### POVERTY, DEVELOPMENT AND DONOR ISSUES
- UK government will enforce open access to development research
- Obama v Kofi Annan: Who has the best model for agriculture in Mozambique?
- U.S. intelligence predicts poverty to plummet by 2030

### ECONOMIC ISSUES
- What rural women can do with R2 (24 US cents) a week
- Location a key determinant of South Africa’s opportunity inequality
- The South Africa-SADC remittance channel

### POLITICAL ISSUES
- What has happened to the protection of rights in SADC?
- Democracy and Change: What are the Prospects for an “African Spring?”

### SOCIAL ISSUES
- University’s iShack project upgrades informal settlements
- TB drugs chalk up rare win

### ENVIRONMENTAL ISSUES
- Bioprospecting to aid community
- Renewable energy bond

### SCIENCE & TECHNOLOGY ISSUES
- Homebrew apps have arrived
- Signs of technology convergence in Southern Africa
UK government will enforce open access to development research

The results of scientific research that tackles disease, food security issues and poverty in the developing world will become freely available as part of the [UK] government’s plans to open up access to publicly funded studies.

The requirement for open access to development research will be announced [in early August] and apply to all work funded by the Department for International Development (DFID) after 1 November 2012. The policy will put the department in line with the push for open access across the rest of [the UK] government. [During July], UK science minister David Willetts announced that all published scientific research funded by the UK Research Councils would be immediately available for anyone to read free of charge by 2014.

DFID’s policy means money will be made available to pay journals for publication. This “gold” open access model means that research papers become available immediately online without any subscription or one-off payment required by readers. Duncan Green, head of research at Oxfam, welcomed the moves by DFID.

The paywalls around journals, which can each cost several thousand pounds per year to access, meant that NGOs would often not use the latest research in their area. “If that’s the case for a fairly well-connected, cosmopolitan NGO like Oxfam, think what it’s like for someone on the ground in Kenya or Mali,” said Green. “There’s been a serious apartheid of information and analysis.”

DFID officials will consider sanctions against researchers who do not make their work freely available after receiving a grant from the department, in proposals similar to those announced by the Wellcome Trust in June. One option would be to penalise future grant applications from researchers who do not make their DFID-funded work open access, which could have a significant impact since the majority of people who get funding from DFID are likely to apply repeatedly. Another sanction could be to withhold the final tranche of funding in a grant, if the resulting research is not destined for an open access journal.

Source: http://www.guardian.co.uk/science/2012/jul/25/uk-government-open-access-development-research

Oxfam’s Duncan Green added that he hoped that a wider availability of primary research material would break down the silos in which development researchers and practitioners operate. “We have the development practitioners, who can’t afford £2000 (US$3100) for a journal [subscription] and academics, who are working separately. Once those silos have been broken down, we will understand what academics are doing much better and academics will be speaking to our kind of needs much more. There will be a dynamic process where the research will become more useful as well as more accessible.”

See here http://www.economist.com/node/21552574 for a good, short overview of open access academic publishing, and here http://www.economist.com/node/21559317 for a recent article covering the implications it may have.

Obama v Kofi Annan: Who has the best model for agriculture in Mozambique?

Mozambique is a development paradox. Rural poverty is increasing despite high growth rates and billions of dollars in aid. Now the country has been targeted by two contrasting models of agricultural development. The Obama model was backed by the G8 in Washington in May, while the Annan model was proposed by the Africa Progress Panel (APP). Which works better for the poor?

The APP is heavyweight and conservative, chaired by Kofi Annan and with members including a former IMF head and a former US Treasury Secretary. It says one of the biggest dangers in Africa is the growing inequality between rich and poor, which is creating a threat of social instability. In sub-Saharan Africa “the current pattern of trickle-down growth is leaving too many people in poverty.” And the panel warns that Mozambique is one of the more unequal countries in Africa. The APP points out that Mozambique is a net importer of staple foods, despite having huge agricultural potential.

The APP report calls for “fundamental change” in both donor and African government policies. “Raising the productivity of smallholder farmers is critical. Smallholder agriculture must be placed at the centre of a green revolution in Africa.” This will require more government action and

ISSUES

POVERTY, DEVELOPMENT AND DONOR
more support for small farmers. Let’s call this the Annan model.

The second agricultural model for Mozambique was agreed in Washington in May, when G8 leaders adopted a New Alliance for Food Security and Nutrition proposed by President Barack Obama and USAID. The idea is to use giant agribusiness to end hunger in Mozambique and five other countries. The first project in Mozambique will be to support Cargill, the giant grain trader and largest private company in the world, to take 40,000 hectares of farmland. US officials say this will include some smallholder contract farming, which means Cargill will not make enough profit from the investment, so the giant transnational grain trader must be subsidised from G8 aid. Let’s call this the Obama model.

The two models are incompatible. The Africa Progress Panel report points specifically to the very large land concessions in Mozambique, and warns that “for Africans, the benefits of large-scale land acquisitions are questionable.”

The United Nations Development Programme (UNDP) recently issued its [Africa Human Development Report 2012](http://www.oxfamblogs.org/fp2p/) which points to “the recent international scramble for land in sub-Saharan Africa” and urges caution on big foreign investors.” Much agricultural technology for producing crops is scale-invariant (it is as efficient on small farms as on large), so large farms should not be expected to be inherently more efficient.” The report warns that “private investors naturally prioritize their own objectives, not the well-being of the poor and vulnerable.”

To be fair, Mozambique’s experience with large investors has not been all bad. Indeed, a single US multination has probably done more to reduce poverty in Mozambique than any donor action – and without subsidy and without grabbing any land. Universal Leaf Tobacco has agreements with 150,000 peasant families, and their earnings from tobacco have lifted thousands of families out of poverty. How ironic that the antidote to poverty should be a poison, tobacco.

But Universal’s success is due to a different model to that of Obama – outgrower or contract farming. The company provides seeds, fertiliser and other inputs as well as extension services, and guarantees to buy the crop. In return, the farmer must sell her tobacco to Universal. This package works because of two factors: first, risk is shared, so if a drought or cyclone destroys the crop then farmers do not have to pay Universal for the seeds and fertilisers they received. Second, the market is guaranteed; if a farmer grows tobacco, she can be sure to sell it.

Elsewhere, Mozambique has the lowest agricultural technology levels in southern Africa, because under the present free market policies, peasants are expected to carry all the risk – of weather, pests and a lack of market. Mozambican farmers are very poor – the average rural cash income is $31 per person per year. That is less than the price of a bag of fertiliser. Very few peasant farmers are willing to risk their whole year’s income on fertiliser, or better seed, or a different crop. The problem for Mozambican peasants is that foreign companies will only share the risk with tobacco and cotton, and are not interested in other crops. And under the present free market system pushed so hard by the international community, the state is not allowed to share the risk for maize and other domestic food crops.

Nearly all Mozambican farmers still use only a hoe, and do not have a tractor or oxen to plough, so they can only farm 1.5 hectares. Now, international investors are noticing that this leaves vast tracts of underused land. The difference between the Annan and Obama models is how that land is to be used. The Obama model is that giant northern agribusinesses like Cargill with G8 help should take that land and end poverty through what the APP calls “the current pattern of trickle-down growth”. The Annan model would upgrade millions of peasant farms to up to 5 hectares each, using most of the available land, but providing initial support with mechanical ploughing, inputs and assured markets.

Will the Annan or Obama model lead to the biggest reduction of poverty and the best use of Mozambique’s land?


### U.S. intelligence predicts poverty to plummet by 2030

Poverty across the planet will be virtually eliminated by 2030, with a rising middle class of some 2 billion people pushing for more rights and demanding more resources, the chief of the top U.S. intelligence analysis shop said recently.

If current trends continue, the 1 billion people who live on less than a dollar a day now will drop to half that number in roughly two decades, Christopher Kojm said. “We see the rise of the global middle class going from 1 to 2 billion,” Kojm said, in a preview of the National Intelligence Council’s global forecast offered at the Aspen Security Forum in Colorado.
"Even if some of the most dire predictions of economic upheaval" in the coming years prove accurate, the intelligence council still sees "several hundred million people ... entering the middle class," Kojm said.

The rising middle class will have little tolerance of authoritarian regimes, combined with the economic resources and education needed to challenge them. "Governance will be increasingly difficult in countries with rising incomes," he said, adding "middle-class people have middle-class values and aspirations" for greater individual empowerment and are now armed with social media and other technological tools to bring that about, including the overthrow of repressive governments. Education levels are also rising, with graduation rates for women set to exceed that of men if current trends continue.

On the negative side, Kojm predicted food demand will rise by 50% in the next 18 years, though global population will only rise from 7.1 to 8.3 billion. Middle-class people want middle-class diets, which are heavy in meat, requiring more water and grain to produce, he said.

Adding to that, "nearly 50% of humanity will live in water-stressed regions by 2030," he said. But Kojm also predicted new technological developments could help close the gap between food and water shortages and need.


Forecasts such as the one above are fascinating and important for development analysis work. However, it is useful to always keep in mind that these projections conceal complexity and uncertainty. Viz. the recent fracas about where the future poor will live. In two new working papers Where do the world’s poor live and Is global poverty becoming a matter of national inequality, Institute for Development Studies fellow Andy Sumner argues that global poverty will increasingly become an issue of national inequality with at least half and possibly up to two-thirds of the world’s poor people continuing to live in middle-income countries (MICs) up to 2030.

However, Homi Kharas and Andrew Rogerson (of Brookings Institute and ODI respectively) state in their Horizon 2025: Creative Destruction in the aid industry report that "by 2025 most absolute poverty will once again be concentrated in low-income countries." They argue that middle-income countries will continue to make progress against the poverty that remains in their midst, reducing its incidence there. So which is it – will the future poor be in MICs or LICs? To follow the debate see here Conflicting views about poverty, here Should poverty be defined by a single international poverty line and here Looking to the future of development and humanitarian aid.

**ECONOMIC ISSUES**

**What rural women can do with R2 (24 US cents) a week**

Rural women [in South Africa] who live below the poverty line have limited access to formal financial institutions and often do not know about options for making sound financial decisions. Neither can the 15 million people on social grants access credit that is appropriate for their income bracket and be protected from unscrupulous lenders and exorbitant interest rates.

Micro-financing is one answer. Although not a new concept, community-based saving and loan groups have helped one organization based in KwaZulu-Natal, Sinamandla, give more than 15,000 rural women the opportunity to pool their collective resources and address their own poverty-related issues.

Sinamandla helps form Self-Help Groups (SHGs) which consist of between 15 and 20 women. They save a minimum of R2 (24 US cents) per week accruing capital which is added to the group savings. Loans are repayable at an interest rate of 10% within the time-frame agreed among the members which is usually a month. Over time, the amount saved increases and the loan amount grows as the interest rates which is added to the group savings.

SHGs are managed by Sinamandla partner non-profit organizations (NPOs) that work in areas of health and social welfare. One staff member of these partners is employed to support the formation, training and monitoring of SHGs. Through working with partner organizations, Sinamandla enables NPOs to build financial self-reliance into their development interventions. In 2011, 12 NPO partner organizations in KwaZulu-Natal, the Eastern Cape, Mpumalanga, Limpopo and the Free State supported 383 SHGs with 5,653 members who assist more than 30,000 family members. SHGs saved R1 503 156 (US$183 000) and borrowed R3 415 514 (US$416 000) from 27 238 loans. Since inception in 2007, 11,000 SHGs have been created and 85% are still functioning.

SHGs form part of a three-tiered model which develops community-driven...
conglomerates as powerful development forces in poor areas. A minimum of eight SHGs that comply with set criteria can form Cluster Level Associations (CLAs) to take up issues beyond the scope of individual SHGs.

Sinamandla currently has 38 CLAs in operation. If CLAs and SHGs continue strengthening, up to nine CLAs can form a Federation which is an important step in taking over the administrative tasks conducted by partner organizations.

Very few such conglomerates exist albeit one collective in Pietermaritzburg aiming for Federation status. Zimele has been managing SHGs for almost six years and is comprised of nine clusters and 1,200 women. They run a number of home-based care activities, food gardens and crèches around the rural areas of Swayimana and Bergville.

The financial benefits of this micro-financing approach in fact underscore the strong social fabric created through functioning SHGs. Sinamandla creates community amongst its groups around the country through running an annual ‘Self-help Awards’ for exceptional partner organizations, CLAs, individual SHG members, and community facilitators. Sinamandla Annual Reports are littered with these success stories.

SHGs are autonomous, self-regulating and help amplify social grants and encourage less dependency on this form of government support. Social grants afford basic survival such as helping maintain basic shelter, and provide money for children to attend school. SHGs on the other hand provide an opportunity for greater quality of life. Women can renovate homes, buy school uniforms and stationary, pay for transport to clinics and start other income-generating activities. Who would have thought only R2 a week could do all this?

Location a key determinant of South Africa’s opportunity inequality

Where a South African child is born and lives remains the single largest factor in determining access, or otherwise, to basic opportunities such as education, healthcare, water, sanitation, electricity and early childhood development programmes, a new World Bank report shows.

The finding emerged though the application of the bank’s Human Opportunity Index (HOI) methodology, which uses public domain statistics to measure inequality of opportunity in a society. Poverty reduction and economic management network lead economist Ambar Narayan, who presented the findings in Johannesburg on 24 July as part of the release of the bank’s biannual ‘South Africa Economic Update’, said the prevailing disparities in opportunity between a child living in a suburb as opposed to those in an urban township, or a rural village, were “huge”.

The second most important factor in the prevailing inequalities of opportunity related to the education of the head of the household, which typically determined the level of access to quality education and health insurance.

The report found that racial factors remained dominant, but that these diminished “once you take into account all the other circumstances”, such as parental education, location and the composition of a household. Nevertheless, the disparity among race groups in South Africa remained large.

The HOI analysis also showed that, while the coverage rate in the provision of services was important to encouraging more equality of opportunity, high coverage rates could also conceal variation in the quality of such services.

For instance, South Africa had near universal coverage in primary education, with school attendance being close to 100% and among the best among comparator countries.

However, the poor quality of education could be seen in the fact that only around 50% of those learners completed their primary schooling on time, which was similar to rates achieved in far poorer countries such as Nicaragua, El Salvador and Honduras.

Similarly, in the labour market, inequality of opportunity in employment is high, while the situation was particularly challenging for young workers, as well as residents of townships, informal settlements and rural areas.

“An equitable society would not allow circumstances over which the individual has no control to influence her or his basic opportunities after birth. Whether a person is born a boy or a girl, black or white, in a township or leafy suburb, to an educated and well-off parent or otherwise should not be relevant to reaching his or her full potential,” the report notes.
But it also states that for an unequal society, such as South Africa, there were “no simple, elegant policy solutions in the quest for equity”.


The World Bank study confirms what is instinctively known by many South Africans – that there is deeply entrenched inequality of opportunity. This is nowhere better communicated than here [http://www.youtube.com/watch?v=plJR5FySRcg](http://www.youtube.com/watch?v=plJR5FySRcg) which is the National Planning Minister, Trevor Manuel, narrating an animated illustration. Well worth watching.


The South Africa-SADC remittance channel

A recent study on remittances flowing from SADC countries outside of South Africa to South Africa, managed by the Centre for Financial Regulation and Inclusion (Cenfri) finds:

- An estimated 3.3 million migrant workers from other SADC countries in South Africa, sending around R11.2 billion rand (US$1.37 billion) home each year.
- R7.6 billion (US$930 000) of which is estimated to flow through informal channels such as sending cash with a bus or taxi driver.
- Zimbabwe accounts for the bulk of the cross-border remittances market: an estimated 1.9 million (59%) of all SADC migrants are Zimbabwean and around R6.7 billion (US$820 000) (60%) of total SADC remittances is estimated to be sent to Zimbabwe each year.

The sheer volume of cross-border remittance flows and the large proportion sent informally indicates not only an untapped market opportunity for the formal sector to capitalize on, but also a strong policy imperative to reduce access barriers to the formal financial system for migrant workers and facilitate formalization of cross-border remittances.

The study integrates a variety of available data sources, combined with insights from a series of dedicated focus group discussions held with migrants and bus and taxi drivers in order to estimate total migrant and remittance numbers. [Click here to download the full report (PDF, 0.56MB)](http://www.polity.org.za/article/location-a-key-determinant-of-sas-opportunity-inequality--report-2012-07-24)

POLITICAL ISSUES

What has happened to the protection of rights in SADC?

For about the last year and a half a vital aspect of the Southern African Development Community (SADC) legal regime, the ability to enforce the rights and obligations in the legal instruments of this regional arrangement, has been suspended. The terms of the Judges (Members) of the Tribunal have also not been renewed. There are no indications yet as to when and how the judicial function in the organization will be restored or what new arrangement might be put in place. And there is no public debate about the issues at stake.

Since the Windhoek meeting of the SADC Summit in August 2010, the SADC Tribunal has not been allowed to hear any new cases. This is a consequence of decisions taken by the SADC Summit at is Windhoek Summit. At this meeting it discussed, amongst other matters, the recent rulings by the SADC Tribunal against Zimbabwe. Those judgments were not implemented. It was, instead, decided to commission a new study on the role, responsibilities and terms of reference of the SADC Tribunal. This development was triggered by the rulings by the Tribunal that provisions in the SADC Treaty had been breached by the actions of the government of Zimbabwe. The Campbell case involved a national of Zimbabwe and his claim that his basic rights had been violated as a result of the expropriation, without compensation, of his private property. The SADC Tribunal became involved after all efforts at obtaining judicial protection through the courts of Zimbabwe had failed. In the later Gondo case the Tribunal again ruled against Zimbabwe for other violations of basic human rights and the failure to honour local judgments on compensation for the violation of private rights.

The SADC Summit decisions give rise to serious concerns about the rule of law in this organization and about the protection of rights. The decision to suspend the functioning of the Tribunal has resulted in the de facto amendment of the Treaty and Protocol on the Tribunal, but involving what is prima facie an ultra vires action on the part of the Summit. It does not have the power to suspend the judicial arm of SADC or any part of the Treaty. If changes to existing legal instruments become necessary they should be brought about by giving effect to...
the amendment provisions in the applicable legal instruments. The SADC Tribunal is one of the main institutions of this organization and it derives its powers and legal status from the SADC Treaty, as further defined in its own Protocol.


**Democracy and Change: What are the Prospects for an “African Spring?”**

An op-ed by Jolyon Ford, Senior Analyst (Africa) at Oxford Analytica. He writes a blog on the intersection of business and politics in Africa at [http://www.privatesector-publicworld.blogspot.co.uk/](http://www.privatesector-publicworld.blogspot.co.uk/)

High unemployment and expectations among a bulging youth population, cost of living pressures, aging long-time rulers and government that is unresponsive and unrepresentative. The coexistence of these factors helped drive the 2011 uprisings in North Africa. In varying degrees and combinations, they are also evident across much of the rest of the continent, generating, over the last year, a mini-literature on the prospects for equivalent protest movements and moments in sub-Saharan Africa.

Broadly speaking, and perhaps with the possible exception of Sudan, it will remain too simplistic to argue that by analogy to the Arab Spring or some more direct “contagion,” sweeping social protest and political change are inevitable and imminent in sub-Saharan countries. This is even true—and in some cases especially so—in those settings with very little pluralist democratic space. Drivers of unrest and avenues for unrest are distinct; the fact that all the ingredients for mass discontent are ostensibly present in Cameroon, for example, does not make popular revolution there a foregone conclusion. Moreover, Mali’s experience in 2012 provides a caution against blank assumptions about popular resistance to autocratic elements: there we have recently seen a crowd demonstrate in support of a military coup against a democratic and relatively benign administration.

The first point to make is thus a general one: the limited utility or viability of making comparisons between regions and countries, whatever the shared ostensible drivers of discontent. The context for political mobilization and its forms differs markedly between sub-Saharan African countries. Niger and Nigeria have entirely different dynamics and democratic currents; insights on Mali are not necessarily of much use in anticipating outcomes in Malawi. It is true that ideas and examples now spread more quickly, and that the Arab Spring certainly both unnerved less legitimate authorities and inspired activists across sub-Saharan Africa. However, country-by-country analysis will continue to be more useful than broad-brush comparative efforts—including the present one.

The second point to make is that prevailing claims that many African polities face an inevitable “Tahrir Square” phenomenon overlook the fact that despite on-going rapid urbanization, most African populations remain predominantly rural. Meanwhile, educated, newly “middle-class” urban dwellers, are not necessarily interested in what it takes to displace incumbent governments. Like the middle classes, social media played an important role in Egypt’s revolution. However, while mobile technology has spread exponentially in sub-Saharan countries, average Internet penetration rates are still generally very low (below or around 10%).

Although mass access to the growing fusion of mobile and Internet technology will steadily transform African political landscapes, radio broadcasts are still the primary source of news for most people on the continent—and relatively easy for more autocratic regimes to control. It is too simplistic to assume that Africa’s exponential growth in mobile phone-based banking—and the financial inclusion it portends—necessarily translates into similar advances in communicating political ideas or in greater political inclusivity.

Initiatives to increase Internet access—such as the World Bank’s Kenya Open Data Initiative launched last year, or Google’s 2011 Orange deal across Africa—will not necessarily promote Egypt-style protest movements for at least two reasons (other than the time it will take for more universal access to these services). Such initiatives may make it easier to view government
information, empowering civil society groups and political parties to make more coordinated campaigns—but if so, this trend would point to formal rather than street politics as the main avenue for growth in political expression. Moreover, authoritarian forces can also use the new technologies to monitor or discredit opponents. Where this fails, blunt and more familiar techniques still work in physically smothering dissent without provoking further outbreaks.

A third important, perhaps obvious, distinction is that unlike the North African countries, democratization of one form or another had come to much of sub-Saharan Africa in the 1990s: in general, although there is widespread dissatisfaction with corruption, poor service delivery and infrastructure, and growing social inequality, there is not the same long-term democratic deficit or ready constituency for change as that which fuelled the Arab Spring.

Take South Africa: its youth unemployment rate suggests that in theory the country should be ripe for widespread, sustained mass protests. This time last year, many local commentators made the too-easy leap from “joblessness” to “imminent unrest”. Yet a much-publicized “economic freedom” march last year on the Johannesburg Stock Exchange and Chamber of Mines yielded a crowd only a fraction of the size and intensity that black South Africa’s massed public is historically capable of. This is partly explained by the particularities of ANC politics and personalities (and municipality-level protests are increasing), but it also reflects that South Africa is a democratic country with ample party, union or other avenues for free political expression. African democracies from South Africa to Senegal (where robust youth-led street protests in 2011 did not translate into full-scale uprisings, despite some analysts’ predictions), the multiparty landscape is different, but there is still sufficient faith in public institutions that the medium-term prospects of any wider popular uprising are weak.

In autocratic countries, other examples show that for reasons other than (often very real) fear or futility, sub-Saharan populations make different calculations that do not necessarily point to Arab Spring-style uprisings. Angola’s democracy is highly dysfunctional and its social inequalities are highly visible—yet memories of its long civil war are still one important factor preventing recent urban protests from spreading into Luanda’s slums; many urban Zimbabweans appreciate the existing political compromise and understand that mass protests could provide a pretext for overt military rule in the name of “restoring public order”; the reason Swaziland’s 2011 fiscal crisis did not lead to mass uprisings in Africa’s last absolute monarchy is not only that the authorities tolerate no dissent, but also because most Swazis are socially conservative and reluctant to challenge the royal household and traditional leaders in overt ways. (Attempted) revolution of some sort may be a matter of time in more politically austere settings from Ethiopia to Equatorial Guinea, but if this occurs it will not necessarily manifest as popular uprising; since independence Uganda has never experienced a peaceful transfer of power, but when the current president finally leaves office, it is far from obvious that the mass popular will (through the street or ballot box) be the cause.

2011 was marked not only by the Arab Spring but also by the “Occupy” movements in many major Western cities. The phenomenon sparked few, if any, analogous events in sub-Saharan Africa. Social protest in Africa is more likely to revolve around land or extractive sector schemes (in rural areas) or cost of living, electricity and other services, and high-profile instances of corruption or abuse (in urban centres) than around the more structural reform agenda discernible in the “Occupy” movement.

Even so, as I argued elsewhere, Tony Blair’s claim that Africa is now entering a “post-ideological age” is surely wrong. The terms on which national wealth is extracted and exported, and the role of the state in the national economy, remain deeply politicized issues in more mature economies like South Africa’s. The overall ‘national idea’ for how countries should grow and share their wealth is far from resolved in other evolving export-driven African economies. In this sense a generalization is possible: political change in many settings in sub-Saharan Africa will continue to revolve around contests, democratic or otherwise, for control of the state apparatus and, through it, economic opportunities. Social protests, sometimes becoming paralleling political ones, are likely to revolve around unmet expectations of populations who do not perceive a fair or sufficient socio-economic dividend from the prevailing political order.

**SOCIAL ISSUES**

**University’s iShack project upgrades informal settlements**

Stellenbosch University’s iShack project, which aims for “improved” shacks [shanty
This very promising project originated in 2011 when a group of postgraduate Sustainability Studies students started working on the challenge of incremental upgrading of informal settlements. Some worked on energy and others on water and sanitation. By 2012 there was a core group of five, two working on Phds (one an economist, the other an engineer) and three on their Mphil theses (waste, energy and institution building). See here http://thehopeproject.co.za/hope/blog/Lists/Posts/Post.aspx?ID=54 for a more descriptive piece and some pictures of this endeavour.

Meanwhile the Sustainability Institute is also experimenting with a retrofit of a standard RDP house (typical small type of house that the SA government provides/pays for). It is made of compressed earth blocks which contains an additive to strengthen it. The house is aimed at having a larger square metre footprint (50.7 sqm) and sustainability principles incorporated into it. The house will be fitted with solar panels to feed into a battery which will store the energy to power the entire house, along with a solar heated geyser for further reduction in energy consumption and associated costs.

TB drugs chalk up rare win

Earlier this year, two companies filed for regulatory approval for drugs that should enhance existing TB therapies, and at the XIX International AIDS Conference in Washington DC, researchers unveiled a combination therapy that could cut the time taken to treat drug-resistant TB from two years to just four months.

"The field of TB drug discovery is the most exciting it's been in 50 years," says William Bishai, director of the KwaZulu-Natal Research Institute for Tuberculosis and HIV in Durban, South Africa, which is slated to open in October. "I'm very impressed by the combination therapies in development because they'll give clinicians a roadmap on how to best partner drugs to prevent resistance."

The progress is being driven by an infusion of government and donor money. And it is being helped by a 2010 change in guidance from the US Food and Drug Administration (FDA), which makes it easier for developers to gain approval for novel drug combinations.

Drug cocktails are a key weapon against TB because Mycobacterium tuberculosis, the bacterium that causes the disease, quickly evolves resistance to individual drugs, says Melvin Spigelman,
Bioprospecting to aid community

The Komaggas community in South Africa’s Northern Cape province stands to benefit in both monetary and non-monetary terms from the bioprospecting permits that Water and Environmental Affairs Minister Edna Molewa awarded to seven community organisations last week.

The permits will allow these organisations, who work with plants, to legally engage in bioprospecting activities. Bioprospecting involves searching for, collecting and deriving genetic material from samples of biodiversity that can be used in commercialised pharmaceutical, agricultural, industrial, or chemical processing end products.

Awarding the permits at a local community hall in Komaggas, Molewa said the South African benefits of biodiversity or ecosystems services were estimated at R73-billion (US$8.9-billion), contributing 7% of the country’s gross domestic product per year.

South Africa’s Bioprospecting, Access and Benefit Sharing Regulatory Framework: Guidelines for Providers, Users and Regulators was also launched at the ceremony. The legal framework provides a huge opportunity for economic growth, sustainable development and poverty alleviation.

According to the department, researchers have successfully cultivated a selection of naturally occurring Sceletium as a new commercial crop on a large scale and developed a standardised extract known as Zembrin, which is manufactured to the European Union’s Good Manufacturing Practice (EU-GMP). The plant is associated with the treatment of anxiety, stress, mood and cognition.


A good example of ecosystem services contributing to poverty alleviation in practice. (The principle has been mentioned in previous editions of the Southern Africa Scan newsletter.) See also here [http://www.southafrica.info/about/sustainability](http://www.southafrica.info/about/sustainability)

**Renewable energy bond**

South African bank, Nedbank, has developed a new investment product for green-minded South Africans who want to take responsibility for their financial security, but also make a contribution towards protecting the environment. The dual-purpose Green Savings Bond, a first for the country, encourages people to save more, and at the same time participate in funding renewable energy products in the country.

There is nothing highbrow about the Green Savings bond. It requires a minimum investment of only R$1 000 (US$122), and offers an interest rate of up to 7.50% per annum. The interest rate is fixed and varies according to the investment term. No fees or commissions are levied to the client.

Investors can decide when they want to access their funds, at 18 months, two, three or five years. There is also the option of having interest paid out monthly, quarterly, half yearly, annually or on expiry of the investment. Although clients cannot add more money to the initial investment amount, there is no limit to how many Green Savings Bonds a single investor can hold.

Mike Peo, head of infrastructure, energy and telecoms at Nedbank Capital, explains that all the capital raised through the Green Savings Bond will be set aside for investment into renewable energy projects financed by Nedbank Capital. “The product is another step forward to building South Africa’s green economy,” Peo says. He explained that all risk associated with investing in such projects will be carried by Nedbank Capital. “Nedbank Capital supports many renewable energy initiatives, and recently it also became involved in the Department of

**ENVIRONMENTAL ISSUES**


- Working for Water, which was established in 1995 and has over the years created 397 146 work opportunities. It aims to combat the impact of alien invasive species.
- Working for Wetlands, which was founded in 2004 and has rehabilitated over 800 wetlands, creating 15 000 jobs for mostly marginalised rural communities. The project focuses on the rehabilitation, protection and sustainable use of South Africa’s 110 000 wetlands.
- Working on Fire, which also recruits from disadvantaged backgrounds and offers work opportunities to 4 800 fire fighters in 107 bases around South Africa.

There really should be many more such programmes, which should also be effectively run.

[http://www.southafrica.info/about/sustainability](http://www.southafrica.info/about/sustainability)

Since 2008, the World Bank has raised more than $3-billion in Green Bonds, proving just how successful such an investment product can be. Some of the projects that have received funding from its Green Bonds include solar and wind installations, greater efficiency in transportation, fuel switching and mass transport, waste management, construction of energy efficient buildings, carbon reduction through reforestation and food security improvement. See here for details http://www.nedbank.co.za/website/content/products/product_detail.asp?SubcatId=502&SubSubcatId=1869&ProductId=639

SCIENCE & TECHNOLOGY ISSUES

Homebrew apps have arrived
Last year Eddie the pig took Chile by storm. The iPhone game “ePig Dash”, featuring Eddie, dislodged “Angry Birds” to become the number-one paid game on the Chilean App Store. By itself, the story of a cute, if flatulent, pig pushing a bunch of irate birds off the top spot is nothing unusual. What is odd is that the creator of “ePig Dash”, a conjuror and economics teacher, knew little or nothing about programming. Instead he used GameSalad, a do-it-yourself tool for app-makers.

DIY is hot. In May Research in Motion, the maker of the BlackBerry, unveiled a kit that allows people with no programming skills to create a working app within minutes. Apple, too, has applied for a patent indicating it is also building a DIY tool for its mobile operating system. And in March the Massachusetts Institute of Technology released a beta version of App Inventor, which allows even simpletons to make apps for Android phones.

Several start-ups already offer DIY app services. Conduit, a firm which was valued at $1.3 billion after J.P. Morgan acquired a 7% stake for $100m earlier this year, allows people to build mobile apps themselves with a simple graphical interface. AppMakr, a similar service, has helped to create some 10,000 apps. Users include individuals, small businesses and the Harvard Business Review. AppMakr also offers its users help in bringing apps up to standard before submitting them to Apple’s picky App Store. Other services publish to Android and Windows, or bypass Apple altogether by creating web apps.

Custom-made apps can cost $10,000 or more. By contrast, DIY apps are free to create, with a subscription for continued support. Prices vary, typically from about $30 to $80 a month. Magmito, an app-building service that targets small and medium businesses, has a plan that costs as little as $50 a year. AppMakr offers a free, ad-supported service.

Small businesses and tech-savvy amateurs have been the most enthusiastic early creators of DIY apps. But they can also be a profitable business. GameSalad allows users to make 2D games for smartphones, which some choose to sell. According to Steve Felter, GameSalad’s boss, some developers even make a living designing apps on its platform.

The democratisation of technology is not without drawbacks. Apple’s App Store already has some 550,000 apps. Google offers 450,000 for download on its Android operating system. The coming deluge of apps made by amateurs will see those numbers swell.

Not all will shine. “There’s a lot of garbage on YouTube. But once in a while you find a gem and everybody passes it around,” says Ted Iannuzzi of Magmito. Professional app-makers may not be shaking in their boots just yet. But the clever ones, like AppMakr, are moving from creating stuff for mobile phones to creating the stuff that creates the stuff for mobile phones. App-creating software could be the machine tools of the mobile world.

Source: http://www.economist.com/node/21559366?fsrc=syn
c/tw/te/ar/makeyourownangrybirds

Could app-creating software be one of the ‘keys’ that ‘unlocks’ the African ICT / mobile / creative revolution? If so, it would be a beautiful example of leapfrogging -- no programmers needed.

A related issue is that of Emerging Design Centres. Emerging Design Centers (EDCs) is a for-profit enterprise that puts cutting-edge design tools in the hands of the poor. With a small amount of expert training, people in base-of-the-pyramid communities will be able to design new products for themselves. These products will be sold in markets with similar demands around the world, with a substantial share of the profits returning to the people who design them and their communities.

Signs of technology convergence in Southern Africa
Alcatel-Lucent recently said that it will supply the network equipment to Telkom South Africa (one of the largest integrated communications companies in Africa), to
dramatically expand the availability of superfast broadband services to subscribers throughout Southern Africa. The project which is part of Telkom’s strategic ‘Network Transformation Initiative’ includes upgrading the existing access network with new generation VDSL2 technology serving 4.4 million subscribers, and where commercially viable will also include the introduction of gigabit passive optical network (GPON) technologies to support fibre to the home (FTTH) capabilities. These new technologies will be key enablers for potential future services such as Video on Demand, IPTV, and high quality voice services.

In addition, Avanti Communications, an Aim-quoted company, is pinning its hopes on Africa’s fast growth rates as it prepares to launch a satellite next month that will provide broadband internet services to southern and eastern Africa, the latest illustration of increasing international interest in the continent. David Williams, Chief Executive of the satellite operator, told the Financial Times that 13% of the capacity of the satellite, which also covers the Middle East, has been presold, adding the company planned to launch another satellite dedicated to Africa in 2015. “It [Africa] has the biggest unmet demand, laying copper cable in Africa is very difficult, because it gets stolen … the cost of laying high quality fibre optic cables is enormous and prohibitive in most of Africa and yet there’s huge demand,” Williams said.