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These prominent academic institutions are leading research into the urban metabolism, resource dynamics and natural system characterizing urban regions.

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A well-attended policy workshop regarding Low Income Human Settlements on dolomitic ground was held in November 2011 as part of a GCRO project investigating the intersection between achieving the aim of sustainable living and vulnerability to disaster risks.

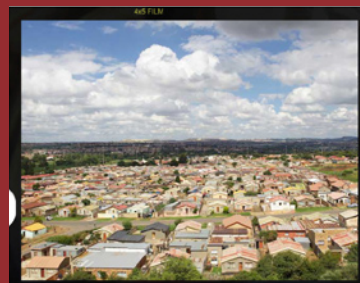
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### Map of the month: 2011 local municipal boundaries

A comparison of the 2006 and latest 2011 municipal boundaries within Gauteng is provided in January's map of the month.

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Reports and publications.



vignettes  
GCRO

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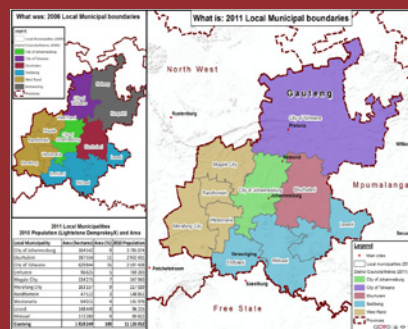
Sport and the City: Impacts and effects of Mega-Events on Urban Development

Monday, March 26, 2012 - 08:00 - Tuesday, March 27, 2012 - 17:00

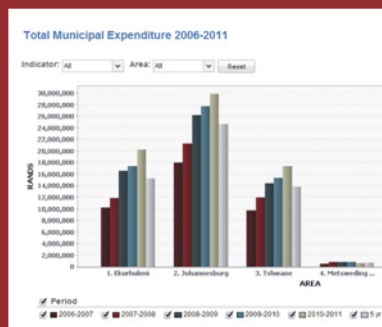
See the website for an introduction to our new staff:

• Dr Sally Peberdy

www.gcro.ac.za



Map of the month



Map of the month

FUTURE  
ECONOMIES

## 1 | Putting the GCR on the global map – Graeme Gotz

The Gauteng City-Region Territorial review conducted by the Organisation for Economic Co-operation and Development.

On 30 November 2011, the Gauteng Provincial Government launched the Organisation for Economic Co-operation and Development OECD Territorial Review of the Gauteng City-Region at a formal lunch in Sandton, bringing to a close GCRO's largest (and longest) project to date. The event, addressed by representatives of the Paris-based Organisation for Economic Co-operation and Development, and the MEC for Finance Mandla Nkomfe, was attended by some 70 participants, including MECs, municipal mayors, members of the National Planning Commission, members of the Advisory Council to the Gauteng Planning Commission, heads of provincial departments, heads of business associations, academics and representatives of the media.

The Territorial Review of the GCR was commissioned by the Gauteng Provincial Government in mid-2009. Produced by the Urban Development Unit in the OECD's Directorate for Public Governance and Territorial Development, it provides an independent peer assessment of the challenges and opportunities facing the city-region, backed by a comprehensive process of data-collection and comparative analysis.

The OECD has previously done Territorial Reviews in Copenhagen, Melbourne, Madrid, Toronto, Istanbul, Mexico City, Guangdong, and many other major cities and city-regions.

GCRO, working under the leadership of the Gauteng Planning Commission, played a major role in supporting the research on which the Review is based. We commissioned a range of expert inputs, produced a substantial background report, hosted two missions by OECD experts to Gauteng in 2010, and responded to innumerable requests for data sources, maps and bits of information over a two-year period. GCRO also paid for the Review out of its core-grant from the GPG.

The comprehensive report looks at Gauteng in comparison to 90 other metropolitan regions in the OECD's MetroDatabase, giving a perspective on where Gauteng stands in relation to other regions on issues of population size and growth,

economic development, spatial efficiency and equity, affordability, environmental sustainability, social equity, and governance.

The benchmarking enabled by the OECD's MetroDatabase provides some fascinating – and some quite unexpected – insights into the GCR, as illustrated by the data in table 1.

The OECD Review contains a number of proposals and recommendations on how to address challenges highlighted by the analysis. These will be considered as part of the G2055 long-term strategy process (see story in this newsletter) which sees the Review as a key diagnostic input into a process that will re-envision the future of South Africa's core city-region. As stated by MEC Nkomfe, reading prepared remarks by Premier Nomvule Mokonyane at the launch:

*"The Organisation for Economic Co-operation and Development's (OECD) Territorial Review of the Gauteng City-Region has provided an important opportunity to take stock of the progress Gauteng has made in fighting poverty, underdevelopment and inequality we inherited in 1994.*

*At the end of the first decade of democracy in 2004, the Gauteng Provincial Government identified the need for new strategies to fast-track development and build a more equitable Gauteng we can all proudly call home. Together with municipalities, we adopted a new perspective and roadmap to build Gauteng as a globally-competitive and more socially-inclusive city-region.*

*This is the context within which we commissioned the Territorial Review in 2009. ...We welcome the findings and recommendations of this review in the same positive spirit we had when we commissioned the study. We believe that the Territorial Review lives up to its promise of providing Gauteng with an extremely useful base of comparative data and analysis that will inform future government policies and strategies."*



continue...



Table 1: Data extracted by GCRO from the OECD MetroDatabase, December 2011.

Indicator	Date	GCR rank on database of 91 other metro-regions	GCR result	OECD average
Population size	2008	10	10 784 862	5 041 771
Population density (persons / km <sup>2</sup> )	2008	37	593	672
Average annual population growth (%)	2001-2008	14	1,9%	1,0%
Elderly dependency rate (%)	2008	1	6,1%	20,0%
Average annual growth in employment (%)	2001-2009	2	3,7%	0,7%
Average annual growth in unemployment (%)	2001-2009	46	7,2%	5,0%
Average annual change in GDP (constant prices) (%)	2001-2007	11	5,1%	2,2%
Average annual change in per capita GDP \$PPP	2001-2007	13	3,1%	1,2%

Read an online version of the Territorial Review here: [http://www.oecd-ilibrary.org/urban-rural-and-regional-development/oecd-territorial-reviews-the-gauteng-city-region-south-africa-2011\\_9789264122840-en;jsessionid=adv0mjbjh5q.epsilon](http://www.oecd-ilibrary.org/urban-rural-and-regional-development/oecd-territorial-reviews-the-gauteng-city-region-south-africa-2011_9789264122840-en;jsessionid=adv0mjbjh5q.epsilon).

The Premier's media statement in response to the Review can be seen here: <http://www.gautengonline.gov.za/MediaStatements/Pages/StatementbytheGautengPremierNomvulaMokonyaneontheoccasionoftheofficialreleaseoftheOECDTerritorialReviewoftheGautengCity-Reg.aspx>.

Download a Data Brief on the Review, and data extracted from the OECD MetroDatabase, here: <http://www.gcro.ac.za/reports-data/data>.

## SPACE & MOBILITY



## 2 | Gauteng 2055 (G2055) – Graeme Gotz

GCRO has been asked by the Gauteng Planning Commission to provide research support for an emerging long-term development strategy for the city-region, known as G2055.

This will be a key focus of our work over the next year. GCRO will provide intellectual inputs into working groups convened by the Gauteng Planning Commission (GPC), feed in research findings on key trends and dynamics from various GCRO projects, and act 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, 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 finalizing 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, now regarded as a key diagnostic input into G2055.

2012 has kicked off with a workshop between GPC and GCRO to look at draft work on a revised G2055 strategic framework. This will be presented to the GAC, various intergovernmental forums, and then the broader public, in February and March. GCRO's contribution to this key, high-profile strategy process, that will very likely define the future of the city-region, will be further clarified in the coming months.

## Surveying micro-traders and the impact of the FIFA World Cup – David Everatt

When the World Cup was close to taking place, we thought, why not track those who we felt ought to benefit from the Cup – the micro-traders?

When the World Cup was close to taking place, GCRO decided that our best contribution would be to avoid the obvious approaches dominant at the time – that the World Cup would create jobs by the thousand, re-brand and re-create South Africa's global image on the one hand; or that it was the biggest folly imaginable, with billions spent on inevitably white elephant projects.

Rather, we thought, why not track those who we felt ought to benefit from the Cup – the micro-traders who were selling flags or making makarapas, the shebeen and B&B owners, and others who were not able to make it into the 'charmed circle' that FIFA drew around the stadia.

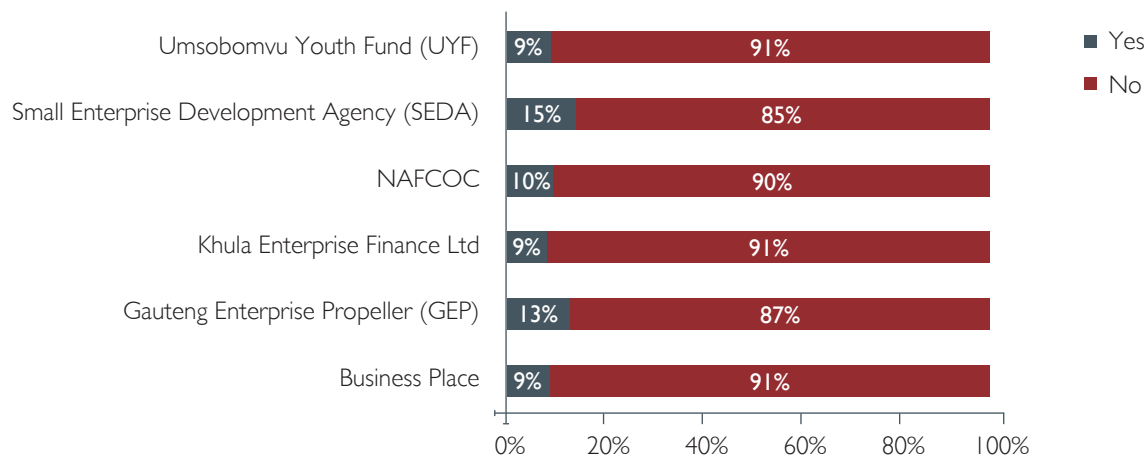
GCRO commissioned a three-phase survey. We began by surveying 200 micro-traders immediately before the World Cup took place, in order to assess expectations. Then we returned to 150 of those traders a few months after the Cup, in order to assess the extent to which expectations had been met, and then returned again, a year after FIFA 2010, to see what if any lasting impact the World Cup had had on this key economic sector.

Our focus was mainly economic, but we also tested social values and attitudes, such as xenophobic sentiments and the impact that Ghana's quarter-final appearance may have had, and so on.



From the first survey, as the graph makes clear, there were policy take-outs for government. Although the Gauteng Provincial Government, and local governments across the province have put in place a battery of support mechanisms for the 'second economy', few if any go to that economy - they expect it – and the people working in it – to come to them. That this is impossible for people who have to be selling at the same corner of the same busy road, every day or every night, ought to be self-evident – and is, according to our data – but nonetheless services keep being offered but not taken up by those who most need them.

Figure 1: Have you approached any of the following organisations that support small businesses in South Africa?



In March 2012, the Wits School of Architecture and Planning will be holding an international conference, supported by GCRO, where researchers from South Africa, England, Germany, Brazil and elsewhere will be presenting their findings

of research into different aspects of these global mega-events (such as FIFA, the Olympic Games and so on). Details of the call for papers and conference announcement can be found at [www.gcro.ac.za](http://www.gcro.ac.za).

## DATA

4 | The second GCRO 'Quality of Life' survey – *David Everatt*

In 2009, GCRO commissioned its first 'Quality of Life' survey, in order to analyse the quality of life of citizens. This time round, the sample has increased from less than seven thousand to more than seventeen thousand respondents.

In 2009, GCRO commissioned its first 'Quality of Life' survey, in order to analyse the quality of life of citizens, identify key areas and groups needing intervention and support, and provide an holistic assessment of life in the Gauteng City-region – not just looking at Gross Domestic Product, or Value Add, or similar economic measures, but including the values and attitudes of citizens, their levels of social capital, alienation, anomie, and so on. The survey, because of both the sample size and breadth, and quality of analysis, had a considerable impact on government's work, as well as enjoying significant media coverage.

In 2011, GCRO ran a highly competitive tender process and awarded the fieldwork contract for the second Quality of Life survey. This time round, the sample has increased from less than seven thousand to more than seventeen thousand respondents, primarily due to the new technology (digital pens) used by DataWorld. What this means is that we could stratify the sample from ward level upwards, rather than metro/municipal level as previously – and of course we can analyse back down to that same level.

The data, from this mammoth sample, which were cleaned and tidied by Ross Jennings on GCRO's behalf and Adhir Nursayhe from DataWorld, should be ready for initial (topline) analysis in February and we hope to launch in March 2012.

Of course, a fieldwork outing of this scale throws into harsh relief the challenges of doing fieldwork in the Gauteng



City-Region. One ward, from Midvaal, has no respondents whatsoever – after over 80 attempts to get access to gated communities (with attendant domestic work facilities), with fieldworkers (of all races) escorted out at gun-point, we simply gave up. Elsewhere, some mine-managers for example continued to act as if they ruled fiefdoms, telling us when and who we could talk to – or more commonly, not talk to – making random sampling impossible. Again, this led to substitution.

In the end, a cluster of fieldwork houses were used to patch together the very large sample, but the fieldwork phase should remind us of the inequities and brutalities of the past, where groups of people assumed they could tell others what to do, where to assemble, where to research, as if democracy had not occurred, and freedom of movement and association were not constitutionally guaranteed.

## SUSTAINABILITY

5 | Sustaining the Gauteng City-Region – *Josephine Musango*

How can we function more sustainably?

Cities and city-regions worldwide are confronting growing challenges of not only supplying secure, optimally managed and affordable resources such as energy, food, clean and safe water and waste management services to their residents, but also of utilising its urban space sustainably.

Gauteng is not an exception to these challenges. Despite being the smallest province in South Africa, it has the highest population when compared to other provinces, and is the economic hub of the country. It relies mainly on its hinterland for supplies of water, food and energy. With the increasing population and demand for resources, infrastructure is being put in place or modified in order to accommodate these demands. Thus, we see expanded and upgraded roads,

more pipes and cable, and so on. However, the more the infrastructure is put in place, the more the growth in demand for resources. The infrastructure tends to increase resource consumption and waste generation.

Traditionally, the design of infrastructure systems does not take into account the reality of resource limits. With resource limits now imminent, the question arises as to how to transform infrastructure such that the Gauteng City-Region remains economically competitive globally, while at the same time functioning more sustainably in terms of its resource requirements and waste output and better serves its population locally.



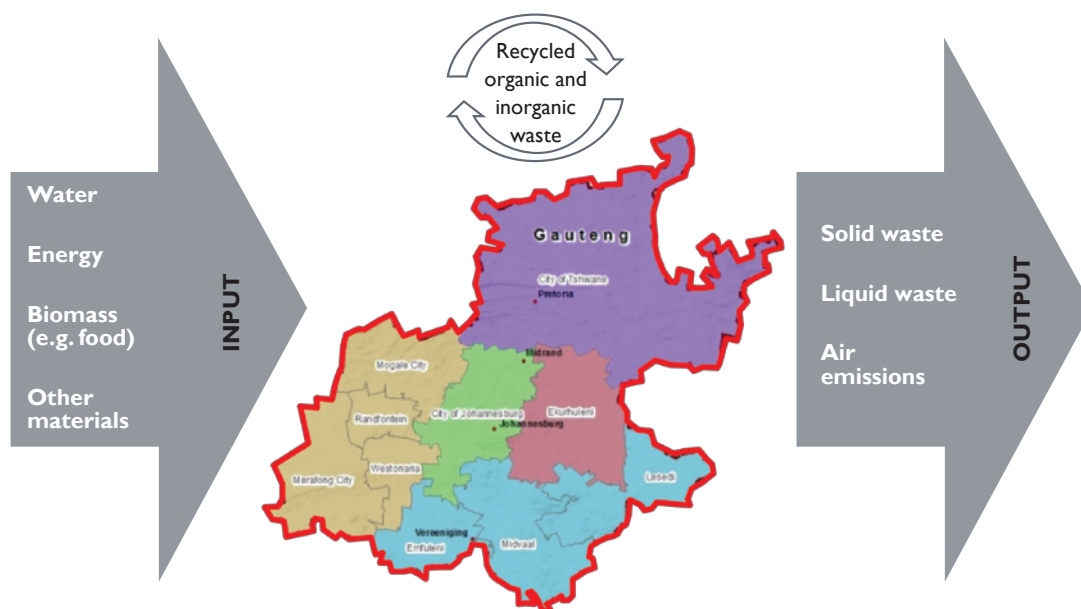
Several conceptual frameworks have been proposed that can be used to assess the sustainability of cities and city-regions in relation to the abovementioned context. Urban metabolism is one such framework that can be useful in conceiving the city-region as a living organism. In its simplest form, the city-region can be represented as a set of urban activities receiving physical inputs such as water, food, energy and other raw materials, which are consumed and transformed, by means of infrastructure, technological and biological systems, into the built environment, goods and wastes.

Adopting the concept of urban metabolism can foster new imaginaries and visualisations of what the city-region is, and how it functions, both as a biophysical and socio-economic entity. Investigations into urban metabolism can also inspire new ways of thinking about how infrastructure in the city-region can be transformed to be more sustainable, and the manner in which specific flows in the city-region can be better prioritised.

It is from the above understanding that the GCRO's project entitled "Metabolic flows and infrastructure transitions in the Gauteng City-Region" utilises the concept of urban metabolism to investigate various selected flows of the city-region (see Figure 2 below). The aim of the project is to evaluate both resource flows required for and produced by the city-region, and the infrastructure networks that traverse, structure and provide channels of flow within this urban formation. The project is conducted by a team of researchers, focussing on selected flows namely water, energy, biomass (which include food, urban green resources and land use) and waste.

The outcomes of the project are expected to inform the policy- and decision-makers in provincial and local governments, the academy and other relevant stakeholders on the functioning of the Gauteng City-Region metabolism and the potential infrastructure transitions that ought to keep it alive, competitive and sustainable.

Figure 2: Conceptualising Gauteng City-Region metabolism



## 6 | Assessing the state of non-racialism in South Africa – David Everatt

In late 2011, the GCRO and the Ahmed Kathrada Foundation (AKF) jointly convened a national symposium analysing the state of non-racialism in South Africa.

The symposium was opened by Ahmed 'Kathy' Kathrada who also remained with us for two days of debate and argument, as well as good food, good music, the journeys of 'The Ubuntu Girl', and more.

At the heart of the symposium was a set of deeply serious questions about what South Africans understand non-racialism to mean 17 years into democracy; how they think it impacts on their lives, if at all; and what they think needs to change if we are to realise the non-racial, non-sexist democracy for

which people like 'Kathy' fought and struggled and spent so many years in prison.

At the symposium, people elaborated – was our theory able to understand and embrace non-racialism? Why race at all, and if not race, then what? Most concluded that equality was a pre-condition for non-racialism, but given the massive inequalities in South Africa, does that mean we simply put off worrying about non-racialism until some kind of equality is attained? Clearly not.



These questions had formed the basis of the joint GCRO/ AKF research project that preceded and informed the symposium. GCRO commissioned 18 focus groups around the country, with a guideline designed by the partners and a group of potential authors. Our innovative design was to get a series of researchers from different disciplines and places to work from the same primary dataset – the transcripts of the focus groups – and analyse the data from their own particular angles. These formed the basis of papers presented at the symposium. Many will be published in early 2012 in **Politikon**, the official journal of the South African Association of Political Studies, for which ‘Kathy’ has graciously written the preface. This in turn reflects a key facet of GCRO’s work, namely commissioning primary and applied data but ensuring that it also enters the academic arena.

At the symposium, attended by some 100 people from across the country, a wide range of views were aired. Some felt that the structural racism of the state was at the root of the problem, while others pointed to the on-going obsession with race classification, which ensured that a racial consciousness

was paramount among all South Africans. Others took particular angles to try and break open non-racialism, such as grappling with the meaning of coloured identity, or the hostility expressed towards Indian South Africans in particular. Many had strong words about the inability of the ruling African National Congress to move ‘beyond race’, while others felt that our theory was weak and was holding us back.

When ‘Kathy’ wrote the preface for **Politikon**, he reminded readers, in customarily polite and understated fashion, that while research and analysis remained important – urgent, even – what mattered was action. Non-racialism has to be built every day, by ordinary South Africans, in our dealings with each other. It won’t be delivered from on high, nor can it wait for us to arrive at some future point when we can begin to worry about it. Being a non-racial South African requires a state apparatus committed to redistribution; a national drive towards substantive equality, providing both redress and recognition; but above all, it requires each of us to become non-racist in our dealings with and understanding of one another.

The GCRO’s Prof David Everatt is the guest editor of the special edition of **Politikon**, which will be published in early 2012, including inputs from ‘Kathy’ Kathrada, Gerry Mare, Firoz Cachalia, Rupert Taylor, Caryn Abrahams, Dan Hammett, Annsilla Nyar and others. The transcripts of all the focus groups are freely available on the websites of both GCRO and AKF, and the debates, arguments, new ideas and buzz of the symposium will impact on the work of the AKF at grass-roots level. The symposium hoped to fuse the work of activists and academics, and it seems to have been extremely successful in doing so.

## FUTURE ECONOMIES



## 7 Socio-economic forces shaping life in the GCR: Findings from data – *Darlington Mushongera*

In line with its mandate of providing relevant, timely and accurate data, the GCRO has initiated a series of Data Briefs, which are meant not only to provide information to the public but to enhance planning in the Gauteng City Region (GCR).

These Data Briefs are a quick way of understanding the current state of the province, and a means of assessing public and private sector performance.

### **GCRO Data Brief I: Summary analysis from Statistics South Africa’s 2010 General Household Survey for Gauteng**

GCRO Data Brief I was the first in the series of these short Data Briefs and it presented some key findings for Gauteng drawn from the Stats SA 2010 General Household Survey, released in August of 2011.

The Data Brief classified the analysis into sections that are in line with the Gauteng Provincial Government’s priority



areas, e.g. education, health, safety, decent employment among others. The report concludes by citing the main performance successes and failures of the province.

One key success is the high level of access to basic municipal services by households, which was well above the national average. Of all households in the province, 96.9% have access to piped or tap water, 84.6% have flush toilets connected to public sewers and 82.3% are connected to electricity mains. Crime, according to official figures, had also dropped almost across the board in Gauteng.

A key failure highlighted in the Data Brief is that the province has the largest proportion of households living in informal settlements (21.5%, compared to a national average of 13%). In terms of health, high blood pressure is a serious problem in the province while access to medical aid among the black population is very low, in turn increasing pressure on public health institutions. The table below, extracted from the Data Brief, reflects on the performance of some health indicators.

The full version of this Data Brief can be accessed at <http://www.gcro.ac.za/reports-data/data>.

Table 2: Health sector performance

Area	Indicator	2009	2010	Performance
Number of people suffering from diagnosed chronic illnesses <sup>1</sup>	Asthma	256,000	204,000	↑
	Diabetes	282,000	248,000	↑
	Cancer	67,000	63,000	↑
	HIV/AIDS	125,000	118,000	↑
	High Blood Pressure (HBP)	740,000	686,000	↑
	Arthritis	261,000	229,000	↑
	Other	345,000	209,000	↑
Consultation at health institutions	Proportion of households consulting at public hospitals	10.7%	12.0%	↑
	Proportion of households consulting at public clinics	48.1%	50.4%	↑
	Proportion of households consulting at private hospitals	2.8%	4.3%	↑
Medical aid coverage	Proportion of people not covered by medical aid	73.4%	73.7%	↓

<sup>1</sup> The green arrow in this case means an improvement i.e. the health system has managed to reduce the number of people affected

### GCRO Data Brief 2: Anatomy of the global financial crisis

The second Data Brief reports on the impact of the global financial crisis on the South African economy in general and Gauteng province in particular. It builds on a 2009 GCRO report of how sub-national units were responding to the crisis by measuring performance of the GCR economy over the last two financial years (July 2009 to June 2010 and July 2010 to June 2011).

The Data Brief, due mid-February, draws on data from a multiplicity of indicators which were classified under six main groupings, namely: economic activity, employment, property markets and development, debt, bank lending and

savings, migration and tourism, and municipal revenue and expenditure.

The report shows that there were significant improvements in some sectors, e.g. vehicle sales, freight volumes, and domestic market capitalisation. However, there has been little improvement in unemployment, building plans passed and civil cases for debt while business confidence indicators generally remained lower than the pre-crisis period.

GCRO hopes that these Data Briefs will assist the public in understanding key development trends at both local and provincial levels and aid the planning process.



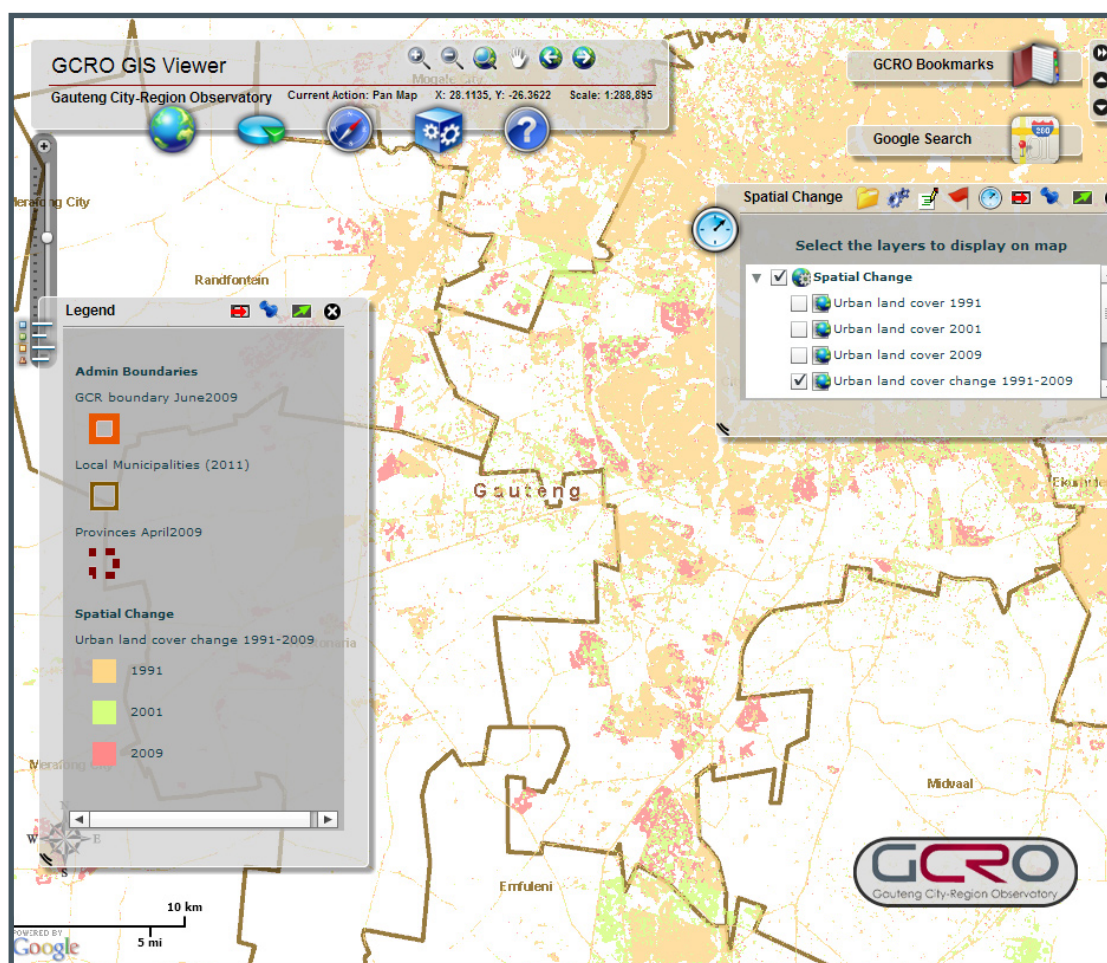
From its inception, GCRO recognised a need to make spatial information describing the Gauteng City-Region easily accessible.

In 2010, GCRO launched an innovative GIS website that combines government, proprietary and open data sources such as Google maps, in an easy to use application that utilises the latest Web 2.0 technology. The website has recently been upgraded to incorporate new functionality, such as an option to download graph data into a .csv file, a Google Street view tool and a Load Data tool for users to overlay and view their own data (in a Web Mapping Service, shape file or KML/KMZ format) within the GIS website application.

Based on the data, three new themes have been added to the website:

- A Spatial Change theme highlights the dramatic land cover change (derived from Landsat imagery, as part of Brian Mubiwa's PhD work at the University of Johannesburg) that has occurred within Gauteng over the past two decades. Within the urban land cover class, a time slider tool is available to animate the change across three time frames, i.e. 1991, 2001 and 2009. For example, Figure 3 (with red indicating the 2009 urban land cover) illustrates the dramatic growth of residential housing on the outer fringes of southern Johannesburg.

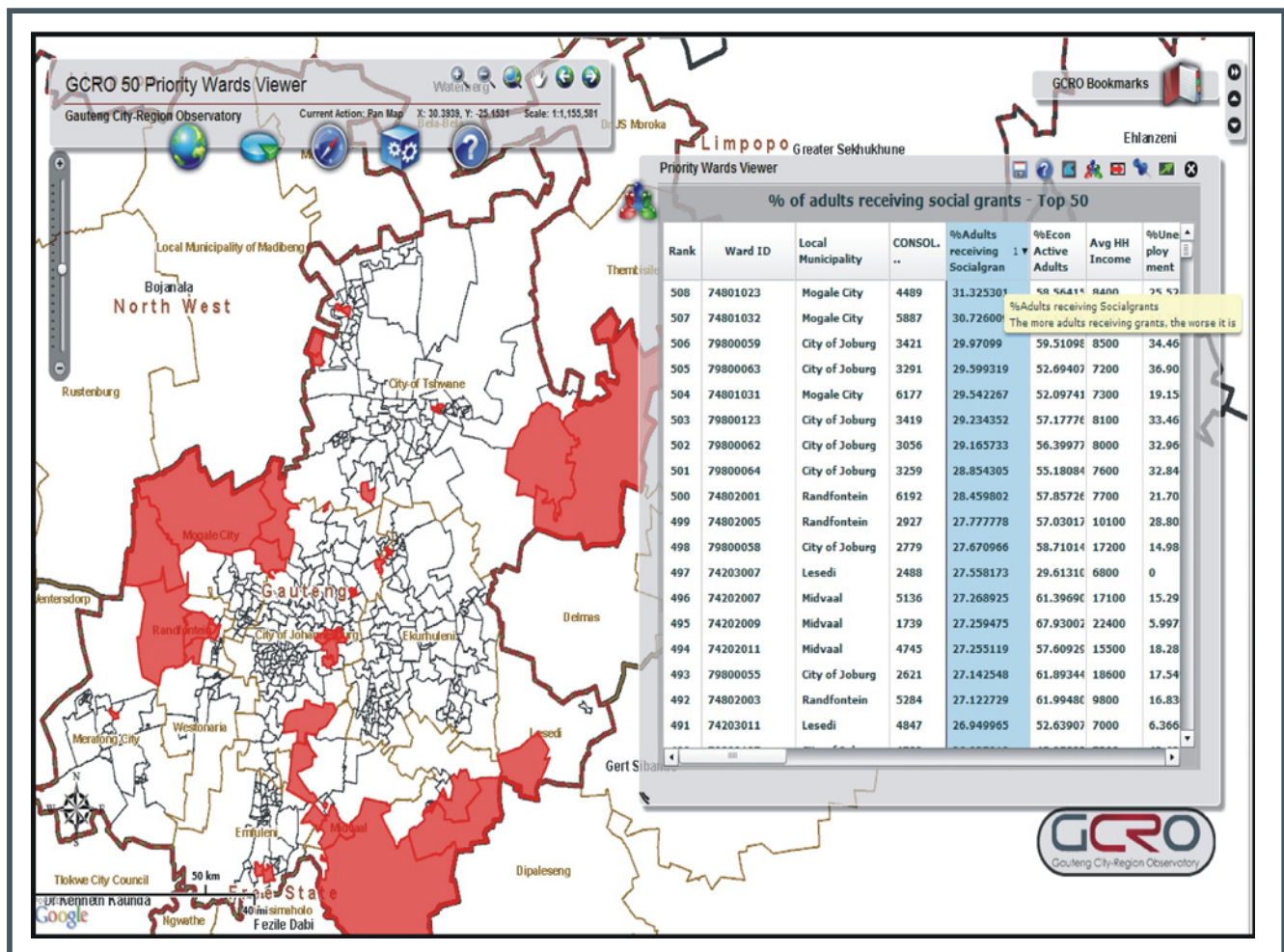
Figure 3: GCRO GIS website - Spatial Change theme



- An Environmental Data theme was compiled following a Memorandum of Understanding signed with the Gauteng Department of Agriculture and Rural Development (GDARD) to provide online public access to environmental layers such as Mine Residue Areas and the latest Conservation Plan (C-Plan version 3.3). The theme enables government and public users to overlay and print GDARD layers with Google Maps and various GCRO GIS layers, thereby providing access to, and basic analysis of the environmental data.
- The 50 Priority Wards theme was developed as part of the 50 priority wards project which provided the

GPC with an independent analysis and identification of 50 priority wards within Gauteng using 18 indicators. These indicators were mapped using the latest available spatial data (such as updated demographic estimates from the 2010 Lightstone DemprokeyX dataset and 2008 Eskom Spot Building Count). This theme (depicted in Figure 4) offers the user the option to map 50 priority wards from the 18 indicators, or change the weighting of indicators to generate a new map based on the revised weighting. Each indicator can also be selected and mapped individually. The theme will be launched in February.

Figure 4: 50 Priority Wards theme



- The GCRO GIS website is viewable in all the main Internet browsers (such as Internet Explorer, Safari, Firefox and Google Chrome), but does require a reasonable broadband Internet connection and the latest Adobe Flash Player plug-in to be installed. The website is available from the GCRO website: <http://www.gcro.ac.za/maps-gis/interactive-maps/gcr>.



## GOVERNMENT



9

GCRO: helping promote city-region-wide cooperation amongst institutions of higher education in the GCR – *Annsilla Nyar*

Our work recognises higher education as one of the most important mechanisms we have for generating and transforming knowledge into wider social and economic benefits for all sectors and citizens of the city-region.

Imagine a city-region of ideas and creativity where the pursuit and application of skills, knowledge and enterprise combine to create a dynamic quality of life for all Gautengans. The idea of a dynamic city-region is the basis for GCRO's research into the role of higher education institutions (HEIs) in the GCR. Our work recognises higher education as one of the most important mechanisms we have for generating and transforming knowledge into wider social and economic benefits for all sectors and citizens of the city-region. Hopefully our research will help toward turning this vision into a practical reality for all who live in the GCR.

The conceptual basis of our work is guided by the idea of Gauteng as a 'learning region', a term coined by the Canadian-based economist Richard Florida. A learning region is conceptualised as a powerful framework for understanding the creation and transfer of knowledge. Our research is focused on understanding how key institutions in the city-region can work together more effectively in order to build the kind of 'learning' region which can help Gautengans to broadly fulfil their economic and social potential.

In November 2011 GCRO conducted a series of discussion groups focused on the role of HEIs in the development trajectory of the Gauteng City-Region. The discussion groups succeeded in bringing together a number of HEIs from different parts of the city-region, such as University of the Witwatersrand (Wits), University of Johannesburg (UJ), University of Pretoria, Tshwane University of Technology (TUT), University of South Africa (UNISA) and Monash University. Our discussions traversed an extensive range of concerns specific to the higher education sector in the Gauteng City-Region.

We explored the role of relevant role-players such as academia, government, business and civil society in building a learning region. We used examples of successful and



entrepreneurial universities and their knock-on effects on regional development, in order to stimulate thinking about possibilities for the Gauteng City-Region. We discussed critical provincial priorities. We deliberated about possible synergies between the various stakeholders in the city-region, such as university-driven 'incubator' programmes that seek to develop entrepreneurial development and business mentoring skills amongst university students and staff as well as within industry and the public sphere.

Participants expressed a concern that public policy has tended to overlook the strategic role of HEIs in regional development. Higher education's location as a national competency under the National Department of Higher Education and Training has meant that the role of higher education in regional development has not been developed, and it has focused more broadly on serving national goals. We concluded that the relevance of the regional level ought to be established in order to strongly embed the priorities and concerns of higher education.

Our discussions culminated in a proposal to develop a regional network of higher education stakeholders, structures and constituencies in the city-region, with an eye to promoting a more dynamic convergence of interests and activities amongst role-players. We are currently exploring possibilities to take forward this idea of regional cooperation amongst HEIs in the city-region. Meanwhile we also look forward to releasing the results of our research in March 2012.

## SUSTAINABILITY



10

GCRO metabolic flow research visit to MIT and Virginia Tech – *Alexis Schäffler*

These prominent academic institutions are leading research into the urban metabolism, resource dynamics and natural system characterizing urban regions.

In April 2012, two GCRO staff members will embark on a research visit to Massachusetts Institute of Technology (MIT), in Boston, and Virginia Tech, in Washington DC. These prominent academic institutions are leading research into the urban metabolism, resource dynamics and natural system characterizing urban regions.

Senior researcher, Josephine Musango, and researcher, Alexis Schäffler will visit MIT to engage with John Fernandez, Associate Professor and Director of the Building Technology Program in the Department of Architecture. Prof Fernandez is a leading force in the area of urban metabolism studies globally, tracking city resource flows and strategies aimed





at more efficient resource consumption by cities. The visit by the two GCRO staff is aimed at forging a collaborative partnership on urban metabolism research through forums to discuss the previous and current urban metabolism work at MIT, and the GCRO's projects, including, Metabolic Flows and Infrastructure Transitions; and Green Assets and Infrastructure, amongst others.

In addition, the GCRO staff will engage with Prof Fernandez's PhD students at MIT to discuss their experiences and lessons in utilizing different approaches of assessing resource flows in urban contexts. This exciting opportunity will allow both the GCRO and MIT to share lessons on utilizing and comparing data in the study of urban metabolisms whilst fostering

synergies in this critical area of research. This will be a key benchmarking aspect of our metabolic flows project.

Josephine and Alexis will also conduct a study tour of green infrastructure projects and similarly forge collaborative partnerships with a team of researchers at the College of Natural Resources and Environment, and Department of Urban Affairs and Planning, at Virginia Tech. This collaboration will feed into the GCRO's Green Assets and Infrastructure project. Virginia Tech has taken the lead on research into the planning, policy and design dimensions of how to reconfigure urban environments for urban greening and sustainability. This research visit provides the GCRO with a basis for comparison and benchmarking of research into the state of green infrastructure in the Gauteng City-Region as well as green projects and policy responses. Virginia's research into the policy dimensions of green infrastructure makes for interesting comparative work for the GCRO's ongoing engagement with Gauteng Provincial Government.

On the last leg of the research visit, Josephine and Alexis will visit a number of policy units in Washington D.C. and New York as a series of case studies on operationalising green infrastructure planning. Feeding into both our work on governance and sustainability, these case studies offer new ways of benchmarking the GCR in an international setting.

## SUSTAINABILITY



11

## Treading on dangerous ground: Opinions and perceptions regarding Low Income Humans Settlements in the GCR – Maryna Storie

A well-attended policy workshop regarding LIHS on dolomitic ground was held in November 2011 as part of a GCRO project investigating the intersection between achieving the aim of sustainable living and vulnerability to disaster risks.

The purpose of the workshop was to promote interaction between different disciplines, departments and spheres of government to provide insights into opportunities related to the development of Low Income Human Settlements LIHS on hazardous ground, in particular, dolomite. The discussions often featured conflicting ideas, which highlighted the nuances of difficulties associated with different elements of development of low income settlements on potentially dangerous (or 'marginalised') ground.

Some key highlights from the discussion include the following:

- Hazardous ground varies from low to high risk: for example, some areas may allow high density development to take place while others require engineering investigations and the implementation of alternative housing types.
- High quality agricultural ground has in the past been used for housing development. This emphasises the need to allocate space for its best purpose when doing spatial planning and development.
- There is a critical need to integrate social incentives with transport nodes during spatial planning.



- Travelling costs should be accounted for when the relocation of communities is costed. This is because upgrading may possibly turn out to be a more effective option in the long-term.
- There is need for change in the current subsidised housing design and layout form (e.g. to walk-up apartments with the option of rental tenure, or units that are developed on shared foundations). This requires both an official and community mind-shift regarding housing in densely populated urban areas. Such buildings and related infrastructure should also be easy to inspect and maintain.
- Capacity building and awareness related to hazards is critical. It involves educating ward councillors, officials, decision makers, community leaders, teachers, youth groups, preachers and residents about hazards and the impact of infrastructure maintenance on potential

disaster risk. Hazard reports need to be in a format that is easily understood by the general public.

- There should be conditions specified in the title deeds of low-income stands that for example prohibit building additions, thereby potentially managing the 'back-yard shack' problem. Communities further need to understand the conditions of the deeds and responsibilities associated with living on hazardous ground.
- Disaster Management Risk plans for development on dangerous ground should be standardised across the GCR.
- Standard regional operational procedures related to allocating funding should be developed for dealing with matters related to marginalised land and the allocation of funds for the rehabilitation of such land.

- Community beliefs that land is not dangerous need to be addressed, especially where no evidence of hazards is present or where recent hazard investigations present different results than historical studies.
- Risks are very often created post-development approval. There is a need to ensure that construction companies strictly adhere to building regulations and any site-specific building requirements.
- Finally, a strong regional policy statement is required to address some of the outstanding and unsolved issues related to the development and/or upgrading of LIHS on marginalised ground.

Details of comments made during the workshop proceedings are available on: <http://www.gcro.ac.za>.

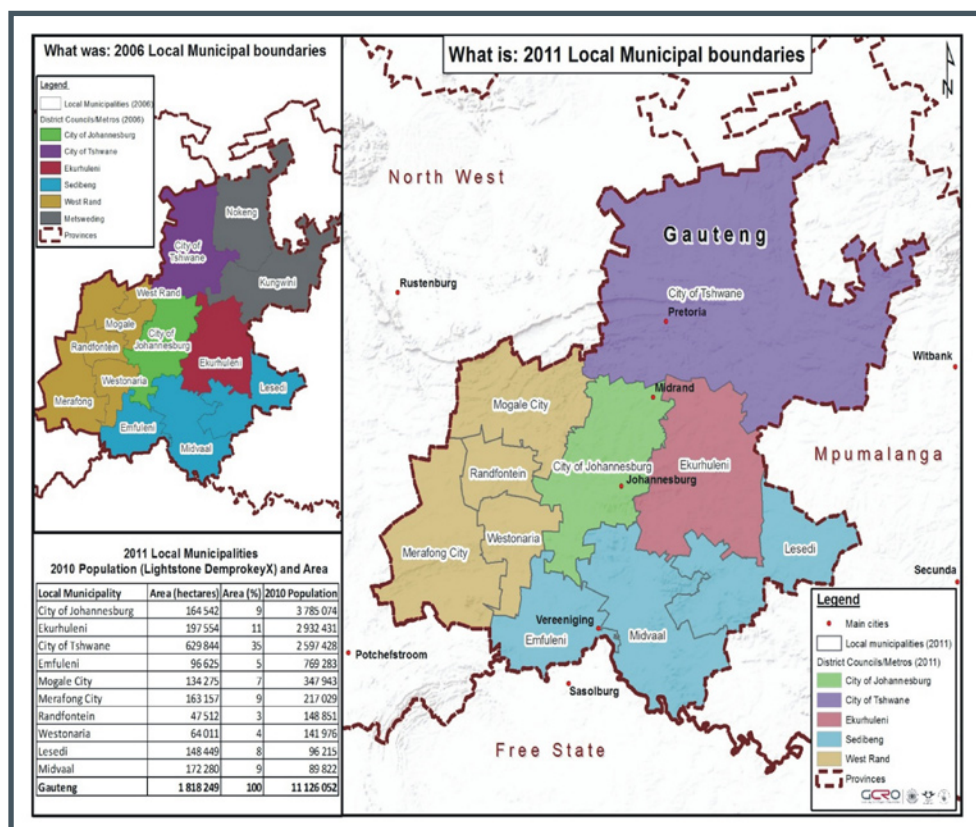
## 12 | Map of the month: 2011 local municipal boundaries

A comparison of the 2006 and latest 2011 municipal boundaries within Gauteng is provided in January's map of the month.

The amalgamation of Metsweding District Council (consisting of Nokeng tsa Taamane and Kungwini local municipalities) with City of Tshwane is clearly visible – Tshwane now covers a massive 35% of the province, with a population of 2 597 428, according to Lightstone DemprokeyX 2010 population estimates. City of

Johannesburg has the largest population in Gauteng, 3 785 074, followed by Ekurhuleni with a population of 2 932 431. Another major boundary change was the incorporation of the West Rand District Management Area (Cradle of Humankind World Heritage Site) into Mogale City.

Figure 5: 2011 local municipal boundaries



## Welcome to our new staff member, Dr Sally Peberdy

Dr Sally Peberdy is a Senior Researcher at the Gauteng City-Region Observatory. Before joining GCRO she taught urban geography at the University of the Western Cape. Previously, she was the Project Manager for the Southern African Migration Project in Johannesburg.

She has extensive experience in research related to cross border migration and trade in southern Africa and has made contributions to policy debates and training of officials around these issues in South and southern Africa. She is the author and co-author of reports for various South African national, provincial and municipal government departments including Home Affairs, Labour and Social Development, Gauteng and the City of Johannesburg. She has also authored reports for international organisations including the Global Commission on International Migration, the International Organisation for Migration, Realising Rights, the World Bank, DFID and IDRC.

Sally has worked extensively across SADC and her research activities and focus have meant that she has also developed networks with governments, academics and NGOs in the rest of Africa, Europe (including the UK), North America, and South Asia.

Her work on migration has been recognised by the Mail & Guardian Book of South African Women. She is the author of *Selecting Immigrants: National Identity and South Africa's Immigration Policies, 1910-2008* published in 2009 by Wits University Press which won her a University of the Witwatersrand research prize.

Born in Kenya she has lived in South Africa since 1994.

David Everatt presented an overview of the findings at the launch of the GCRO's 'State of the Gauteng City-Region 2011' report, in October 2011.

The OECD Territorial review launch event was chaired by GCRO's Executive Director, David Everatt, and addressed by Lamia Kamal-Chaoui and Michael Donovan representing the OECD, as well as by Gauteng MEC for Finance Mandla Nkomfe, speaking on behalf of Premier Nomvula Mokonyane, and provincial Director-General Ms Nosizwe Nokwe Macamo.

David Everatt and Annsilla Nyar both presented at the GCRO/Ahmed Kathrada Foundation conference: 'Non-racialism in post-apartheid South Africa: contemporary meanings and relevance', 13-14 October 2011, Sturrock Park, Wits University, Johannesburg.

Graeme Gotz presented 'Green economy transitions: Gauteng's Green Strategic Programme' at the South African National Bio-Diversity Institute (SANBI) Grassland Forum conference on Powering the Green Economy on 19 October 2011.

Annsilla Nyar attended the higher education conference convened jointly by the University of Fort Hare, Rhodes University, National Research Foundation, Human Sciences Research Council and the South African Higher Education Community Engagement Forum entitled 'Community Engagement: the Changing Role of Universities in Development', in November 2011 at the University of Fort Hare, East London. She presented a paper: 'Inside or outside the academy: examining possibilities for a scholarship of engagement'.

Annsilla Nyar, with Prof Pundy Pillay, conducted three 'Group Discussions on the Role of Higher Education Institutions in the Gauteng Global City-Region (GCR) Vision'. The discussion groups were held in November at the Professional Development Hub, University of the Witwatersrand, and later in the same month at the School of Tourism and Hospitality, University of Johannesburg.

Annsilla Nyar presented a paper: 'Some new perspectives on South African Indians and 'non-racialism': Findings from the AKF non-racialism focus data'. David Everatt presented an overview of the 18 focus groups that formed the basis of the research feeding into the conference, 'Non-racialism in South Africa today: status and prospects'.

Graeme Gotz and Alexis Schäffler presented on 'Green Economy Transitions: Gauteng's Green Strategic Programme' at the Nedbank sustainability forum in early 2012.

Darlington Mushongera attended the CODESRIA General Assembly 5-9 December 2011 Rabat, Morocco.

Maryna Storie organised and presented at a well-attended policy workshop regarding Low Income Human Settlements on Dolomitic ground on 22 November 2011 at the Wits Professional Development Hub.

## Conferences, workshops & presentations

Alexis Schäffler participated in various events in October, International Food Security Month, including the Gauteng Food Security Summit, and the presentation of Wits Food Security Results and became a member of the SA Food Lab forum, an interdisciplinary network address.

Alexis Schäffler, Graeme Gotz and Josephine Musango presented 'Infrastructure and Greening the Future: Current Research and Initiatives on green city strategies' at the Development Bank of Southern Africa's Infrastructure Dialogues on 16 November.

In October 2011, Alexis Schäffler and Maryna Storie attended the second Johannesburg Decking Project meeting to discuss the nature of the project and give critical insight about the project's potential.

David Everatt presented an overview of the GCR to the ANC caucus in the Gauteng Provincial Legislature in October 2011.



## Reports and publications

Everatt D. (2012) Guest editor of Special Edition of *Politikon* focusing on 'Non-racialism in South Africa today'

Everatt D. (2012) 'Nonracialism in South Africa today: status and prospects' in *Politikon* (forthcoming)

Everatt D. (2012) 'Ring of fire or a puff of (commentators') smoke?': youth, unemployment and transitions in Gauteng' in *Youth, Work Transitions and Well-being* (ed.s Karen Evans and Helena Helve, Tufnell Press) (forthcoming)

Mushongera D. (2011) GCRO Data Brief 1: Summary analysis from Statistics South Africa's 2010 General Household Survey for Gauteng of 2011

Mushongera D. (2012) GCRO Data Brief 2: Anatomy of Crisis (forthcoming)

Mushongera D. (2011) Overview Section of the Gauteng Province Mid-Term Review Report.

Nyar A. 'Some new perspectives on South African Indians and 'non-racialism': Findings from the AKF non-racialism focus data' *Politikon* (forthcoming)

Nyar A. and Wray C. (2011) 'Understanding Protest Action: Data Collection Challenges for South Africa' in *Transformation* (forthcoming)

Schäffler, A. & Swilling, M. Forthcoming. 'Valuing green infrastructure in an urban environment under pressure – the Johannesburg case'. The abstract has been accepted by *Ecological Economics* and the full paper is under review.

Schäffler A. 'Head in the clouds? Reflections on managing storm water as a resource'. In Swilling, M., Pieterse, E. & Musango, J. *Sustainable Urban Transitions & Governance* (forthcoming)

Schäffler A. Forthcoming. 'Developmental Green Economy Strategy for Gauteng'. In UN-Habitat: Towards a Green Economy: case studies from around the world (under review)



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### Annual Conference on WWW Applications

#### News

#### Proceedings of ZA-WWW2011 now available

The proceedings of the 13th Annual Conference on World Wide Web Applications (Johannesburg, 14-16 September 2011) are now available. Please select [Archive] on top the home page to access the 2011 Conference. Then select [Presentations] to retrieve the list of papers, organised per track. Select [PDF] on the abstract page to access the DHET-ready full paper. The title page, ISBN number and peer-review declaration are automatically printed with every paper. A contents page of the proceedings must accompany a paper when submitted to DHET for subsidy. For this purpose print the list-per-track which appears when selecting [Presentations].

Posted: 2010-11-24

Storie M., Musango J. and Schäffler A. (abstract): "Potential for urban transformation from vulnerability to sustainability through the utilisation of stormwater infrastructure" has been accepted for the *FloodRisk2012 Conference* in Rotterdam, November 2012.

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.

Wray C. and 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.

Wray C. and van Olst R. (2011) 'Enabling g-government in the Gauteng City-Region'. The paper has been accepted for publication in the *African Journal of Information and Communication*.