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Empowering the urban poor through changes in aid distribution

In a recent TEDx talk, Dr David Satterthwaite - senior fellow in the International Institute for Environment and Development’s (IIED) Human Settlements Group – discussed how a change in the way aid is assigned could have a large impact on urban poverty. When donors increase their consultation with, and accountability to, poor urban communities and focus on work at a local scale, a small amount of development aid can greatly assist the urban poor. The press release covering the talk follows below.

The associated Briefing Paper, which can be downloaded from here, http://pubs.iied.org/pdfs/17154IIED.pdf, goes on to explain why local funds work (local knowledge, flexible timetables, bargaining power and autonomy) and how to integrate local funding into Sustainable Development Goals. Rockefeller Foundation is in all probability well aware of these initiatives; however, the TEDx talk and IIED briefing paper are useful new resources that can be referred to, to strengthen this case.

One small change to how donors provide development aid could unlock the power of poor people in urban centres to address their own problems, says Dr David Satterthwaite, senior fellow in the International Institute for Environment and Development’s Human Settlements Group.

In a new TEDx Talk, which he gave last month in Germany, Satterthwaite tells the story of two innovative funds that have enabled low-income communities in more than 200 African and Asian cities to build and upgrade houses and improve water, sanitation and other important services.

They are exceptional cases of success, which could be replicated and scale-up massively if donors changed the way they operate. Today, aid agencies and international development banks provide US$125 billion a year in aid to national governments in Africa, Asia and Latin America.

But as Satterthwaite explains, while donors justify their aid with images of poor communities, they rarely consult to those communities about the aid they will provide. Nor are the projects they fund accountable to the urban poor. The result is often bad projects that fail to meet local needs.

The other problem is that aid agencies were not set up to work at the local scale at which problems exist. To save staff costs, donors prefer to fund fewer large-scale projects than many smaller ones.

Satterthwaite shows that another way is possible. He describes how Urban Poor Fund International and the Asian Coalition for Community Action were set up to support slum or shack dwellers to drive their own development, with the funding and its use accountable to them.

The Urban Poor Fund International is managed by Slum/Shack Dwellers International, a network of more than 30 national slum/shack dweller federations. It has supported over 200,000 households to build or improve their homes and to get tenure of their house plot and hundreds of other initiatives. The Asian Coalition for Community Action (ACCA) has funded more than 1,000 community initiatives in 168 cities.

Both funds are affecting the way city governments work, empowering low-income communities to raise more funds and work in partnership with authorities to develop their settlements and improve living standards.

There are now over 100 formal memorandums of understanding between federations and local governments. Thanks to ACCA there are now a hundred city-based funds that groups of savers from informal settlement co-manage with municipal governments.

Satterthwaite points out that the funds have achieved all of this with just US$35 million, a tiny sum when shared across so many countries, cities and communities. “Imagine if just one per cent of aid — US$1 billion — was spent this way,” he says. “We would truly transform our cities.”


Tenure Security Facility Southern Africa project: Findings from research in Malawi and Mozambique

Urban LandMark’s Tenure Security Facility Southern Africa project supported by Cities Alliance and with co-funding from UKaid by the Department for International Development (DFID) is providing technical assistance and advisory services on incrementally securing tenure in slum upgrading. The work aims to contribute to improved access to land for poorer people, which in turn contributes to improved livelihoods, active citizenship and asset creation.

As part of this project, Urban LandMark has undertaken two studies on how the poor access, hold and trade land - one study in two settlements in Lilongwe,
Malawi and the other in two settlements in Tete, Mozambique.

The studies aim to shed light on the ways in which informal land transactions occur and the extent to which they result in tenure security and asset creation in these informal settlements. Results from both the Lilongwe study (opens pdf), which surveyed the informal settlements of Mtandire and Chinsapo, and from the Tete study (opens pdf), which surveyed the informal settlements of Matundo and Mateus Sansão Muthemba, are available.

This research forms part of a larger programme of work Urban LandMark has undertaken over the last number of years, and which includes similar studies on how the poor access, hold and trade land in Maputo (Mozambique), Luanda (Angola) and Durban, Cape Town and Johannesburg (South Africa).

Source:
http://www.urbanlandmark.org.za/research/x63.php

**Regional lessons learnt**

Meanwhile the Tenure Security Facility Southern Africa project hosted a Regional Learning Event in Pretoria on 29 July 2013 where Urban LandMark shared and discussed the lessons learnt from its recent work on incrementally securing tenure in slum upgrading in Southern African sites. The purpose of the event was for the local partners in six sites to share their practical experiences and lessons learnt around incrementally securing tenure. While the six sites all have different contexts and the technical advice offered varied, in all six sites, some element of official recognition of tenure was addressed along a continuum from insecure to more secure tenure.

The regional partners included:
- In Angola, Development Workshop, an NGO based in Luanda
- In Maputo, Mozambique, ANAMM, the national association of municipalities, and with the Cities
- Alliance Country Programme there
- In Lilongwe, Malawi, the Centre for Community Organisation and Development (CCCODE), an NGO which works to link active poor communities with governments and local authorities to facilitate dialogue and solutions to meet their basic needs
- In eMalahleni, South Africa, Planact, an NGO working with an informal settlement community in Springvalley
- In Cape Town, South Africa, Sun Development Services, which works for the City of Cape Town in piloting upgrading in five informal settlements

- In Johannesburg, South Africa where Urban LandMark has provided support over several years to the city’s regularisation programme.

The lessons and experiences have informed the development of five Practice Notes and a practical Regional Guide on incrementally securing tenure. The Practice Notes and the Regional Guide are intended to provide guidance to practitioners, officials and communities who are involved in incremental tenure processes in informal settlements. For the project’s summary report see here (downloads in pdf)

**ECONOMIC ISSUES**

**Overview of illicit financial flows (IFF) in Africa**

Due to the recent G8 meeting, there has been in increase in recent press coverage around the issue of illicit financial flows (IFF) in Africa. It is a huge topic, with huge economic and development impact and consequences. Below is a good analysis piece recently published by South Africa Institute for International Affairs (SAIIA).

In 2012, Africa lost an estimated US$43-$46 billion to illicit financial flows (IFF). Calculated over time, the size of this “shadow financial system” is staggering. For instance, between 1980 and 2009 the continent is estimated to have lost around US$1.3 trillion. This is according to a report by Global Financial Integrity (GFI) and the African Development Bank (AfDB) released in May 2013.

To put these figures in perspective, for most of the 30 year sample period, IFF outstripped official development assistance (ODA) to Africa by a factor of between 2:1 and 3:1. The amount of money lost by countries such as South Africa and Nigeria place them among the top 20 countries worldwide. However, it is not only the relatively well-off economies that are losing out: the GFI report found that around a quarter of the illicit flows from Africa were from highly indebted countries.

IFFs can be defined as unrecorded (and mostly untaxed) illicit leakage of capital and resources from a country. On the source side, IFF are facilitated by weak governance systems and corruption. On the receiving end, these flows are made possible by opacity in the global financial system. What has been described as “layers of opacity” include tax havens, falsified pricing,
fraudulent foundations and anonymous trusts, money laundering, false documentation, disguised corporations ("shell companies"), offshore secrecy jurisdictions and loopholes in laws of some of the most powerful countries in the world – which in turn are home to some of the most powerful companies in the world. Moreover, globally these flows have been growing at an annual rate of around 8%; doubling between 2001 and 2010.

The magnitude of the challenge has catapulted it to the top of the global and African agendas. The issue was on the table at the recent G8 meeting, with Prime Minister of the UK David Cameron pushing for the automatic exchange of tax information between countries as well as for beneficial ownership of companies – two key reforms that, if implemented, could go some way in addressing the problem. The meeting saw some progress on both fronts, though as the economics editor of The Guardian argues, there will be a lag between the statements of intent expressed at the meeting and real change.

For its part, the African Union (AU) and the United Nations Economic Commission for Africa (UNECA) in 2012 created a High-Level Panel on Illicit Financial Flows, chaired by former South African president Thabo Mbeki. While the G8 met in Northern Ireland, the AU/UNECA panel met in Lusaka, Zambia. The two meetings discussed some of the same topics, albeit from rather different angles. This was also the topic discussed at a recent conference titled, "Capital flight and pro-poor development", co-hosted by the Centro de Estudos e Investigação Científica (CEIC) of the Catholic University of Angola and Norwegian Church Aid in Luanda, Angola on 18 June 2013.

It is important to keep the momentum in the coming months and especially in the run-up to the Group of 20 (G20) summit which will take place in Saint Petersburg, Russia on 5 and 6 September 2013. South Africa – the only African country in the G20 – could arguably play an important role in pushing for curbing IFF, particularly so because as one of the top 20 countries losing money through these flows, it has much at stake. It is also useful to note at this stage that China tops the list of countries losing money through IFF.

However, even if both of Cameron’s proposed reforms are passed, more work will remain. In addition to the automatic exchange of tax information and beneficial corporate ownership, GFI is advocating for the curtailment of trade mispricing, the harmonisation of anti-money laundering policies and country-by-country company reporting. Though there is certainly a role for both legislation/regulation and prosecution, Managing Director of GFI Tom Cardamone argues that transparency is the key. This is in part because there will always be opportunities to find new regulatory loopholes.

The GFI/AFDB report also identifies unique challenges for natural resource-rich African countries. Whereas in so-called natural resource-poor countries IFF arise largely from the mispricing of trade (a form of money laundering and tax evasion), in natural resource-rich countries, the extractive sectors is usually the main source of IFF. The size of IFF in resource-rich countries is also much larger than that in resource-poor countries. In this context, the report advocates for initiatives such as the Open Budget Initiative and the Extractive Industries Transparency Initiative (EITI). The revised EITI standard will be particularly beneficial, as it provides, among other things, for reporting disaggregated on a project-by-project basis. Similarly, the focus of the World Bank’s EITI++ on the full value chain could close additional loopholes.

Finally, even if there were no illegal flows related to Africa’s extractive sectors, questions of fairness will remain. Some of the participants at the conference on capital flight in Luanda did not phrase their arguments only in terms of combating illegality, but in a broader discourse of economic and social justice. Organisations that promote such an approach – including many faith-based civil society groups and networks such as the Tax Justice Network – point out that some types of capital flight could be legal, though still harmful. On the agenda of these organisations are such issues as overly generous tax incentives for mining companies. On these issues too there seems to be some momentum.

Though at first glance this seems like a bigger fight than that against IFF, many of these issues could arguably be tackled at the national and regional levels, by African states themselves.


Seed venture flourishes as a growing business

Interest in social entrepreneurship and the positive impact it can have on society is increasingly attracting the attention of business school students. Many schools now offer social entrepreneurship programmes or run dedicated centres helping students to apply their business skills to global social problems.
Earlier this year, the newsletters of the GSB – The win ena, a start at the – previous range bled the – Inside|Out – http://www.ft.com/cms/s/2/5d9944ec-
Southern – take cognisance of complexity. is the first of its kind on the (download pdf interesting article about the rule of significant social, 201- underdiagram illustrates where and when the -seeds must be planted, eliminating the need for -strips. The strips, which are sold in reels for R10 ($1) a metre, can be planted in soil, but for those without access to land they can also be placed in newspaper. All that is needed is sunlight and the right amount of water.

Claire Reid, inventor of the product and founder of Reel Gardening, says the paper strips use 80 per cent less water than conventional means of gardening as they absorb most of the water and indicate where watering is needed. Planting instructions are written on the tape and there are step-by-step illustrations for those who cannot read. Each tape is colour-coded to indicate the sowing depth.

Reel Gardening’s product range includes pre-packaged seasonal goods such as the “Spring/ Summer garden combo” containing seed tapes of five different seasonal vegetables that can be planted on an area of 2 square metres. Another product, the Garden in a Box, aims to make large-scale gardening easier. The box holds a selection of seed tapes of vegetables and companion plants – specific flowers to attract pollinators or deter pests. A colour-coded diagram illustrates where and when the seeds must be planted, eliminating the need to understand technical aspects such as crop rotation.

Reel Gardening is working on many community projects in poor areas where there is a shortage of water and low levels of education. As well as growing their own food, the communities can earn an income by selling surplus produce.

Source: http://www.ft.com/cms/s/2/5d9944ec-c777-11e2-be27-00144feab7de.html#ixzz2XUwvbLHt

Last year, Reel Gardening – with Emily Jones as project manager and Sean Blanckenberg director – won a social venture competition run by the University of Cape Town GSB. The contest was set up by Mr Bonnici to identify and support the best student social ventures in South Africa. The win enabled the company to benefit from the school’s Student Social Venture Programme where they learnt about business management from practitioners on an executive education course known as “Find-Make-Grow-Realise”. In addition to support from GSB’s teaching staff, Reel Gardening has joined forces with MBA students Greg Macfarlane and Dianna Moore, who are helping the company develop its business plan, offering advice on strategy and financial modelling. Earlier this year, the team won the London regional final of the Hult Prize, a global social entrepreneurship competition for students. Reel Gardening will compete against five other teams in the final in New York this September, for a prize of $1m in seed capital.

Biofuels in Zambia: panacea or problem?

A very interesting article about the rule of unintended consequences, and how seemingly obvious policy interventions, should, with the wisdom of hindsight, rather be crafted to take cognisance of complexity.

Biofuels have been heralded as a solution to the world’s dependence on hydrocarbons and are promoted under international carbon trading schemes as a mitigation tool for climate change – impelling first world governments to incorporate biofuels into energy mandates for transport industries. Due to the amount of land needed to grow biofuel crops such as jatropha, sugarcane and oil palm, the biofuels market has given rise to a rush to buy up the world’s farmland. In Africa in particular, much uncultivated land is seen as accessible, fertile and cheap. According to Pearce (2012) the continent alone accounts for a reported 34 million hectares of verified land acquisitions world-wide. This constitutes almost half of all authenticated deals. The Land Matrix, an international collaboration of organisations committed to ensuring transparency in land transfers, found that over half (55%) of African land acquisitions since 2000 were for biofuels production. The fundamental driver...
of land acquisitions specifically for biofuels in sub-Saharan Africa is the US and EU export market.

As in much of the developing world, agriculture remains central to the livelihoods of rural dwellers in many African countries, with many of the poorest households relying on small-scale farming for subsistence. Investment in agriculture is therefore considered crucial for boosting rural economies and modernising farming methods. Most governments in Africa have welcomed the flow of foreign investment via land acquisitions for biofuels, believing it will lead to agricultural reform and poverty reduction.

Zambia’s government also embraced this logic. The introduction of agricultural-based biofuels projects was intended to promote government targets of agricultural reform and poverty alleviation in Zambia. Other targets included the reduction of oil imports in order to improve energy security, while the potential of agricultural investment to enhance economic productivity was also a major consideration. The Zambian government appeared to expect that substantial foreign investment in the agricultural sector – and the agro-fuel industry specifically – would deliver socio-economic benefits to rural populations reliant on small-scale farming. Hence, specific initiatives such as the creation of farming blocks in Zambia were introduced in order to encourage the implementation of outgrower and other employment schemes in rural areas.

The policy intent was that outgrower schemes implemented via the national Farm Block Development would achieve food security for rural farmers while also creating an opportunity to grow biofuel feedstock for sale as an additional source of income, ultimately reducing overall poverty levels. A strong drive to integrate non-food crops such as *jatropha curcas* was promoted in order to meet biodiesel targets, without threatening food security.

However, this reasoning is flawed due to the allure of additional income. Small-scale farmers are reliant on profit, and because export markets have more value, it is tempting for them to convert all their food crops to cash crops (such as jatropha) where there is a willing buyer and a market, with adverse implications for local food security. Indeed, research suggests that the Zambian market for biofuels opened up so quickly there were few policy measures or safeguards in place to prevent knock-on effects on food security and crop-switching further down the line.

Further, while EU blending mandates are driving the biofuels rush, the European market is not easily accessible due to EU trade restrictions. African countries struggle to meet the strict criteria and high standards demanded. In Zambia, meeting international market demands is exacerbated by the fact that Zambian farmers are widely dispersed, and operate individually in a rural environment, without any cooperative or unionised schemes.

While the emphasis was on outgrower arrangements, the undefined policy meant there were no real specific requirements for implementation of biofuels projects, and small-scale farmers became mostly responsible for producing biofuel without the relevant legislation or supportive mechanisms necessary to take the product to international markets. Additionally, without the right policy framework, investors were not fully aware of the consequences of their operations or difficulties in implementation.

The case in Zambia was that many of the investors pulled out of their ‘contracts’, ceased operations, and abandoned the land. Reasons for failure include the economic downturn of 2008–2009, a lack of enabling rural infrastructure to take the product to market, the initial cost of capital required in the set-up of the project and possible controversy surrounding projects, particularly in light of failed crops, land conflicts and impacts on surrounding communities. Coupled with these issues, a lack of experience and technical know-how in growing agro-fuel crops resulted in many of the original biofuel crops failing in Zambia, resulting in poor yields and disappointing returns for small-scale farmers.

Interestingly, the policy measures in the [National Energy Policy of Zambia](opens pdf) provide for the use of biofuels as a source of modern energy provision for the population through the expansion of biofuels in the transport industry.

However, the National Energy Policy does not make mention of policy measures used to integrate biofuels into household use or as an alternative fuel source. This is of significance due to the high reliance of the rural population on cheap charcoal for energy needs, particularly as bioethanol is considered an expensive household fuel and out of reach for many poor people. Furthermore, the Energy Policy lays out the reasoning for the prioritisation of energy crops, including the participation of Zambians in the biofuels industry and support to farmers in this sector, and discusses the policy and legal framework necessary in order to build capacity and support the industry in an environmentally friendly way. However, a lack of foreign exchange controls
permitted the full repatriation of capital by investors while legal provisions and the high costs of entry for intending investors essentially prevents the entry of smaller, less competitive local enterprises from entering the market.

Despite the initial promise of the biofuels industry, large-scale land acquisitions for agriculture and biofuel production remain controversial and have not lived up to the initial expectations. A lack of strong policy governance and appropriate support for the industry in Zambia has hampered the development of a successful biofuels sector. Given the negative impact and the minimal realisation of economic goals in the biofuels industry thus far, the Zambian government has often put the industry on hold, acknowledging how underprepared the country was.


### POLITICAL ISSUES

#### Land rights: grounds for dispute

A recent article about the dilemmas, politics and complexities of communal land rights in South Africa. This issue, however, plays out in different formats all over the Southern African region and has enormous consequences for wealth creation and development, especially for the rural poor and especially for women.

[The South African] government has unveiled a new land tenure model aimed at giving 22 million South Africans living in former Bantustans more secure property rights. But though the model is billed as one that will speed up land reform and boost agricultural productivity, in practice it won’t.

At best, it’s a crude version of the Communal Land Rights Act, which was declared unconstitutional, and at worst it will placate traditional leaders and entrench a system where citizens live and work on land at the pleasure of the chief who controls it.

Rural communities represented in parliament at a land workshop called “Redressing the legacy of the 1913 Land Act” (opens pdf workshop programme) expressed frustration at being subjected to a land tenure and customary legal system that limited their constitutional rights. But the ANC is under pressure from traditional leaders to maintain the status quo.

Government has promised to overhaul land reform so that it makes a “radical and rapid” break from the past. What this means for communal land areas, which are home to SA’s poorest and most underdeveloped communities, is a plan that will transform the rural economy by creating opportunities for the people to use their productive assets to create wealth.

The National Development Plan (NDP), which sets out what is required to boost SA’s economic growth and which President Jacob Zuma has placed at the centre of his second term in office, identifies the lack of secure tenure for black farmers in communal areas as a major obstacle to this.

The NDP cautions: “Failing to adequately address tenure of security for black farmers in communal areas and under the land reform programme would pose a major risk to agricultural expansion. As long as these farmers (especially women) don’t have secure tenure they won’t invest in the land and agricultural production won’t grow at the rate and pattern required for growth in employment.”

Department of rural development & land reform director-general Mduduzi Shabane agrees that strengthening tenure in these areas is critical to protect the rights and interests of SA’s most vulnerable citizens, especially women, and to allow people to bequeath land to their children.

But Lamson Maluleke of the Maluleke Communal Property Association - a group that won restitution to communal land in Limpopo - says Shabane’s new tenure model for traditional areas isn’t going to change anything. This is because the model proposes single-title land ownership for overarching traditional areas. The title holder will be the traditional council.

Traditional councils’ roles as single title holders would include land allocation and “adjudication of disputes on land allocation and use”. The model also puts traditional leaders in charge of land that has been claimed by communal property associations on their communal land.

“We’ve been promised secure tenure since the restitution settlement agreement in 1996 and we haven’t got it to date. We don’t want to scrap the traditional leader system but we want to own our land,” says Maluleke, who says the state’s new tenure model replicates the Communal Land Rights Act.

This act was successfully challenged in the constitutional court in 2010 by four communities that occupy communal land in Mpumalanga, Limpopo and the North West, including the Maluleke Communal Property Association, on the grounds that it undermined gender equity and granted authority to traditional leaders who aren’t elected and whose interests don’t necessarily reflect those of the communities.

The new tenure model must also be seen in the context of two other pieces of...
legislation that reinforce the chiefs’ powers. First, the Traditional Leadership & Governance Framework Act, which was passed in 2003, resurrects the Bantu boundaries for communal land areas, which means government’s planned new land tenure model will base title on boundaries created by the 1951 Bantu Authorities Act.

“Any land reform process is going to be hollow unless it breaks from these boundaries,” says Nolundi Luwaya of the UCT’s Centre for Law & Society.

Enter the Traditional Courts Bill, which is expected in parliament this year. This centralises more power in the traditional leader than customary systems have before. It extends law-making powers to them and allows them to define customary law. At the same time, it empowers them to apply their laws in disputes, thereby making them lawmakers, judges and prosecutors.

Eastern Cape DA leader Athol Trollip says it’s time parliament passed legislation that allowed individuals living on communal land to own it.

“Government is keeping the rural poor in perpetual dependence by failing to create clear legislation on communal land ownership. It’s remarkably patronising to suggest that rural communities aren’t equipped to manage private property rights,” says Trollip.

But Stone Sizani (ANC MP), who has just been moved from his role as chair of parliament’s rural development & land reform committee and made ANC chief whip, says giving indigent people title to a parcel of land in communal areas will, like it did in Kenya, tempt owners to sell their land. Once the proceeds of this sale have been spent people will be left more indigent than before.

“Two to three decades after communal land was privatised in Kenya most of it had been sold off in the market. A few big farmers owned it while many of the original recipients were either serfs on this land or living in informal settlements in peri-urban areas,” he argues.

Trollip dismisses this, saying people should be allowed to do what they like with their land, including raising bonds against it to educate children or make improvements to their homes and farms.

But studies by the Poverty, Land & Agrarian Studies (Plaas) Institute at the University of the Western Cape agree that titling in areas that have been under an African tenure system don’t seem to create wealth or expand agriculture.

For a start, trying to define clear boundaries required for titling generates huge disputes. This makes titling vulnerable to being hijacked by powerful interest groups, including chiefs.

The ideal model, argues Luwaya, would have to recognise the practices of African tenure and offer different kinds of shared property rights. But these would have to be covered by laws to protect tenants and occupiers from arbitrary actions by owners. Citizens, she says, should also have the right to opt in or out of a customary arrangement.

An integral part of designing a new tenure system for these communal areas would have to be a system of holding traditional leaders to account, academics agree. The system would also have to be designed in consultation with communities, especially women. They make up 59% of the rural population and are vulnerable under customary law, especially when it comes to inheritance.

The question is whether government will appease voters who are questioning the current system or placate traditional leaders who are seen as the custodians of culture and powerful brokers who deliver votes.

Source: http://www.fm.co.za/politics/local/2013/06/27/land-rights-grounds-for-dispute

On the matter of land ownership, as well as ‘land grabs’, in the region, it is useful to refer to new World Bank report, “Securing Africa’s Land for Shared Prosperity”. Sub-Saharan Africa is home to nearly half of the world’s usable, uncultivated land but so far the continent has not been able to develop these unused tracts, estimated at more than 202 million hectares, to dramatically reduce poverty and boost growth, jobs, and shared prosperity. According to the report African countries and their communities could effectively end ‘land grabs,’ grow significantly more food across the region, and transform their development prospects if they can modernize the complex governance procedures that govern land ownership and management over the next decade. According to Makhtar Diop, World Bank Vice President for Africa: “Improving land governance is vital for achieving rapid economic growth and translating it into significantly less poverty and more opportunity for Africans, including women who make up 70% of Africa’s farmers yet are locked out of land ownership due to customary laws. The status quo is unacceptable and must change so that all Africans can benefit from their land.”

The report notes that more than 90% of Africa’s rural land is undocumented, making it highly vulnerable to land grabbing and expropriation with poor compensation. However based on
**SOCIAL ISSUES**

**Namibia examines innovative housing**

Windhoek is set to host the National Housing Enterprise (NHE) Alternative Building Technology Village, which will see 10 organisations invited to construct innovative low-cost housing models. As an alternative to the current brick housing offered by the NHE, innovative materials will be used to construct these model houses. Houses made with sandbags, prefabricated houses, light steel frame houses and hydra form houses are expected to be some of the designs put forward.

The New Era newspaper reports that the NHE has set aside two plots for each invited company to erect two show houses based on NHE plans. The plots have been made available at no cost, however the organisations are expected to pay for the erection of these houses.

The aim is to provide cheaper housing to NHE clients, the Senior Manager of Technical Services and Property Management, Uazuva Kaumbi, said, adding that NHE is taking speed into consideration seeing that the houses will be built much faster than the conventional brick houses.

“The cost on capital will be less, there will be less labour and a lower interest payment,” he explained. The houses will be built in days instead of months. The durability of these houses will be established once the project commences.


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**ENVIRONMENTAL ISSUES**

**Mauritius: Sustainable development and climate change education in schools**

Tourism, agriculture, fishing, the water supply - climate change threatens the very foundations of society and the economy in Mauritius. As the Indian Ocean island nation develops its adaptation strategies, it is working to ground the next generation of citizens firmly in principles of sustainable development. Launched on 5 July, the country’s National Climate Change Adaptation Policy Framework (NCCAPF) included familiar but worrying predictions for the future. Half of this tourist destination’s beaches could disappear by 2050, swallowed by rising seas and increasingly violent and frequent storms. Fresh water resources could shrink by as much as 13% while demand will rise steadily.

“We are shocked to learn that our beautiful island - or part of it - may disappear because of a rise in sea levels,” student Felicia Beniff told [news agency] IPS as she emerged from a class on the environment and climate change with four friends. “We are afraid. We have many more years to live. Where will we go?”

The teenage students at MEDCO Cassis Secondary School in the Mauritian capital Port Louis are among a quarter of a million students across the island that will be exposed to principles of sustainable development.

Mauritius is working hard to correct unsustainable practices, notably through the Maurice Île Durable. Educating youth about sustainable development is part of this long-term vision to establish a new, ecologically sound economy.

“We collect plastic bottles. We turn off the lights and the air-conditioners when we leave the classroom. We open the windows to aerate the classes. This reduces the school’s expenses. We also plant trees,” one of the students, Ashoothos Jogarah, told IPS.

Mahen Gangapersad, the school’s rector, believes Mauritians have taken the environment for granted for too long without realising the harm they cause to natural resources. The new education programme aims to correct this. “Better late than never,” he told IPS.

Tree planting, the installation of photovoltaic cells for renewable energy, endemic gardens, backyard gardening, waste segregation, compost-making, rain water harvesting and water control are now a reality at many schools. The plan is to expose the entire student population.
"So we are reaching out to 250,000 plus people," Veenace Koonjal, special adviser to the Minister of Education told IPS. He believes this training will have a great impact on awareness among the country’s population of 1.2 million as students take what they learn home to their families and communities.

The launch of the newly-completed policy framework was accompanied by the opening of a Climate Change Information Centre in Port Louis, an initiative that will gather local and regional information on climate change and make it available to everyone - scientists, engineers, architects, as well as farmers and students.

Strengthening and broadening knowledge, awareness and information about climate change is a key part of this island nation's response to global warming. Mauritius, like other island states, can expect to bear the full brunt of climate change despite contributing very little to the greenhouse gas emissions that cause it.

Further, the policy framework acknowledges that the island’s geography and topography limit what can be done to counter harmful impacts of global warming on fishing and the coastline, tourism, or agriculture.

Mauritius has already received three million dollars from the Africa Adaptation Programme - funded by the Government of Japan's Cool Earth Partnership for Africa - to integrate and mainstream climate change adaptation into its institutional frameworks and core development policies.

An official from the Ministry of Environment and Sustainable Development told IPS that a Technology Needs Assessment (TNA) project is also being implemented this year. It will receive technical support from the United Nations Environment Programme’s Division of Technology, Industry and Economics, and its Risoe Centre in Denmark. It is funded by the Global Environment Fund (GEF) to the tune of 120,000 dollars.

The key aim of the TNA is to bridge the gap between identifying appropriate technologies and the design of action plans. The aim is to allow Mauritius to implement technologies to reduce greenhouse gas emissions and support adaptation to climate change that is consistent with national development priorities.

The government hopes to secure more funding for adaptation and mitigation efforts from the Green Climate Fund, the U.N. Adaptation Fund and the GEF.

Beyond the classroom, several other programmes run by NGOs complement what young people are learning at school. The Youth be Aware programme of the Mauritius Red Cross, for example, engages 600 young people on the risks posed by climate change to the island.


An excellent example of longer-term thinking in action, whilst acknowledging that Mauritius, as a small island state, will feel the effects of climate change more acutely – this is a good ‘motivator’. At the same time proactive policy interventions like those mentioned above are considerably easier in smaller systems characterised by good governance, available finance and functioning institutions.

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**Update on Sustainable Development Research**

The International Conference on Sustainable Development Research that was mentioned in the June 2013 edition of the Southern Africa Scan newsletter (which featured the incremental urbanism innovation) took place outside of Cape Town in July 2013. The overriding theme of the conference was Just Transitions. For an initial basic write-up of proceedings see [http://www.sustainabilityinstitute.net/newsdocuments/item/international-sustainable-development-research-conference](http://www.sustainabilityinstitute.net/newsdocuments/item/international-sustainable-development-research-conference) , and for papers presented at the conference by researchers associated with the local Sustainability Institute, see here [http://www.sustainabilityinstitute.net/newsdocuments/document-downloads/cat_view/23-research-project-outputs?limitstart=0](http://www.sustainabilityinstitute.net/newsdocuments/document-downloads/cat_view/23-research-project-outputs?limitstart=0) . Some of them make for some very interesting, inspiring reading. Full proceedings, as relevant, will be checked and reported on in due course.

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**SCIENCE, TECHNOLOGY & INNOVATION ISSUES**

**Open Data Platform achieves continent-wide coverage**

The African Development Bank’s Open Data Platform is now operational for the entire African continent. This follows the completion in July 2013 of the last phase of the project for the following 14 African countries: Benin, Comoros, Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, The Gambia, Guinea-Bissau,
Liberia, Kenya, São Tomé and Príncipe, Sierra Leone, Swaziland, and Togo. Statistical data for all 54 African countries are now available to all users. In addition to social and economic statistics, data on key development topics such as climate change, food security, infrastructure, and gender equality can be accessed by researchers, analysts and policymakers worldwide.

The Open Data Platform is part of the AfDB’s Africa Information Highway initiative to scale up the collection, management, analysis, and sharing of quality statistics relating to the continent’s development. This ambitious initiative sees the establishment of live data links between the AfDB, National Statistical Offices, Central Banks and line ministries in all African countries on the one hand and sub-regional organizations, international development institutions, and a worldwide community of users on the other. By providing quality data aligned to the highest international statistical standards, the initiative will foster evidence-based decision making, good governance and public accountability. It will also allow for the tracking of progress in areas such as the Millennium Development Goals at both national and regional levels.


**SA students are supercomputing champions**

The fastest supercomputer is in China, the Tianhe-2, and runs at about 33.86 petaflops. Many countries say they intend to break the exaflop barrier in the next few decades. For some context, your single-core 2.5GHz PC has a theoretical performance of 10 gigaflops. Tianhe-2 is more than a million times faster than your computer.

Although South Africa’s supercomputer, based at the Centre for High Performance Computing is in the top 500 fastest supercomputers in the world, it is not one of the front-runners in the field. However, on [20 June], Team South Africa “made jaws drop” at the international Student Cluster Challenge in Germany when the first-time entrant trumped all the other teams, including two from the United States and two from China, the Centre for High Performance Computing.

“In a real-time challenge, teams of six undergraduate and/or high school students build small clusters of their own design on the [International Supercomputing Conference] exhibit floor and race to demonstrate the greatest performance across a series of benchmarks and applications,” the centre said.

The South African team received the highest aggregate scores in the competition. Supercomputing has become a South African focus, given the country’s status as one of the hosts of the Square Kilometre Array (SKA), a giant radio telescope that will straddle both Africa and Australia. SKA South Africa project director Bernie Fanaroff has said that the SKA will generate more raw data in one week than human kind has created in its entire existence.

Supercomputers will be required to crunch this data, and the country is trying to position itself as a player in this arena.

Referring to the student competition, the centre said: “The experience will assist South Africa grow a generation of high performance expertise for national economic development and for large projects such as the SKA.”


**HIV drug resistance test to slash costs by 80 per cent**

Researchers in South Africa have developed a low-cost tool to test for HIV drug resistance, potentially opening the door to improved treatment for users of antiretroviral drugs (ARVs).

The researchers, based at the University of Western Cape’s South African National Bioinformatics Institute (SANBI), have developed a computer-based tool, Seq2Res, that vastly reduces the costs and time involved in analysing data about viral DNA compared to conventional methods.

Simon Travers, bioinformatics associate professor and project leader at SANBI, says the tool allows HIV drug resistance testing of samples from almost 50 patients pooled together, which makes it significantly cheaper. Conventional method can only assess one patient’s data at a time.

It is also expected to be five times cheaper than the average conventional testing system.

Travers says that the tool offers a more sensitive HIV drug resistance test by identifying drug resistant viral variants circulating at low levels in individuals. Viral sequences are listed and compared to a reference virus to identify the presence of mutations that are known to cause drug resistance.