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The poor will suffer more as a result of projected oil price increases

Some recent ODI (Overseas Development Institute) research looks at the potential impacts of a one third increase in oil prices over the next two years (which they argue is a reasonable projection, given historical experience of the effects of MENA (Middle East and North Africa) region conflicts on oil prices):

The study suggests that some of the poorest countries could lose up to 4% of their GDP. Those likely to lose more than 3% of GDP as a result of a one-third increase in oil prices include Ghana, Honduras, Lesotho, Swaziland, Togo, Moldova and Nicaragua. Those likely to lose more than 1% of GDP include Burkina Faso, Burundi, Ethiopia, Malawi, Mali, Mozambique, Nepal and Niger. This is assuming that there are no market or policy interventions. At national level, government balances could worsen in countries where oil prices are controlled, and changes in oil price structures may lead to protests as seen in Indonesia (1998), Nigeria (2000) and Yemen (2005).

Fortunately, the fiscal position in some developing countries that have been growing is fine, but this certainly not the case for others that have seen the fiscal balances worsen due to a number of shocks (Swaziland is a case in point).

At the household level a review of the evidence finds that both rich and poor households suffer as a result of oil price increases, but the poor tend to suffer more. There are direct effects, with the poor spending a large share of their small incomes on oil and oil products. In Ghana, Guatemala, India, Nepal, South Africa and Vietnam, the poorest households may spend as much as 3-4% of their income on kerosene, compared to little more than 1% of the richest households.

There are also indirect effects, with rising transport costs affecting the poor more than the rich. The evidence suggests that rising oil prices and falling GDP have a direct impact on the most vulnerable people. It is estimated that a drop of 1% in African GDP could increase the number of infant deaths by 5 000 each year, and child deaths by around 10 000. In countries that are more sensitive to falling incomes the impact could be worse.

ECONOMIC ISSUES

World Economic Forum on Africa 2011: “From Vision to Action, Africa’s Next Chapter”

Africa’s economic potential will come under the spotlight next week when more than 700 representatives of the world’s leading corporations, governments and civil society organisations descend on Cape Town for the annual meeting of the World Economic Forum (WEF) on Africa. They will be discussing how to realise the potential of the continent, one of the fastest-growing regions in the world with growth projected by the International Monetary Fund to reach 5.5% in sub-Saharan Africa this year and 5.9% next year.

Opportunities for investment in mining, energy, agriculture, infrastructure, tourism and the green economy will be explored and political trends analysed, including those in the Middle East.

Africa’s mineral wealth and economic prospects have attracted significant investments by China, India and other countries but the continent faces significant challenges, such as instability in global financial markets and commodity prices, climate change, and how to make its growth sustainable and inclusive. This year’s forum has the theme “From Vision to Action, Africa’s Next Chapter”. In promoting the event, World Economic Forum director and head of Africa, Katherine Tweedie, highlighted the improved political and macroeconomic stability in Africa, the strengthened political commitment to private-sector investment, and the improved access to basic education and social services.

But she said that strong leadership and political will would be necessary if Africa’s growth was to become inclusive and its development sustainable through the use of its financial resources.

“It will also depend on the ability to craft innovative partnerships between business and civil society, as well as the empowerment of small and medium enterprises that continue to be the main providers of income across the continent,” Tweedie said. One of the sub-themes will focus on how African economies can mitigate their exposure to commodity price volatility; boost their representation in multilateral organisations; hasten regional integration; and tap into global financial markets.

A second theme will look at ways to foster the champions of Africa’s growth and examine the drivers of competitiveness, such as industrial diversification and innovation. The third strand of debate will deal with ways to achieve inclusive growth and sustainable development. Debates on how to combat...
corruption and manage the effects of climate change will also feature.
Source: http://www.businessday.co.za/articles/Content.asp?id=141193

The themes, sub-themes and topics of WEF Africa 2011 are all highly relevant, but whether the gathering and its dialogues make any difference, is a moot point. Harvard University historian Niall Ferguson’s comments on the WEF Davos gathering comes to mind: “The mood [at WEF] is always a counter-indicator. It is a consensus not to be believed in - the more complacency [in this case perhaps optimism] there is, the more I’m worried.”

South Africa, deemed the gateway to Africa, joins the BRIC economic group

The possibility was first mentioned in the February 2010 Scan, and on 13 April 2011 South Africa joined the BRIC economic group, now renamed BRICS. The founding nations - Brazil, Russia, India and China - and now South Africa, are in a similar state of economic development, although South Africa ranks lower according to several significant indicators. However, despite its small standing in terms of statistics (see below), South Africa is viewed as a gateway into the rest of Africa and its rich natural resources and millions of consumers, and as such, is of great value to the other nations as a strategic partner.

Many commentators, including Jim O’Neill, who originally coined the term, did not agree with South Africa’s inclusion in this grouping, but Webber Wentzel partner Peter Leon believes that South Africa’s invitation was “all about the minerals”. “South Africa is sitting on the world’s biggest set of mineral resource with reserves worth US $2,3-trillion. Further, in the context of the rest of mineral-rich Africa, South Africa has the most developed infrastructure and the deepest capital markets. However, he emphasised that if the country really wanted to leverage its position as a gateway to the rest of the continent, it seriously needed to consider eliminating exchange and capital controls. “Issues such as trade liberalisation, and even free trade agreements, between other members of the BRICS as well as other African countries need to come to fruition.”

South African Institute for International Affairs (Saiia) CEO Elizabeth Sidiropoulos said that South African business and government needed to start working as a united force, much like the other Brics members, to position itself as a competitive, but also a cooperative, force in the global market, especially in the growing African market.

BRICS vital statistics

<table>
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<th>BRICS</th>
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<th>Area</th>
<th>Population</th>
<th>Population growth rate</th>
<th>Labour force</th>
<th>GDP (nominal)</th>
<th>GDP (PPP)</th>
<th>GDP (nominal) per capita</th>
<th>GDP (PPP) per capita</th>
<th>Human Development Index</th>
<th>Exports</th>
<th>Imports</th>
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<th>Received PDI</th>
<th>Forex</th>
<th>External debt</th>
<th>Public debt</th>
<th>Electricity consumption</th>
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<th>Active troops</th>
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So what!? for the poor and disenfranchised of Southern Africa:
The key reasons to explain escaping from poverty are largely equity related: changes in economic and social assets (e.g. changes in employment, land, ownership and education) and/or social exclusion and discrimination and/or location in remote or otherwise disadvantaged areas. Growth and trade, though (and this is where there is potential from the new BRICS relationship) is a major (potential) source of government revenue to finance public expenditure, which can be designed to be explicitly pro-poorest, for example through broad based expenditure on education and health.
Southern African rulers eyeing the money, not development

A new revenue sharing formula in the Southern African Customs Union (SACU) could boost development but has met with resistance from the governments of poorer states in the sub-region that are interested in “just getting the money”. [As mentioned in previous editions of Scan] the South African government’s treasury department wants a revision of the formula. Smaller member states Botswana, Lesotho, Namibia and Swaziland (BLNS) argue that SACU’s common external tariff (CET) gives South Africa an instrument to protect its own industry, while the level playing field in the union makes it hard for the peripheral countries to build their own industrial bases and compete with their much larger neighbour’s products and services. For this they deserve to be compensated, they argue. At the 25 March 2011 heads of state meeting in Pretoria “a lot of time was spent on working out the formulation of a new mechanism, but nothing definite was decided on”, said researcher Paul Kruger of the Trade Law Centre of Southern Africa (Tralac).

In a recent article, Southern African Customs Union: Myths and Reality, Catherine Grant, senior researcher at the South African Institute of International Affairs (SAIIA), and a colleague warned against an “unrealistic” perception of the balance of power in SACU. “South Africa feels that it cannot be expected to receive less than that it is due, [whilst] in the BLNS countries there is a shocking lack of understanding of the realities.” According to Grant the South African treasury is frustrated over having to hand over so much money, without really having control over it. “Most notable is the case of Swaziland where there is little fiscal discipline and the budget is controlled by the (autocratic) royal family.” In Grant’s opinion South Africa should be tapping up the revenues for reasons of political stability and economic policy but the formula shouldn’t just focus on trade. It should rather stimulate development. But, it will be very difficult to get countries on board. Previous changes in the revenue sharing formula were triggered by significant political events, such as independence struggles and the end of apartheid. The current revision is mainly inspired by the recession and a couple of years of experience with the current revenue formula, which South Africa now wants to renegotiate. Such changes are not significant enough to drive the process.

One of the options on the table is to increase the development component of the pool with funds, for instance, going to regional infrastructure projects instead of state coffers. “It is doubtful that countries like Swaziland and Lesotho will be keen on that,” opines Kruger. “For them, it is more important than anything else to get the money.” According to Kruger it will be very difficult to continue with other items before the revenue-sharing issue is solved. These other issues include SACU’s common industrial policy, the trade facilitation programme focused on relaxing border procedures, external trade agreements and common institutions like the SACU tariff board and tribunal. There has been little movement on any of these since 2002.

Source: http://www.tralac.org/cgi-bin/giga.cgi?cmd=cause_dir_news_item&cause_id=1694&news_id=100903&cat_id=1026

The Economic contribution of tourism in Mozambique – Insight from a social accounting matrix.

How much tourism contributes to the economies of developing countries is controversial and often not measured rigorously. Focusing on Mozambique, a recent study by S. Jones in the Development Southern Africa journal presents a simple accounting tool – a tourist-focused Social Accounting Matrix – which makes it possible to estimate the economic contribution of various tourism sub-types. Multiplier analysis is applied to evaluate the strength of backward linkages from tourism to the domestic economy. The results show the sector is moderate in size but has the potential to contribute significantly to aggregate economic development. However, potential weaknesses are already evident and careful attention must be paid to the full tourism value chain.

Source: Development Southern Africa, Vol 27 (5) (subscription required, full article available on request)

Zimbabwe and Angola tourism updates

Meanwhile Zimbabwe’s tourism earnings jumped 47% last year to US $770 million while the number of visitors rose 15% to 2.3 million, according to the Zimbabwe Tourism Authority Tourism Trends and Statistics Report for 2010. The report indicates that tourist arrivals were 2 239 165 representing an 11% increase from 2009. Of the 2 239 165 arrivals received by Zimbabwe last year, Africa contributed 87% followed by Europe (6%), the Americas (3%) and Asia (2%).

Source: http://allafrica.com/stories/201104280185.html

Angola has made 87 000 square kilometres of land available under the Okavango/Zambeze tourist project which is comprised by five countries of the Southern
The Okavango/Zambeze tourist project is a Peace Parks Foundation initiative. The Peace Parks Foundation, based in Stellenbosch, facilitates the establishment of trans-frontier conservation areas (peace parks) and develops human resources, thereby supporting sustainable economic development, the conservation of biodiversity and regional peace and stability. It is a uniquely innovative and ambitious endeavour well worth monitoring for the (unexpected) benefits it may hold for the region. See here http://www.peaceparks.org/tfca.php?pid=27 &mid=1008 for more information about the Okavango/Zambeze, aka Kavango/Zambezi (Kaza) project, and here http://www.peaceparks.org/story.php?mid=1008&mid=28 for more information about the Wildlife Management and Tourism colleges.

POLITICAL ISSUES

India and South Africa as Partners for Development in Africa?
The South African Institute of International Affairs (SAIIA), has collaborated with Chatham House in London to produce a new briefing paper entitled: ‘India and South Africa as Partners for Development in Africa?’ The paper unpacks the relationship between India and South Africa, two countries who cooperate in many ways including through the IBSA (India, Brazil and South Africa) forum and the BRICS (Brazil, Russia, India, China and South Africa) grouping. But they also compete on other instances, especially on what the African continent has to offer. The paper examines many of the convergent and divergent areas and sets out the various approaches to issues such as multilateral reform, security matters (such as terrorism, nuclear weapons and non-proliferation) and trade relations.

Some of the key points in the paper include:

- The engagement of India and South Africa in Africa can be explained as much by the shifts in global power and realpolitik as by their desire to be seen to be playing a positive developmental role and shouldering global responsibilities.
- India articulates its Africa policy through a national-interest prism, especially with regard to energy security, trade and terrorism. Development cooperation is a by-product of its engagement in Africa rather than a central driving force.
- South Africa is currently reassessing how it articulates its national interest in the context of its African agenda. It sees India’s engagement in Africa in a positive light, especially its focus on human-resource development, ICT and agriculture.
- While cooperation between the two countries may be possible in certain areas such as the India Brazil South Africa Forum (IBSA), in others it may be too politically sensitive for them to be perceived to be working together. Both aim to advance their commercial interests on the continent, which implies an element of rivalry.
- There is scope for deepening the substance of political and economic relations between India and South Africa, which has been hampered by capacity constraints on both sides and differing priorities. Development cooperation between the two in Africa is not a priority for either but using the private sector in this field is an important potential model.


SOCIAL ISSUES

Few service providers have planned for an ageing African HIV-positive population because no one expected this group to survive to old age

In a recent article by Mills et al in The Lancet it is argued that ‘as the AIDS epidemic matures, evidence is emerging that poorly managed HIV infection exacerbates ageing diseases, leading to increased morbidity and mortality, and that exacerbated chronic diseases should now be considered AIDS-related. Cohort evaluations indicate that non-AIDS cancers, pulmonary diseases, osteoporosis, and age-related blindness, which might previously have been considered..."
of low importance due to low prevalence, are becoming major causes of reduced quality of life and causes of death’. In Africa, where the focus of attention to date has been on the provision of emergency care for the most vulnerable (i.e., children, mothers and severely immuno-compromised patients), few service providers have planned for an ageing African HIV-positive population because no one expected this group to survive to old age. However, the proportion of older persons in Africa infected with HIV/AIDS is increasing. ‘This brings both good and bad news: good news because increased access to treatments means that patients are living with longer life expectancy; bad news because meeting the complexities of geriatric care for HIV-infected adults will further challenge overwhelmed health systems.’

Source: The Lancet, Volume 377, Issue 9772, Pages 1131 - 1133, 2 April 2011 (subscription required, full article available on request)

Swaziland’s unmatched HIV-Aids epidemic can most plausibly be traced to a unique combination of biological, economic, social and cultural factors

Swaziland, home to about 1m people, ‘has the dubious distinction of having the world’s worst national AIDS epidemic’. According to the latest UNAIDS estimates, the adult HIV-prevalence rate was 25.9% in 2009. Why is the epidemic so serious in Swaziland and what has been driving HIV prevalence? In The future of AIDS: A still-unfolding global challenge by The aids2031 Consortium it is argued that ‘If the answer were known, interventions would be clear. Studies and speculation have not yielded a single neat answer. Instead, Swaziland’s unmatched epidemic can most plausibly be traced to a unique combination of biological, economic, social and cultural factors.’

Migration has been common in Swaziland for decades and it is generally agreed that migration increases the risk of HIV infection. The epidemic is also perpetuated by multiple concurrent partnering and intergenerational sex in which girls and young women have sex with older men. Although no evidence suggests that Swazis have more partners, or more frequent sex, than other groups in Southern Africa, polygamy is culturally accepted in Swaziland and sexual violence against females occurs across all socioeconomic and cultural backgrounds.

‘The picture is bleak: Swaziland is experiencing a humanitarian crisis comparable to conflict countries or those facing a severe natural disaster. AIDS here is a slow-onset disaster, leading to a long-term catastrophe and requiring an urgent, sustained response.’

Unique (complex) problems require unique solutions and a deep understanding of their co-producing factors. Swaziland is nowhere near dealing with its HIV-Aids scourge, especially not given its current financial crisis and sovereign risk issues (see the March 2011 Scan). Despite the gloomy prognosis for Swaziland, the HIV-Aids epidemic can be addressed, viz. recent declines in Zimbabwe (March 2011 Scan) due to changes in social behaviour, and the rollout of antiretrovirals in South Africa where the Actuarial Society of South Africa estimates a downturn in annual Aids related deaths from 257 000 in 2005 to 194 000 in 2010.

The challenge, and contradictions, of organised crime and urbanisation in Africa

Below is an extract of the recent opinion piece by Erin Torkelson, Researcher, Organised Crime And Money Laundering Programme, of the Institute of Security Studies in Cape Town Office:

… Today, some of Africa’s urban centres have become sites of violence and conflict. Due to the increasing interdependence of nation-states, sovereign warfare is far less prevalent and only viable against disconnected or power-less states. In contrast, this same interdependence – international flows of people, goods and capital, improved communication and transportation networks – has made urban centres increasingly vulnerable to civic violence from non-state entities. Cities have become complex geographies where criminal groups are increasingly able to challenge national governments for authority and control – organised crime, terrorism, religious and sectarian riots and protests over perceived state failures are just a few examples of contemporary civic conflict. Of these, violence resulting from organised criminal net-works is arguably the most common threat to Africa’s urban centres.

The rise of criminal networks and their ability to form parallel systems of authority has been spurred on by globalisation, urbanisation and corruption. With regards to globalisation, gangs throughout the developing world have accumulated power over time – aided by socio-political changes that resulted from the end of the Cold War – and now have close connections with global criminal networks and multi-trillion dollar illicit markets. In
Cape Town, for example, the Americans and the Firm (names of gangs) have joined forces with the Chinese Triads to exchange abalone for the raw ingredients needed to make amphetamines. With these increasingly global business arrangements, the profitability of gangsterism has become almost limitless and has fuelled rapid expansion. Against this backdrop, escalating confrontation between criminal gangs and democratic governments seems inevitable.

Moreover, the rapid urbanisation of Africa’s cities has frequently resulted in ‘grey areas’ that fall outside the rule of law and the ability of the state to provide protection and social services. Local authorities have frequently abandoned these areas, creating a power vacuum that is seized by those profiting off of illegal economies. Criminal networks use their money and influence to exert power within their communities through violence, fear and also beneficence. Were gangs to be entirely predatory, the surrounding community would likely cooperate with police to root out criminal groups. In the absence of effective state social services, however, criminal gangs secure loyalty from the community by providing employment, supporting local business, and funding sporting events and university scholarships.

Likewise, criminal über-entrepreneurs use their profits to secure loyalty from strategically positioned officials and the formal security apparatus as well. One of the findings of a recent organised crime review suggests that almost all illegal goods are transported across borders at official customs points. This means that criminal gangs bribe law enforcement agents to ensure their safe passage. In other cases, criminal gangs do not use bribery directly, instead offering authorities the opportunity to benefit from illegal profit-making opportunities. Research in Zambia suggests that the police and army often collude with human smugglers to rob vulnerable international migrants travelling through the country. What results is a series of contradictions where legitimate state authorities can be involved in criminal business (bribery, highway robbery) and illegitimate non-state actors can be seen as more acceptable providers of social services and protection (bursaries, employment).“ ...(emphasis added)


This is a fine local example of what the Global Risk Network (see here) has termed the “illegal economy” risk nexus: This nexus examines a cluster of risks including state fragility, illicit trade, organised crime and corruption. A networked world, governance failures and economic disparity create opportunities for such illegal activities to flourish. In 2009, the value of illicit trade around the globe was estimated at US $1.3 trillion and growing. These risks, while creating huge costs for legitimate economic activities, also weaken states, threatening development opportunities, undermining the rule of law and keeping countries trapped in cycles of poverty and instability. International cooperation – both on the supply side and on the demand side – is urgently needed.


Cities report looks at future

The success of South Africa’s cities, which provide 60% of the country’s economic output, is crucial to the strengthening of the rural areas and the country as a whole, Cooperative Governance and Traditional Affairs Deputy Minister Yunus Carrim said last week at the launch of the '2011 State of the Cities’ report entitled Towards Resilient Cities. According to Carrim increased support from provincial and national government through a more integrated cooperative governance system, would be key to the success of the cities in the future.

The report, which was a project of the South African Cities Network (SACN) and the Department of Cooperative Governance and Traditional Affairs, intended to assist a new generation of civic leaders and officials who would be in charge of planning, developing and managing cities after the 2011 municipal elections, by providing a framework for local innovation. The report looked at the challenges and opportunities facing the cities from an economic, spatial, structural, environmental, governmental and financial perspective. It placed emphasis on Johannesburg, Tshwane, Ekurhuleni, Cape Town, eThekwini, Nelson Mandela Bay, Mangaung, Buffalo City and Msunduzi, and assessed the progress of the metros and secondary cities over the past ten years in improving service delivery, development and governance. It also identified trends that have emerged and challenges that must be tackled in the period ahead. “For all the difficulties the cities have experienced over
the past ten years, the report points to the resilience they have shown,” Carrim noted.

Source:

The report can be downloaded here

**ENVIRONMENTAL ISSUES**

Middle income households may become more vulnerable to droughts as they transition away from traditional agriculture towards more modern agricultural livelihood strategies - evidence from Malawi and Botswana

The Resilience 2011 conference was recently held at Arizona State University. It brought together scientists from a broad spectrum of disciplinary backgrounds who are interested in the major science and policy challenges that face us all as a result of global change. The abstract below is from a paper by E Simelton et al that was presented as part of a panel on assessing the vulnerability of food security to climate change by integrating socio-economic and environmental factors.

Vulnerability to drought is determined by environmental, socio-economic and institutional factors that lead to a lack of capacity to cope with even small rainfall perturbations. Identifying who is vulnerable is necessary to target actions that limit the impacts of droughts and to facilitate better coping and adaptation strategies. It is expected that under climate change the incidence and severity of droughts are likely to increase and the Intergovernmental Panel on Climate Change (IPCC) considers African countries to be particularly vulnerable to the effects of climate change. The poor are also considered most likely to be disproportionately affected by climate change impacts, particularly those engaged in agriculture and livestock dependent livelihoods. As a result development programmes have focused on improving the livelihoods and incomes of poor rural agricultural households, particularly in Africa.

This paper develops the hypothesis that households may actually become more vulnerable to droughts as they transition away from traditional agriculture towards more modern agricultural livelihood strategies. As such it is those in middle income groups who may be more vulnerable to drought than the poor or the better-off. This paper will present qualitative evidence from households in Malawi and Botswana of an ‘inverted U-shaped’ relationship between vulnerability of livelihoods to drought and income. We hypothesize that this relationship arises because although traditional farming practices such as the use of traditional seed varieties and broadcast planting are less productive they are able to deliver harvests across a range of rainfall conditions. In contrast higher yielding modern crop varieties accompanied by the use of fertiliser have a narrower range of rainfall tolerances. High yields in “good” years, along with other assets, are therefore needed to buffer the losses from this strategy in years of drought. Middle income groups are often in transition from traditional to modern agricultural practices. As a result their use of higher yield varieties but lack of capital to buffer losses increases their vulnerability to drought.

The consequences of this hypothesis for research and policy are explored. Firstly, more empirical evidence is needed to discover the contexts in which the hypothesis is supported and middle income groups demonstrate greater vulnerability to drought. Secondly, it highlights a need for a more nuanced approach to identifying vulnerability to climate change that goes beyond focusing just on the “poor”. And thirdly, with more countries, communities and households being encouraged towards more modern agricultural practices in order to improve yields and so food security, more support is needed to help those in the middle to cope and adapt so as to reduce their vulnerability to drought while in transition.


This counter-intuitive hypothesis is potentially an excellent example of the unintended consequences that may emerge when persuading communities to modernise their agricultural practices. In cases of drought, it would seem that the poor who do not ‘upgrade’ would be the more resilient.

South Africa’s acid mine drainage wastewater is ‘mineable’

According to Dr Anthony Turton, director of Touchstone Resources, consideration should be given to studying the economic feasibility of ‘mining’ South Africa’s problematic acid mine drainage (AMD) and wastewater (mentioned in the December 2010 Scan) for metals, minerals, salt and even hydrogen. Turton is a protagonist not only of ‘mining’ AMD, but also the water in sewage works and obtaining phosphate, which is crucial for food security, as a by product. Turton favours consideration being given to the use of ion-exchange technology to remove the metals
and minerals. He advocates that the large volume of salt that becomes available in processing AMD should be considered for use in concentrated solar power plants.

Turton estimates that for every litre of AMD, up to 4g of sulphate salt are produced, plus a range of acid-leached metals and minerals. Much of the phosphate in wastewater treatment works comes from personal care products like shampoos and soaps. Simultaneously, the water will be sufficiently cleaned for safe discharge back into natural streams, or be cleaned to potable standard, and then injected into an aquifer to over-come psychological barriers.

There is also the prospect of AMD being considered as a feedstock for a hydrogen economy, with the possibility of using renewable energy to provide the electricity to crack water into its hydrogen and oxygen parts. In correcting the mispricing of water, a cue can be taken from the successful water project in eMalahleni, where an Anglo American-BHP Billiton joint venture is turning AMD into drinking water at R10 to R12/m³ (US $1.50 - $1.80/m³). "If we look at a realistic price of water, suddenly the AMD problem goes from being a problem into becoming a major asset," Turton comments to Mining Weekly Online. He believes that a well-considered government policy pronouncement can create the enabling environment for venture capital to be attracted into experimental AMD/wastewater ventures.

Sources:
See the January / February 2011 edition of Water Wheel magazine for a comprehensive overview and background of AMD

According to their website TouchStone Resources (Pty) Ltd is a 'social entrepreneur' that is engaged in prospecting for, and developing New Energy and New Water resources, in order to enable the levels of socio-economic activity that will be needed within southern Africa. Their focus is on the Southern African Development Community (SADC) area, because the limitations to economic development and social well-being across the entire region are constrained by similar resources - water and energy. New Water encompasses;
- Big Water which is about strategic storage in a region with high evaporative losses that limit the utility of dams, so their focus is on alternative storage in groundwater aquifer systems, or in old mine voids.
- Medium Water is about treating effluent, either from sewage works or from Acid Mine Drainage (AMD) effluent streams, to a level that makes it suitable for industrial purposes. This is based on the notion of water as a flux and it generates New Water by relieving pressure on existing potable water resources, while also enabling economic activity to proceed without the prohibitive costs of potable water being used for industrial processes.
- Small Water is about bringing affordable and safe treatment processes to the individual consumer, where service delivery is failing or is under stress. Part of this is about gaining access to the growing bottled water market, but in a way that avoids the normal pitfalls of bottled water.

The creation of New Energy operates at two different levels of scale:
- Big Energy is about exploration for active geothermal energy sources in the SADC Region. This uses the earth as a source of energy and involves a number of different technologies such as binary, flash steam and hot water. This generates New Energy from sources other than coal in a way that is more environmentally friendly.
- Small Energy is about the introduction of passive geothermal technologies into the SADC region, including the possibility of manufacturing locally under licence to existing foreign geothermal manufacturers. This is based on the notion of energy as a flux and it uses the earth as a sink and generates New Energy by making existing electricity use much more efficient.

More details about the above-mentioned technologies can be obtained from the TouchStone website: http://www.touchstoneresources.co.za/.

The Department of Water Affairs’ (DWA) report on AMD can be found here http://www.dwaf.gov.za/Documents/ACIDReport.pdf. In it a team of water and geology experts recommend that AMD intervention and management measures be undertaken "as a matter of urgency" to "avert impending crises and stabilise the situation". Contamination of shallow groundwater resources for agricultural use and human consumption, geotechnical impacts, such as the flooding of underground infrastructure in areas where water rises close to urban areas, and increased seismic activity, were some of the risks identified in the report.
TECHNOLOGY ISSUES

New technology that can diagnose patients with tuberculosis (TB) in two hours

The GeneXpert machine tests for TB much faster and more accurately than microscopic tests that are used to diagnose the disease, which could take between three to five months to produce results. There are only five GeneXpert machines outside the United States and a majority of them can be found in Europe. The fifth one, now in South Africa, is the only one dedicated to TB testing in the world. The GeneXpert Infinity 48, manufactured by US company Cepheid, is an automated molecular analysis machine that produces accurate results quickly, with minimal risk of contamination. The GeneXpert will be used to test sputum for tuberculosis and was donated to the hospital by the US Agency for International Development (USAID), a government agency providing economic and humanitarian assistance. The GeneXpert can detect TB and multi-drug resistant TB (MDR-TB) in two hours. The GeneXpert machine can conduct up to 48 tests simultaneously and a total of 200 in eight hours. The South African Department of Health has also purchased nine GeneXpert 16 machines, which will be put into operation in areas with a high TB incidence rate, as well as 20 portable GeneXpert 4 machines which will be used for testing in communities.


Drug-resistant tuberculosis (DRTB) is an emerging infectious disease threat to sub-Saharan Africa (SSA), particularly in the regions hit hardest by the HIV epidemic. Numerous challenges face clinicians and public health officials tasked with combating DRTB in SSA. These include difficulties providing effective diagnosis, treatment, and prevention of this illness. Furthermore, combating DRTB requires addressing various legal and ethical complexities. A sustained commitment to investigating as well as implementing new diagnostic, therapeutic, and preventative interventions is essential to defeating this threat. The use of the GeneXpert machine is a potential solution, therefore its effectiveness in South Africa could be benchmarked or studied as a pilot project for roll-out in other SSA countries.

Africa’s largest and latest fibre-optic submarine cable has brought a number of firsts to South Africa and the continent.

A new 14 000km, ultra-high capacity (5 terabits per second) fibre-optic submarine cable made landfall on the west coast of Western Cape on 26 April after landing stops in 13 countries, 11 of which are on Africa’s west coast. The cable is the first to be funded by all South Africa’s major telecoms operators, including Telkom, Broadband Infraco, Vodacom, MTN and Neotel. The “open access model” employed for WACS (West African Cable System) is a system that allows all the funders or telecoms operators that own bandwidth capacity on the cable to have equal access, despite them not having landing sites of their own. This is different from the previous dispensation that prejudiced operators that did not have landing sites of their own and left them at the mercy of incumbent operators, who often charged exorbitant service fees and often artificially restricted bandwidth, thus preventing the full exploitation of international broadband capacity.

The concept of “open access” will substantially improve access to the new cable system for telecoms providers - even those who have not invested in WACS - thus spurring competition. The new spirit of openness and competition is one that has been encouraged by South Africa’s recently updated Electronic Communications Act, which places a heavy emphasis on sharing expensive infrastructure. This can be seen in moves to even share cellphone base stations to bring down the unit cost of providing telecommunications services. The spirit of cooperation can also be seen in the clubbing together of telecoms providers to provide the new national terrestrial fibre-optic network.

Source: http://www.timeslive.co.za/business/article1034933.ece/Cable-puts-SA-on-super-fast-track

A small, but perhaps significant, example of the difference that ‘enabling’ legislation / regulation can make. For and overview of the Act see here http://www.law24.com/understand-your-legal-issue/legal-articles/index.html?domid=/slucb/ulucb/8lucb/a3wcb/b3wcb/oikfb&id=210

The WACS cable will link SA directly to Europe and London with an ultra-high capacity fibre cable pair that will allow simultaneous transmission and receiving of data at unprecedented speeds. Although the cable will begin transmitting at 300 gigabits/second (Gbps) this will ultimately be
upgraded to the design capacity of 5.12 terabits per second (Tbps). The ultimate doubling of Africa’s broadband capacity to more than 10Tbps will have very profound effects on the continent’s internet capability. Data-rich applications such as HD video-conferencing are expected to grow exponentially, video-streaming applications for educational, health and entertainment industries will also be well served by such capacity.

In a related development Brics countries expressed support for the South Atlantic Express (Saex) Cable. This 12.8 terabit cable is more than double the size of the above-mentioned WACS cable. Saex will link South Africa with Brazil through Angola. What makes this cable different, apart from its size, is that it offers the shortest route to the United States (US), which will increase the speed of data transmission. Undersea cables all currently link Southern Africa with the US through Europe.


Umbono update: A blog post by Brett Commaille dated 26 April 2011
I had the privilege of being involved in Google’s Umbono event as a mentor with Wesley Lynch and Invenfin’s Alexandra Fraser. It was organised with Silicon Cape at the V&A [Victoria & Alfred Waterfront in Cape Town] last week. It was a simple event aimed at getting the techies and the idea people together in the hope of pulling the ideas out of their heads and into the real world with the help of new found partnerships.

Surprisingly, it’s given me new hope for the start-up industry in Cape Town. It’s easy to have a networking evening where everybody drinks and chats to old mates. I saw a difference last night. People got the message – get out of your comfort zone and mingle; find a dev guy, find an entrepreneur/idea guy, ask questions and make a plan to get going. I witnessed loads of introductions and met loads of people, many of whom we hope to assist going forward. People seem to be getting the message that you don’t need to wait for funding. You can get a long way down the road with the right partners and hopefully get a basic market tested product which goes a way to justifying interest from an investor. Hopefully next time we will see more developers breaking free from the keyboards to join us.

I also saw a marked improvement in the elevator pitches. There were the usual amount of ‘off the wall’ ideas but some interesting common themes, such as education and music - clearly hot topics at the moment. For me, the best pitch of the evening was the one that really spoke to the need which everyone immediately identified with – the neighbourhood watch support software. Yes, it’s a hot topic, but it was well presented, in that the presenter spoke to a need we could clearly understand, indicated how they would solve it, and literally had us picturing how we would use it. There was an audible acknowledgement from the audience with the usual – ‘why didn’t I think of that?’ expression.

There were lots to learn about techniques from the 30 or so pitches and I would encourage anyone with an idea or a business to practice their pitch often, getting up to pitch whenever you are given the opportunity. I know of guys who invent fictitious concepts when they are given a chance to pitch, just to practice their skills. So, well done to Johanna Kollar from Umbono and Roger Norton from Silicon Cape for getting things going at the front end of the business creation chain. Let’s see how we can assist in making these concepts and fledgling business into the stuff that legends are made of.

Source: http://www.realmdigital.co.za/post/umbono-steps-out/