

eAfrica

The electronic journal of governance and innovation

Highlights:

Verbatim 2

Peeling Away a Banana Republic: Lessons for Africa 3

Special Feature: Climate Change

Climate Change Threatens Africa's Livelihood 4

South Gets Tech Transfer Boost for Renewable Energy 7

Emissions to Soar As Energy Demands Rise 8

The WTO Hong Kong Talks: What Can Africa Expect? 9

Comment: Reinvent the African University 11

To reprint any of the stories, contact editor@saiia.wits.ac.za or call the Nepad Project at +27 (0)11 339-2021

This journal is part of the South African Institute of International Affairs Nepad and Governance project, funded by the Royal Netherlands embassy to South Africa.

Ross Herbert – Editor/Project Leader
Luleka Mangquku – Sub-Editor
Steven Gruzd – Research Manager
Peroshni Govender – Researcher
Peter Farlam – Researcher
Helen Papas – Assistant Researcher
Miria van Rooyen – Website, Database Admin

EDITORIAL ADVISORY BOARD:
Prof Shadrack Gutto, Gillian Kettanoh,
Nick Kotch, Thabo Leshilo, Kurt Shillinger
and Richard Steyn

To subscribe:
eafrica-subscribe@saiia.wits.ac.za
Send comments and suggestions to
editor@saiia.wits.ac.za
www.saiia.org.za

ISSN: 1728-0621

Volume 3, November 2005

Climate Change: Our Gravest Threat?

AFRICA depends on aid for half or more of its public spending, which imposes a perverse system of incentives. For every public need there is a pernicious question to be answered: Do we act swiftly with our own funds or wait for donors to pay?

Unfortunately, it makes economic sense to get someone else to pay. As a result, almost all long-term problems have been shifted onto donors – from building schools to maintaining roads to fighting disease. African governments spend 80%-90% of their own funds on salaries and rely on donors to pay for the vast majority of developmental projects. Botswana, Mauritius, South Africa and North Africa are the exceptions.

But the rest of the continent depends on aid processes that are slow and cumbersome. When new problems arise, it takes years to build the political support in developed countries to fund them. And often donors allocate funds for new needs by shifting money from older programmes. To win aid, Africa must plead disaster, which creates an

inbuilt incentive to allow problems to fester until they become crises.

Resisting such incentives is no easy feat. But one long-term trend demands it: global climate change. Scientists predict that global average temperatures will rise from 1°C-5°C in the next century, which will drive marginal land out of use, spread deserts and disease, and intensify droughts, famine and severe storms. With two-thirds of the continent dependent on rain-fed agriculture, climate change threatens to destroy the foundations of African economies.

Africa cannot change the output of greenhouse gases, and even with dramatic pollution cuts, temperatures will continue to rise. The only solution is for Africa to adopt a much more forward thinking, proactive mindset. In particular, we must focus far more on modernising agriculture and building sustainable irrigation systems needed to survive the coming heat wave.

This issue of *eAfrica* examines the climate crisis and what Africa can do.



IN DANGER: Atmospheric pollution is driving temperatures higher. Africa is most at risk. Photo: The Bigger Picture

Verbatim

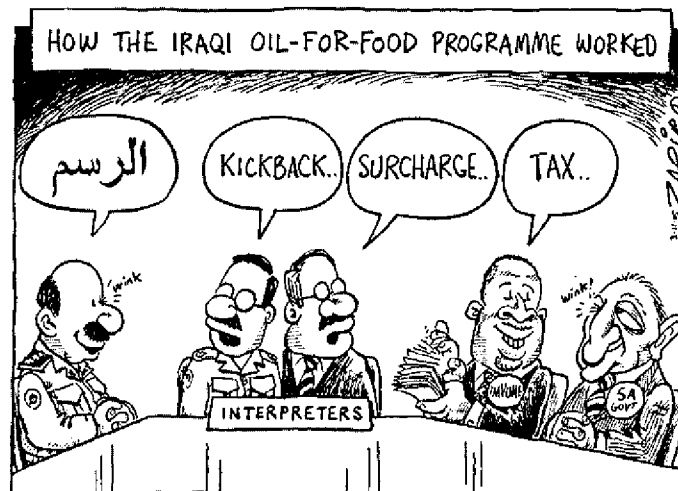
“My government will respect the will of the people.” – Mwai Kibaki, President of Kenya, after losing a referendum on a proposed new constitution.

“I’m looking for a cause, not a job.” – Yoweri Museveni, President of Uganda since 1986, responding to international calls for him to step down and consider a role in the UN. He’ll be contesting the March 2006 presidential polls.

“We’re dealing with an unpredictable government and an unpredictable leader. We don’t know what’s going to happen.” – Mugisha Muntu, an official of Uganda’s opposition Forum for Democratic Change, on President Yoweri Museveni following the return of self-exiled Kizza Besigye, who plans to contest the race for president in the 2006 elections, but has now been arrested charged with treason and rape.

“People of Zimbabwe now know that Tsvangirai is not fit to lead this country. Everybody is left with no doubt whatsoever that Zimbabwe is one country which should not be burdened with this man as its president.” – Paul Themba-Nyathi, Zimbabwe’s Movement for Democratic Change spokesperson, on the party’s decision not to participate in the senate elections. He is one of the officials who defied the party and opted to stand as a candidate.

“I think when Zimbabweans die they must go straight to heaven. You can’t go from one hell to another.” – Mlamuli Nkomo, a Zimbabwean exiled teacher struggling to make a living in South Africa.



“The biggest letdown has been that people without the slightest idea of farming got land and the result has been declining agricultural output.” – Sylvester Nguni, Zimbabwe’s deputy agriculture minister, on the country’s controversial land distribution and the resulting food shortages faced by millions this year.

“These soldiers may shoot you... so don’t accuse my government of abusing human rights if they shoot you.” – Bingu wa Mutharika, President of Malawi, on how trucks carrying food aid to millions of starving Malawians will be protected from looters and ambushers.

“We know that frightened little men will continue harassing us.” – Emily Sikazwe, a Zambian civil society activist studying in Canada, on the arrest of a newspaper editor for allegedly defaming President Levy Mwanawasa.

“Fear is finally changing sides. From now on, dictators will watch themselves.” – Boucounta Diallo, a Chadian lawyer, on the arrest in Senegal of former Chad dictator Hissene Habre who is wanted for alleged war crimes.

“I have absolutely nothing to celebrate. Life is still tough. I can barely feed my family. Nobody helps me. The state gives no support. I have no electricity. I have no water. There are no toilets. There is nothing.” – Sara Nassapolo, an Angolan a day before the country celebrated 30 years of independence on 11 November.

“We cannot afford to waste valuable time and resources on paying tribute upon tribute to our former President.” – An editorial in *The Namibian*, on accolades that are being bestowed on former President Sam Nujoma. His latest title is ‘Founding Father of the Namibian Nation’.

“Our dictatorship has succeeded in courting the West. Tunisia is an ally in the fight against terrorism, and a model of economic development. But it has done so without the West really understanding what the life is like, and the distress of young Tunisians.” – Mokhtar Yahyaoui, a Tunisian blogger who went on a hunger strike, during the UN-sponsored World Summit on the Information Society held in Tunis, to protest against the country’s stringent political and legal systems.

Peeling Away a Banana Republic: Lessons from Latin America

THE embroidered slogan on the polo-shirt of El Salvador's minister of tourism said much about the prevalent attitude: 'A government with you'. Minister José Rubin Rochi, with other ministers, had been sent out into the regions by the president in the wake of the destructive Hurricane Stan in October 2005 to show that the government did care.

El Salvador might be considered the original banana republic, the region of pliable, bendable governments. Not only was the fruit once the principal export from El Salvador and many of its neighbours, but they in turn were the target of manipulative external influences, from the American filibuster William Walker – who tried to gain control of all six Central American states in the 1870s – to Soviet and Cuban support of various guerrilla groups in the 1980s. Yet this image is being slowly peeled away.

El Salvador is showing that it is possible to deal with a violent history, skewed wealth distribution, high crime rates, a dependency on agriculture and the threat of catastrophic environmental degradation and natural disasters. Two earthquakes in 2001 cost 800 lives and left more than 100,000 of El Salvador's six million people homeless.

On a recovery path

Its civil war left 75,000 dead and cost \$5 billion. Within two years from its start in 1980, GDP shrunk by 25%.

But the war also precipitated political and economic reforms after the 1992 peace agreement. Now the government is rebuilding the country and putting themselves on the map economically.

Government showed its commitment to democracy and political reform by allowing ex-guerrillas to participate in elections, disbanding security forces implicated in human rights abuses and

redistributing land to peasant families.

The government also pushed ahead with a range of market reforms, including streamlining the tax and social security systems, privatisation of state-owned industries and liberalising trade. External tariffs went down from a peak of 360% to an average of 8% today. The banking system is the region's most liberal, with deposits now equal to 48% of GDP.

Salvador also aims to better employ the \$2.8 billion in remittances from workers in the US, which amount to 15% of GDP, and to reduce its brain drain. One-third of Salvadoreans live in the US, and 70% want to live there.

Lastly, the government has realised that ensuring macro-economic stability is not enough to deal with the backlog of social and economic problems. It has set about a number of short- and longer-term initiatives including building a tourism industry and a new airport virtually from scratch. The effect: Salvador has quickly become an air transport hub for the region.

To take advantage of its labour force, Salvador's investment promotion agency has successfully targeted high-tech industries bringing in \$1 billion in 2004.

For the longer term, education is seen as crucial to economic competitiveness and social harmony. President Elias Antonio Saca's government has focused on education reform, including the introduction of English in public schools.

Nowadays, El Salvador has a more deregulated and diversified economy, is less dependent on agriculture and is developing strong service and manufacturing sectors. But the government recognises this is not enough, a fact illustrated by anaemic growth locked around 1.5%, high crime rates and mounting debt. 'Although

we are proud of what we have accomplished up to now, in no way can we say that what we have now is what we want, or even what we aspire to,' said Saca. Moreover, the region's ability to promote export-led growth is under serious strain given the threat posed by cheap imports from China.

Lessons to emulate

Salvador, like Africa, has little option in making its own plans for a more positive future, but its recent development path offers guidelines:

- Leadership quickly runs out of new ideas. Rigorous reform requires a political system that regularly empowers new generations of leaders to bring fresh ideas.
- Government should work closely with foreign governments and business in encouraging foreign direct investment, which is both targeted and assiduously courted.
- Ruling parties must seek consensus not only within their own ranks but also among political adversaries to reduce suspicions of a radical change in strategy should the other take over.
- Providing the right economic fundamentals will not necessarily lead to growth.
- There is no substitute for education, skills and hard work in realising success.
- El Salvador's progress shows that salvation has to come from within, that external partnerships offer some rewards and possibilities through aid and market access, but an economy has to be constructed to take advantage of them. – **Dr Greg Mills heads the Brenthurst Foundation, which is dedicated to strengthening African economic performance. This article is based partly on a research visit to El Salvador in October 2005.**

SPECIAL FEATURE

Climate Change Threatens Africa's Livelihood

The world's poorest continent will be worst affected as global temperatures rise.

IN 15 years, the snows of Kilimanjaro will have passed into folklore. Africa's tallest mountain has lost 85% of its ice cap since 1920, and global warming is melting the rest, climate experts warn.

But the threat of rising global temperatures goes far beyond changes to the postcard images tourists see. The Intergovernmental Panel on Climate Change predicts that global average temperatures will rise from 1.4°C to 5.8°C by the end of this century. As the world's poorest, most agriculturally dependent continent, Africa faces a severe threat from climate change that scientists predict will spread infectious disease, increase the length and severity of droughts, reduce access to clean water, intensify the impact of tropical storms and spread desertification.

'Climate change has been happening for some time, what is dangerous is the speed of that change,' Sir David King, chief scientific adviser to the British government, told an audience in Johannesburg recently.

King was on a tour of developing countries ahead of the G8 summit, where Britain's Prime Minister Tony Blair placed climate change at the top of the agenda, along with tackling poverty in Africa. In the next few decades, the two issues may become ever more closely linked.

'Climate change is a threat to all, although its effects vary. Africa is the most vulnerable continent to climate change,' King warned.

According to a study in the journal *Nature*, higher temperatures are accompanied by the spread of disease, including water-borne diseases, heart failure, respiratory disease, rift valley fever in east Africa and dengue fever



NOT GIVING IN: Scientists say climate change is happening at a faster speed and those who mainly depend on agriculture for their livelihood will suffer the most as the changes will spread desertification and increase the harshness of droughts, among other consequences.

Photo: The Bigger Picture

with its more lethal form, dengue haemorrhagic fever.

Catastrophic

The study concluded that: 'Climate-change induced excess risk of the various health outcomes will more than double by the year 2030.' And the World Health Organisation (WHO) estimates higher temperatures have already caused more than 150,000 extra deaths a year worldwide.

'In the UK, for example, flash floods are becoming more common and more severe. In Africa, drought is likely to grow worse,' said King. 'If the continent's temperature goes up by an average of 2% – and this could double for countries at the centre of Africa – the effect on rainfall is likely to be severe. This will accentuate existing population stresses. Worldwide, rainfall has fallen by 3% since the 1970s while the average temperature has risen 0.5%.'

The recent famine in Niger is the latest reminder of Africa's vulnerability to failed rains. Across the Sahel to the horn of Africa and as far south as Malawi, the US-funded Famine Early Warning System Network lists a dozen African countries as facing current or potential food emergencies through crop failure, partly caused by drought. Burkina Faso, Chad, Eritrea, Ethiopia, Kenya, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Somalia and Sudan, all of which face creeping desertification, face greater risk as more marginal land succumbs to desert. Add to that the nations of Southern Africa that are drought prone – Botswana, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania and Zambia – and those that suffer regular major damage from tropical storms – Comoros, Mauritius, Madagascar, Mozambique and Seychelles. In all, more than half the nations of Africa will likely be directly affected and

SPECIAL FEATURE

others will feel the heat through other medical, social and economic effects.

Coastal areas and islands are also at risk, as polar ice caps melt and the sea level rises. Deforestation across Africa, either through resettlement or commercial logging, is worsening the greenhouse effect.

'Livelihoods built for generations on particular patterns of farming may soon no longer be viable. If not addressed, climate change is estimated to place an additional 80-120 million people at risk of hunger; 70% to 80% of these will be in Africa. With increasing temperatures and extreme weather events, climate change will further erode the quality of the natural resource base, thereby reinforcing conditions of poverty,' according to 'Up in Smoke', a report released just

before the July G8 summit by the Working Group on Climate Change, an advocacy group.

The possible extinction of plants used for medicine, as a result of global warming, will also damage the main source of primary healthcare, said the group. Developed countries fail to take these factors into account in their aid strategies, argued the group, which recommended helping Africa move straight to clean energy rather than burning fossil fuels and supporting small-scale agriculture to help farmers adapt to climate change (See page 6).

The science of climate change

The US has officially questioned whether human activity has caused rising temperatures or whether the present trend could be part of poorly understood global and solar

mechanisms that have driven major swings in planetary temperatures long before industrial pollution set in. However, King and many scientists note that there is a measurable correlation between global temperatures and levels of carbon-dioxide – which along with other so-called greenhouse gases have been shown in the laboratory to interact with the sun's infrared light to raise atmospheric temperatures.

And crucially, the evidence from measuring carbon levels in polar ice caps suggests that there is a lag effect: The more greenhouse gases today, the higher future temperatures. At present, the earth's atmosphere contains far more carbon dioxide than at any time in the last 60,000 years, which means even if mankind acted swiftly to cut emissions temperatures could continue to rise for decades to come.

'We have to prepare for the impact, we can't stop it,' King warned. 'Even if we stop the causes of global warming now, the earth will go on warming for another 30 years.'

This delay is matched by political inertia. The US, the world's biggest producer of greenhouse gases, has rejected the Kyoto Treaty, which sets targets for rich countries to cut carbon emissions. It says any deal must also require action from emerging giants such as Brazil and China. In a modest shift, US President George W Bush acknowledged at the July G8 summit that human activity likely does effect the climate, but the US remains unwilling to abide by Kyoto.

Weakened by the American position, the communiqué from the G8's summit in July emphasised the dangers of climate change but failed to come up with an action plan committing itself to targets to cut carbon emissions. The G8 backed a bigger role for the World Bank in developing energy projects and rounded up a series of good intentions with this pledge: 'We will work together to advance the goals and objectives we have agreed today to

Feeling the Heat: Gas Flaring in Nigeria

ON THE global scales, Nigeria is far from the biggest oil producer, but in one pernicious area it leads the world.

Underground oil deposits are often accompanied by large deposits of natural gas that push to the surface when oil is drilled from the ground. In most countries, such gas is captured in pipelines or pumped back underground. But for decades, Nigeria has simply vented the gas into the atmosphere and burned it off – a process known as flaring.

Nigeria is the world's largest gas flarer and it accounts for about 19% of the total amount flared globally. At night the giant flames leaping from its gas flares spew ash onto nearby communities and flood the atmosphere with greenhouse gases. Worldwide such flaring accounts for about 1% of global CO₂ emissions.

Industry regulators in most parts of the world, who once regarded gas as a worthless waste product of the oil industry, now see flaring as an environmental threat and gas as a valuable resource that should be turned to profit. Nigeria, which has more gas reserves than oil but an underdeveloped gas market, has been slow to adjust, allowing oil producers to flare 75% of the gas they produce, rather than using it to produce

natural gas, fuel electricity plants or re-injecting it into the oil fields.

Gas flaring is also an expensive waste of resources costing Nigeria – where 70% of people live on less than a dollar a day and commonly cook on open fires – an estimated \$2.5 billion annually in lost potential income. In Western Europe, oil companies only flare about 1% of produced gas, leading to accusations of double standard against the multinationals that operate in both regions.

The Nigerian government's commitment to end flaring is ambiguous. Laws were passed requiring an end to flaring by 2004 but implementation deadlines have repeatedly been reset further into the future.

As a part owner in the country's oil installations, the Nigerian government takes part of the profits from oil installations run by foreign oil companies, but it has been chronically reluctant to contribute its share of the cash needed to finance upgrades and new facilities, such as gas capture systems. The largest operator in Nigeria – Shell – indicated in January 2005 that it might have difficulty in ending flaring by the 2008 target, blaming a number of factors including insecurity. – 'Up in Smoke', Working Group on Climate Change

SPECIAL FEATURE

inform the work of the UN Climate Change Conference in Montreal 2005.

No action is required from Africa under Kyoto, although South Africa, with its vast coal reserves, has a high level of carbon emissions by international standards. Under the UN Framework on Climate Change Technology (UNFCCC), signed by 180 countries, South Africa is one of the developing countries with strong manufacturing bases that will be asked to cut emissions once the developed world has made progress.

Private sector leads

Amid the political vacuum, the private sector may provide the lead in reducing gas emissions.

'BP is pioneering a technology that we think holds enormous promise for

curbing large amounts of emissions: carbon capture and storage,' Lord Browne, the chief executive of BP, wrote in the *Financial Times* in July.

'The idea is to capture carbon dioxide where it emerges in vast quantities – from power stations. At a site in Algeria, we began work last year on storing the carbon dioxide produced at the Salah gas field, under a joint venture with Statoil, the Norwegian oil and gas company, and Sonatrach, the Algerian national energy company.'

By re-injecting the carbon dioxide into deep wells, the project will reduce greenhouse gas emissions by the equivalent of taking 250,000 cars off the road. However, Lord Browne said it would require subsidies to encourage companies to take up this technology, as it added to the cost of generating electricity.

Algeria's state-owned Sonatrach, by harnessing BP's technology, shows that Africa can tackle gas emissions with private industry's help. African governments own or control most national infrastructure and energy resources, including power companies and national oil companies and regulate the operations of multinationals on their territory.

Yet energy policy in leading African oil producers such as Nigeria is often both wasteful and harmful to the environment. Africa continues to overwhelmingly rely on firewood and charcoal rather than cleaner natural gas or electricity. (See box on Nigerian gas flaring on page 5.)

'Private enterprise has an important role to play,' wrote Lord Browne. 'We should be looking at how to transfer know-how to poorer nations, which cannot afford the same investment in intellectual property. Without this technology transfer, poorer nations will be doomed to satisfy their increasing energy needs by using the old, dirty technologies now superseded in the developed world.' – Paul Adams

Saving the Continent

A REPORT released by the Working Group on Climate Change and Development advocates the following steps to manage the impact of global warming in Africa.

■ **Increased support for small-scale agriculture:** Diverse systems have been shown over time to be more resilient and more productive than commercial monocultures. Farming based on expensive and energy-intensive artificial inputs will be vulnerable to fuel price rises and add to climate change. Small farmers need a favourable policy environment and supportive research with a particular shift from rain-fed cultivation of drought intolerant maize to hardier crops or to irrigated agriculture.

■ **Cut rich country gas emissions:** Rich countries need to go far beyond their targets for reducing greenhouse gas emissions, set under the Kyoto Protocol, and cut emissions to a level that will halt global warming. Commitments to cut emissions should be gradually raised until 2012 and aim for cuts in greenhouse gas emissions of between 60% and 80% by 2050.

■ **Help Africa leapfrog 'dirty development':** There is great potential for sustainable and renewable energy in Africa. To meet people's need for energy, improve health at the household level, and to help Africa leapfrog 'dirty development', international donors and financial institutions should switch investment from fossil fuels to promoting access to renewable and sustainable energy, remove obstacles to technology transfer, setting targets and timetables.

■ **Test whether initiatives are climate proof and climate friendly:** All policies and programmes should face the test of whether they will leave people in Africa more or less vulnerable to the effects of global warming. The test will be: Is this climate friendly and climate proof? In line with the recommendation of the Commission for Africa, climate change should be 'mainstreamed' within development policies, planning and activities by 2008.

■ **Focus on local needs first:** Africa needs to be freed from a one-size-fits-all development approach. The best responses to climate change will differ according to local circumstances, so flexible approaches are needed. The aim should be to secure livelihoods at the local level. – 'Up in Smoke', compiled by the New Economics Foundation, with the International Institute for Environment and Development in London.

Six Effects of Climate Change for Africa

THE Intergovernmental Panel on Climate Change (IPCC) is a scientific body set up in 1988 by the UN and the World Meteorological Organisation to consider climate change. Africa is highly vulnerable to the various manifestations of climate change. Six situations that are particularly important are:

- Water resources, especially in international shared basins where there is a potential for conflict and a need for regional coordination in water management;
- Food security at risk from declines in agricultural production and uncertain climate;
- Natural resources productivity at risk and biodiversity that might be irreversibly lost;
- Vector- and water-borne diseases, especially in areas with inadequate health infrastructure;
- Coastal zones vulnerable to sea-level rise, particularly roads, bridges, buildings, and other infrastructure that is exposed to flooding and other extreme events; and
- Exacerbation of desertification by changes in rainfall and intensified land use.

SPECIAL FEATURE

South Gets Tech Transfer Boost for Renewable Energy

DEVELOPING countries are to receive greater funding and transfers of technology to boost their use of renewable energy supplies.

The pledge was made at the beginning of November in a declaration signed by 78 countries at the Beijing International Renewable Energy Conference.

Representatives from Brazil, China, Germany, India, the UK and the EU were among those who signed the declaration. The US was not involved.

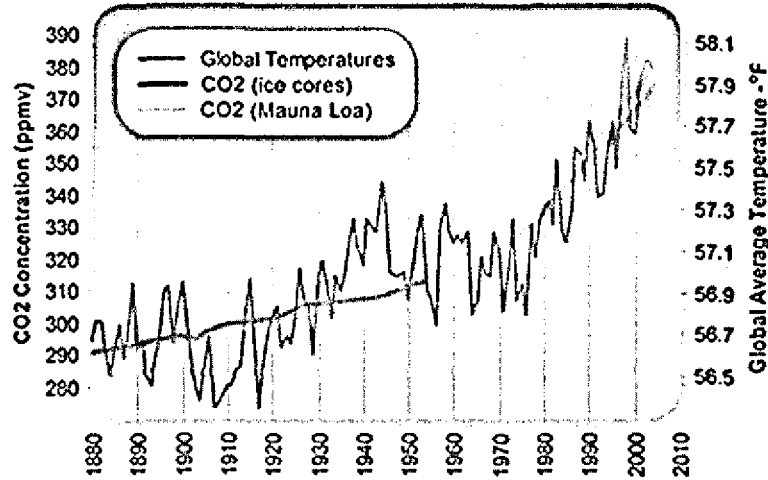
Because progress in renewable energy technology has been led by developed countries, most developing nations have been left behind, said Mohamed El-Ashry from the UN Foundation.

'The global imbalance will increase unless the international community strengthens its commitment to the scaling up of renewable energy development and use, especially in the developing countries,' he said.

In a message to the conference, UN Secretary-General Kofi Annan urged industrialised countries to speed up the transfer of technologies and funding to developing nations. Calling also for greater South-South cooperation, Annan said renewable energy was essential for improving the lives of poor and vulnerable people.

Zhang Guobao, vice-minister of China's National Development and Reform Commission pointed out, however, that accepting assistance from developed countries can be

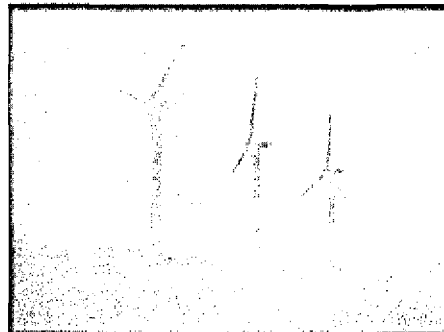
Global Average Temperature and Carbon Dioxide Concentrations, 1880 - 2004



Information on historical levels of CO2 in the air comes from analysis of polar ice cores and since the 1960s from the Hawaiian Manna Loa Observatory.

Data Source temperature: http://ftp.rtd.noaa.gov/pub/data/annual/land_and_ocean.xls
 Data Source CO2 (Siata Ice Cores): <http://tdi.ac.esd.ornl.gov/ftp/trends/co2/siata2013>
 Data Source CO2 (Mauna Loa): <http://tdi.ac.esd.ornl.gov/ftp/trends/co2/maunaloa.co2>
 Graphic Design: Michael Ernst, The Woods Hole Research Center

problematic for poorer nations. 'Sometimes we have been forced to buy equipment from developed countries when accepting their loan, grant or aid,' said Zhang. 'The expensive equipment adds to our costs.' For example, said Zhang, electricity made in coal-fired power stations costs one-third of that using wind



RENEWED: This wind ranch in Borden/Sourry Counties, Texas, will provide enough energy for about 56,000 households per year. Photo: Black, DA

energy technology from industrialised nations.

China plans to build hundreds of coal-burning power stations in the coming years to support its rapid economic growth. Worldwide, its emissions of carbon dioxide, the main gas responsible for climate change, are already second only to those of the US.

According to a report released on 7 November by the International Energy Agency, China will produce one-fifth of the world's emissions by 2030.



To counter this, said Zhang, China would double the contribution

of renewable energy to overall supplies from 7% to 15% by 2020. But that would cost \$184 billion – and some of this money would need to come from international donors and the private sector. China is considering improving the incentives it offers to businesses to invest in renewable energy.

He also said that China would help other developing countries use renewable sources of energy such as wind, solar, and biomass.

Renewable energy supplies 17% of the world's supplies, according to a report by the US-based Worldwatch Institute's *Renewables 2005 – Global Status Report*.

The report says that at least 43 countries have set targets for increasing renewable energy use. Among the countries are 10 developing nations including Brazil, China, India and South Africa. – Scidev.net

SPECIAL FEATURE

Emissions to Soar As Energy Demands Rise

Briefly



ENOUGH: An activist stages a protest at an international auto show in Geneva, demanding sharp reductions in carbon dioxide fuel emissions.

Photo: Courtesy of Greenpeace

RISING global energy needs will double the carbon dioxide from burning fossil fuels by 2030, with China contributing most towards the increase, says the International Energy Agency (IEA).

In its *World Energy Outlook 2005* report, released in November, the intergovernmental agency warns that alternative energy policies are needed to combat climate change.

'We must change these outcomes and get the planet onto a sustainable energy path,' said William Ramsay, the IEA's deputy executive director.

As developing nations' economies expand with growing industrialisation, so do their energy requirements. But burning fossil fuels such as coal and oil to generate power releases large quantities of carbon dioxide – the main gas responsible for climate change – into the atmosphere.

According to reports, China alone will account for three-quarters of the projected increase in emissions. Overall, developing countries will produce half of all global carbon dioxide emissions by 2030, up from 37% today.

The day after the report was released, China pledged to increase its use of

renewable energies sources such as wind and solar to 15% of its total by 2020.

The IEA report also predicts that energy consumption in Middle East and North Africa will double by 2030.

The region's share of global oil production could rise from 35% today to 44% in 2030, says the report. But these countries would need to invest \$56 billion a year in funding for energy infrastructure.

Without this investment, crude oil prices will rise sharply, reducing growth in the global energy demand, and cutting the region's export revenues by more than \$1 trillion over the coming 25 years.

The IEA also considered what would happen if cleaner energy resources were used to achieve goals for reducing climate change set at the G8 Summit in July 2005.

In this scenario India, China and the 26 industrialised nations represented in the IEA would need less oil and gas from the Middle East and North Africa, and carbon dioxide emissions would rise less sharply, which would mean that emissions rise by about one-third rather than a half between now and 2030.

– Scidev.net

Wishful: Zimbabwe's President Robert Mugabe announced in November that his country would tap uranium to produce energy, to slash the amounts the country spends to import electricity. Mugabe gave assurances that the uranium would not be used to make weapons. There is scepticism, however, about whether the country has the capability to process uranium.

No to change: Kenyans rejected a proposed new constitution in a referendum held on 21 November. The vote is a rebuke to President Mwai Kibaki, who had promised a new constitution upon taking power. He campaigned for president on the promise that considerable power would be transferred from the presidency to a strong prime minister. But once in office, he reneged on the pledge. At least seven ministers joined the opposition urging voters to reject the constitution, and nine people were killed in the campaign violence.

History in the making: Ellen Johnson-Sirleaf got about 60% of the vote in Liberia and looks set to be Africa's first elected woman president. She defeated popular former soccer star George Weah in a run-off poll in the country's first post-war democratic elections in November. Though Weah alleged rigging, international observers said the elections had been fair. However, the country's electoral authorities are investigating the allegations and confirmation of the poll results was delayed until the complaints had been probed.

Dire straits: With just a few months before scheduled presidential elections in Benin, the country is facing a financial crisis that could see the March 2006 poll delayed. The country needs about \$57 million to finance the poll and is already in a deficit of about the same amount. President Mathieu Kerekou has already decided to vacate the office as he has reached the two-term limit set out in the constitution. But a lack of potential candidates has raised concerns that Kerekou might renege on his decision and stay on for a third term.

The WTO Hong Kong Talks: What Gains Can Africa Expect?

A SUCCESSFUL conclusion of the Doha Round of trade negotiations is in the interest of all members of the World Trade Organisation and the global economy. As such, the 13-18 December Hong Kong Ministerial Conference represents an opportunity that should not be squandered.

But what are the prospects for a Hong Kong success, and more importantly what tangible benefits can African countries expect?

Four major issues must be satisfactorily dealt with for Hong Kong to register at least a moderate success, namely agriculture; non-agricultural market access (NAMA); services; and development issues.

Agriculture

The most contentious issue in global trade is the subsidies and supports for agricultural products used by developed countries, which pay their farmers more than \$300 billion a year in addition to levying high tariff duties on agricultural imports and subsidising export dumping onto world markets. Substantial liberalisation in this sector is necessary to enable competitive exporters from the developing world to realise gains that could fuel economic growth and poverty reduction.

Although there are promising signs on the horizon, the waters are still murky. Recently the US offered to cut farm subsidies by 60% and import tariffs by up to 90%, but only if the European Union and Japan followed suit with subsidy cuts of 80%. The US argues that the EU farm subsidies are three times the size of US supports. The EU countered with an offer to cut in half its highest import tariffs – which stand at 90%. However, France quickly complained that the EU was not authorised to make such offers, and Japan's trade minister said the US offer was unacceptable as a

basis for negotiations.

Helping developing states is the purpose behind proposed farm cuts, but African voices have been marginalised as the big industrial countries argue. Brazil is a big threat as it has huge surplus capacity and is arguably the world's most competitive farming country. But the developed countries also fear each other.

While cutting trade distorting farm subsidies would be good for the global economy and particularly food producing developing nations, developed countries are also arguing that the developing world must make concessions on NAMA issues and services. African diplomats particularly argue that such a bargain is grossly unfair, but it remains a hard reality that

'It remains a reality that a deeply mercantilist spirit is driving negotiating positions among developed countries'

a deeply mercantilist spirit is driving negotiating positions among developed countries, which have huge interests in winning non-agricultural concessions in exchange for anything they surrender in agriculture.

Further, it is important to note that in most African countries, agricultural trade liberalisation *per se* will not immediately result in windfall gains because most of Africa does not have sufficient capacity, marketing support or the infrastructure needed to quickly exploit new market openings. Yet a favorable outcome in December would create positive international incentives for increased domestic production and is definitely in their long-term interests. It is therefore important for

rich countries (especially the US) to agree to immediately eliminate trade distorting support to cotton to enable competitive West African producers to realise market gains that fairer competition would permit.

Moreover, agricultural liberalisation in Hong Kong should be effective enough to take into account the legitimate interests of relatively competitive commercial farming countries like South Africa that have sufficient supply capacity to utilise improved market access. Together with fellow emerging economies in the G20 coalition (which includes Brazil, India, China, among others), South Africa seeks the elimination of export subsidies, tighter disciplines on food aid dumping, greatly reduced domestic support payments, and reductions of import duties.

Non-agricultural access

NAMA is an area where developed countries have major offensive interests. Since tariffs on manufacturing goods are already very low in these countries, their aim is to create more market access for their companies in developing countries, especially in lucrative markets like Brazil. However, substantial liberalisation is unlikely to take place in this sector in Hong Kong as developing countries are wary of potential economic disruptions should they radically cut their tariffs.

When it comes to manufactured goods, sub-Saharan African countries mainly have defensive interests. They hope to protect their domestic industries from foreign competition but also end what is known as tariff escalation in developed countries. Under an escalating tariff regime, raw material imports face very low tariffs but the more sophisticated the product or the more manufacturing involved, the higher the import duties. Tariff escalation frustrates Africa's efforts to export high value goods and

should be tackled in Hong Kong in order to facilitate the export diversification sorely needed on this continent.

South Africa's position is a bit different. It wants to defend its light manufacturing industries by keeping its tariffs in areas such as clothing, textiles and cars. But it also has strong offensive interests because it believes it could export much more if impediments to trade were removed in heavy chemicals, basic iron and steel, and other resource-intensive manufactures. Most of its manufacturing export markets are in the developing countries, especially within Africa. It would therefore like to see other developing countries liberalising their industrial sectors.

Services

Most developed countries want to open up trade in services where they feel they are competitive, such as telecommunications, financial services, transport and energy. With a few exceptions most developing countries do not have the capacity to export high technology services but would like to negotiate more open trade and movement of semi-skilled and unskilled labour to rich countries. Not much progress can be expected in services negotiations in Hong Kong. There is potential to negotiate a deal but free trade in labour is as controversial in developed countries as trade in services

African countries would do well to unilaterally liberalise their core infrastructure like transport and communications in order to create production efficiency and trade competitiveness. Like other African countries, South Africa is very defensive on services trade. Yet its economy could benefit from increased foreign competition in telecommunications, transport and other key services sectors. Although South Africa fears exposing its domestic champions to foreign competition, it stands to benefit significantly in Africa if South African companies were more free to compete in Africa in banking, telecommunications, transport and construction.

Development issues

This round of negotiations is dubbed the Doha Development Round because all parties acknowledge that poorer countries' interests were largely ignored in past negotiations and past promises to assist poorer countries have mostly gone unfulfilled. Thus developmental measures feature in all parts of the negotiations.

Indeed, it is an open secret that Africa's export capacity is constrained more by 'supply side' difficulties than by tariff barriers and subsidies in rich country markets. Even if rich nations dropped trade barriers, Africa would likely reap little benefit. In agriculture, Brazil, Argentina and Australia could all quickly boost output. And in manufactured goods, China, India, Vietnam and Brazil will all likely be able to capitalise on free trade far faster than Africa's less efficient, capital-starved firms.

'African countries would do well to unilaterally liberalise their core infrastructure'

Africa needs to increase both the quantity and quality of its output to take advantage of trade openings. This means more investment on the factory floor but also measures to increase Africa's capacity to trade are crucial, including efforts to improve transport infrastructure, assistance with marketing and meeting sanitary, labelling and packaging standards for agricultural products.

The provision of adjustment or provisional support to Africa to cushion against the adverse effects of reform is critical. As the world gradually eliminates trade barriers, Africa will suffer from what is known as preference erosion: Since the colonial period ended, the continent has enjoyed reduced or duty free access in Europe for limited quantities of its products, including beef, sugar, some fruit and vegetables. But as Europe reduces the tariffs it

charges non-African producers, Africa's advantage declines. African countries that are net food importers also stand to lose if subsidies are cut to agriculture in the North because that will translate into higher prices for food imports.

In short, rich countries should, within or outside the WTO framework, be prepared to fund 'aid for trade' to enable poor African countries to meet economic and social costs of adjusting to a new and more competitive international trading climate.

In addition, poor African countries need assistance to meet excessively stringent human and animal health standards, and rules of origin that often operate as market access barriers even where preferential tariffs are offered. Profits from improved preferences through less onerous rules of origin, for example, could help African traders to afford the expensive restructuring processes needed to participate in a more competitive global system.

SA does not need aid for trade but could play an important role by supporting the Africa Group's cause and more importantly agreeing to offer weaker African countries – particularly its Southern African neighbours – improved access to its market.

To the extent that development issues are not dealt with to the satisfaction of poor African countries, Hong Kong could easily be a repeat of the failed Cancun negotiations. This is because, though African countries do not have sufficient economic weight, their political clout is massive, and they together with their fellow G90 group of poor countries, could use their voting power to block any agreement in the negotiations.

Failure in Hong Kong is not an option. Therefore progress on the key negotiations issues identified above must be made before the actual meeting in Hong Kong. This is possible and, certainly, cautious optimism is advised. – **Nkululeko Khumalo and Phakamisa Siyothula, respectively Senior Researcher and Research Intern at SAIIA.**

COMMENT

We Need To Reinvent the African University

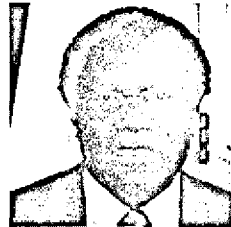
THE rising interest in Africa's future has coincided with a new awakening of interest within international development agencies in the role of technological innovation in economic growth. But much of the discussion on Africa's development only marginally addresses the need to harness the world's existing fund of knowledge for development.

The Commission for Africa chaired by UK Prime Minister Tony Blair has, for example, played an important role in placing the issue on the international policy agenda. But the commission has also pointed out that using existing knowledge for economic development will require governments and other players to focus on strengthening the role of the academic community (as well as business) in development.

Universities and other institutions of higher learning are key players in domesticating knowledge and diffusing it into the economy. But they can only do that through close linkages with the private sector. And that will require major adjustments in the way that universities function in Africa (as well as the rest of the developing world).

Many of these universities will need to be changed from being conventional sources of graduates to becoming engines of community development. In other words, they will need to become 'developmental universities', working directly in the communities they are located in.

The main role of the first generation of African universities was to create civil servants. Unfortunately, this classical model has become the template within



Calestous Juma argues that addressing Africa's development challenges requires the creation of a new generation of universities that focus on solving community problems.

which new universities are created, even though social and economic needs have changed radically.

The continent needs a new generation of universities that can serve as engines of both community development and social renewal.

Rehaul system

The task ahead is not simply one of raising more funds. It will require deliberate efforts by governments, academia, business and civil society to reinvent higher education and put it to the service of the African people. To achieve this, a qualitative change in the goals, functions and structure of the university is needed.

As part of this process, fundamental reforms will be needed in curriculum design, teaching, location, choice of students and the management of the continent's universities. Such an effort will push African leaders to the frontiers of institutional innovation; nothing less will meet the challenges.

The good news is that Africa has a large number of important innovations in higher education to learn from, many of which are from the continent itself, or elsewhere in the

developing world.

Take, for example, curriculum development. One of the most pioneering examples in curriculum reform is EARTH University in Costa Rica, whose curriculum is designed to match the realities of agribusiness, and is therefore able to dedicate itself to producing a new generation of young people trained specifically to focus on changing the human condition through entrepreneurial activities.

In South Africa, Stellenbosch University was the first teaching institution in the world to design and launch a satellite. The project focused on designing a curriculum intended to help solve specific problems such as developing new products or improving the environment, and not to simply produce graduates.

Africa's reconstruction challenges require creating the technical competence needed to design and manage infrastructure projects. The Kigali Institute of Science, Technology and Management (KIST) in Rwanda shows how higher education institutions can help transform the communities in which they are located.

In another shining example of business 'incubation' is the University of Zambia. This was the midwife of Zamnet, the

'Qualitative change in the goals, functions and structure of the university is needed'

'The main role of the first generation of African universities was to create civil servants'

COMMENT

country's largest Internet provider. Zambia's experience demonstrates that universities have great potential for creativity and innovation, even under the most difficult financial conditions. Numerous Brazilian universities have adopted a similar approach as part of their regular mission.

In Uganda, Makerere University has developed a new approach to teaching that enables students to contribute significantly to the solution of public health problems in their communities. Several other African universities are involved in similar social outreach activities.

Many of these examples are a result of isolated initiatives, some resulting from government foresight, others from occasional academic entrepreneurship, or just serendipity. The challenge facing Africa is to move away from relying on luck and tenacity, and to create an environment that helps to realise the developmental role of universities across the continent.

This must start with government policy. Little will happen unless governments realise the strategic role that universities can play in harnessing the world's fund of scientific and technological knowledge for development.

The issue is not simply about more funding, but also involves redefining higher education as a developmental force. This will require efforts to align university activities with development missions. This in turn will influence the location of universities.

Countries such as Kenya and Tanzania, for example, depend heavily on tourism to earn foreign exchange. Given this, there is a strong case for creating institutions of higher learning that are devoted to

wildlife management and are located appropriately.

The sustainable management of freshwater resources – such as those of Lake Victoria – requires similarly dedicated institutions of higher learning.

The way ahead involves at least three types of strategic decisions. The first is to promote reform in existing universities, in order to bring the research, training and outreach activities to the service of the regions they are located in.

Most of the universities located in urban areas, for example, should forge close links with municipal authorities, and help solve the economic, social and environmental challenges that these authorities face.

Developmental functions

Existing universities can also play an important role in promoting infrastructure development. Road and construction, for example, can benefit from local research results. Countries such as Malaysia have established a long tradition of linking road construction to the creation of civil engineering capacities at local universities.

The second type of decision involves upgrading the level of academic competence at technical institutions that have already contributed to community development, while preserving their traditional role.

This, however, is only possible if existing university policies and regulations are sufficiently flexible to accommodate developmental functions. Many are

not; as a result, such upgrades have often been carried out at the expense of community service.

Finally, African governments are currently reviewing an increasing number of applications to set up new universities. This gives them a unique opportunity to shape the curricula, teaching and location of these institutions so they can perform developmental tasks.

Putting universities at the service of community development will also require extensive international partnerships. The implementation of the recommendations of the Commission for Africa is only a starting point. Development agencies such as the World Bank and their bilateral partners will need to complement their current focus on primary education with a new vision for higher education.

African countries, in turn, will need to demonstrate their commitment to long-term development by providing incentives and formulating policies that bring higher education to the service of development. Today the poor flock to the cities, many in search of the higher education that they see as the passport to their children's personal success.

The time has come for higher education to go to the poor, and to demonstrate that it is not only individuals, but also communities – and indeed nations – that will prosper as a result. – Calestous Juma is professor of international development at Harvard University and lead co-author of *Innovation: Applying Knowledge in Development*, the report of the Task Force on Science, Technology and Innovation of the UN Millennium Project. This article is reprinted from SciDev.net.

'The poor flock to the cities in search of the higher education they see as the passport to their children's personal success'

'The challenge facing Africa is to move away from relying on luck and tenacity to creating an environment that helps realise the developmental role of universities'

sufficiently flexible to accommodate developmental functions. Many are