

eAfrica

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NOT REMOVING

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Embracing Complexity, Africa Can Advance

SCENARIOS are risky. We create them to shape decisions in business, politics, even matters of the heart. Sometimes they're prescient, sometimes little more than suggestive. Often they're alarmist and wrong. As predictable as we humans are, our collective narrative still pivots – more and more frequently, it seems – on the unpredictable: the course of events, the hidden calculations of individuals, breakthroughs in science.

But scenarios, like morality plays, can be highly instructive if plausibly constructed. A new report by the UN imagines three trajectories for Africa's future based on how its leaders respond to HIV/AIDS now. It begins by identifying five 'drivers' of the epidemic in Africa: a breakdown of social cohesion; the influence of cultural and religious belief systems; the effective or ineffective use of resources; the generation and application of knowledge; and power equations and application of authority.

These are factored into each of the three scenarios. In the first, called 'Tough Choices,' HIV/AIDS is addressed as part of a coherent strategy for national development. Uganda is the model. The imperative of prevention drives economic, social and ethical choices. The epidemic grows for another decade as the population swells, but then slowly tapers off.

The second scenario, 'Traps and Legacies,'

is a portrait of the consequences of failing to end the cyclical nature of poverty in Africa, stabilise societies and break the addiction to aid. Grasping at 'fractured' responses and silver bullets, African leaders perpetuate patterns of underdevelopment that enable the epidemic to thrive, and by 2025, another 65 million Africans have become infected. This, sadly, is the current course in much of sub-Saharan Africa.

Finally, in the third scenario, called 'Times of Transition', health, development, trade, security, good governance and healthy international relations are recognised as integral. Engaging local and foreign stakeholders in building robust economies and vibrant societies, African leaders reverse current infection rates and the epidemic declines.

Which history will Africa write? In this edition of *eAfrica*, we highlight the neglected issue of nutrition as part of the response to HIV/AIDS, if for no other reason

than to underscore that singular approaches won't alter the epidemic's course. AIDS generates frightening statistics. But the world is thinking more constructively about Africa than at any previous time. A rare window of opportunity exists. African leaders should take it. Meeting complex development problems with complex coherent solutions, it is possible to prevent AIDS from destroying the continent.

As the UN report points out, 'it is not inevitable.'



Photo: Southphoto

Verbatim

“I fear the world is making a historic mistake here in southern Sudan. We have a peace agreement. Now we have three, four months of cementing that peace agreement. We are not getting the money, neither for the refugees returning to southern Sudan nor to the impoverished war-stricken population in this area. The world has to respond. It is unbelievable that they are waiting.” – Jan Egeland, UN Humanitarian Chief, commenting on the slow pace of assistance to southern Sudan since the government and southern rebels signed a peace accord in December to stop more than two decades of war. The international community has given just \$24 million to rebuilding efforts in the south, where the war took its heaviest toll.

“Human rights organisations and aid groups have to justify their work somehow, so they make these fictions. If it has happened, it is in isolated cases. This kind of thing is not part of our culture.” – Jamal Ibrahim, spokesman for the Sudanese foreign ministry, saying accounts of rape in the country's Darfur region have been exaggerated. It is estimated that more than 2 million people have been displaced from and 70,000 killed in the region by military troops and pro-government militia in the past two years. Humanitarian groups working in the dozens of camps for the displaced have issued reports that girls as young as 10 years have been raped by the militia.

“If people are killed in Western countries or in the Middle East, then we count the dead. In Africa

we do not. I find that tragic, immoral and frightening.” – James Wolfensohn, outgoing World Bank president, on the West's comparative disinterest in African crises.

“Can we be without a president for 60 days? We prefer to have sanctions and be in peace and security rather than descending toward civil war.” – Kokou Tozoun, Togo's foreign



affairs minister, defending Faure Gnassingbe's decision not to vacate the post of president until elections are held in April.

“We have been trodden on for so long by the father and now with the son we can expect more of the same.” – A Togolese villager, on the death of Togo's President Gnassingbe Eyadema and the subsequent takeover of his son, Faure Gnassingbe. The latter was subsequently forced by regional leaders and popular protest to abandon the post so that elections could be held to find a legitimate successor.

“Seduce your spouses to cross to the Movement, and for those who remain diehards, just deny them sex.” – Hanifa Kawooya, a Ugandan woman MP, garnering support for the

ruling Movement Party as the country gets ready for polls in 2006.

“I understand very well that he who appoints can also disappoint.” – Jonathan Moyo, the once-powerful former Zimbabwean minister of information, after he was fired by President Robert Mugabe from the cabinet and the party.

“Mogae on Friday gave me 48 hours to leave, but Ian Smith in 1973 gave me five days.” – Kenneth Good, a University of Botswana professor and political analyst, after being expelled from the country by President Festus Mogae for writing a paper criticising the president for hand-picking his successor. Good challenged the decision in court.

“If privatisation is not dead, it has certainly taken a long pause.” – Reg Rummey, director of BusinessMap Foundation, on the South African government's failure to reach its privatisation projections in the past three years.

“We are shocked at the action of the police, because whatever we are protesting against does affect them as well.” – Patrick Ochieng, a protester at the World Trade Centre ministerial meeting held in Kenya, after police arrested some of the 500 protesters.

“Let's fight the stigma associated with AIDS, but not people with AIDS.” – Cynthia Leshomo, winner of Botswana's Miss HIV Stigma Free 2005, a beauty contest held to destigmatise having the virus that causes AIDS.

Two Regions, Two Paths

Responses to Togo, Zimbabwe indicate divergent commitment to democratic reforms

THE decisive intervention by the Economic Community of West African States (ECOWAS) in Togo's political crisis in February was in marked contrast to the hands-off approach by the Southern African Development Community (SADC) to Zimbabwe's violation of the region's new electoral code in the run-up to parliamentary polls later this month.

There are clear differences between the two crises.

Togo's armed forces subverted the constitution to install Faure Gnassingbe as president when his father, Gnassingbe Eyadema, died in February. In Zimbabwe, the government's refusal to let in SADC election monitors three months before polling or to allow the recognised conditions for a fair election is part of President Robert Mugabe's ongoing systematic suppression of political and civil liberties since 2000.

Togo is one of the smallest and weakest members of ECOWAS, whereas Zimbabwe is probably the second most important state in southern Africa, despite the catastrophic decline of its economy since the late 1990s.

The statures of the two presidents are also at opposite ends of the scale. Gnassingbe, an obscure son of the tyrant who had dominated Togo for 38 years, was almost unknown to ECOWAS leaders when he seized office. Mugabe, as one of the few southern African liberation leaders still in power, commands respect from his peers.

There is no common African Union position against the misrule in Zimbabwe, while the AU was unanimous in condemning the Togolese coup.

Yet the succession crisis in Togo and the parliamentary polls in Zimbabwe are both seen as test cases. Togo provided West African leaders with

an opportunity to stand up against military-backed dynastic succession. The younger Gnassingbe was forced to step down, and elections have been scheduled for 24 April.

In Zimbabwe, the elections might have marked a potential step toward normal parliamentary democracy and dialogue between the ruling Zanu-PF and the opposition Movement for Democratic Change (MDC) – the two aims of South Africa's controversial 'silent diplomacy'.

Eyadema had not completed the ground-work for his son's succession when he suddenly died. Togo's parliamentary speaker Fambare Natchaba Ouattara was legally next in line for the presidency, but the army and the ruling party, dominated by the late ruler's Kabye tribe from the north of the country, saw him as a threat.

'Mugabe, as one of the few liberation leaders still in power, commands respect from his peers'

They therefore immediately closed the borders while Ouattara was abroad and replaced him with Gnassingbe.

The constitution stated that elections should be held within two months of a president's death, but parliament, dominated by the ruling Togo People's Rally, voted to delete that article and allow Gnassingbe to inherit his father's term of office, which runs until 2008.

If African leaders, led by Nigeria's President Olusegun Obasanjo but backed even by ECOWAS leaders who had close links to Eyadema, had not taken such a firm stand, Togo's bloodless coup might have succeeded. The European Union, which along

with France had periodically bankrolled the late Eyadema's corrupt and brutal regime, seemed at first prepared to work with his son.

The international roles are reversed over Zimbabwe. The EU, the US and the Commonwealth, of which Zimbabwe is no longer a member, have been sharply critical of and taken sanctions against the government, while SADC leaders, dominated by South Africa, have insisted on a policy of constructive engagement with Mugabe and have defended his regime against censure motions in international organisations. If SADC has any real leverage over Mugabe, there is no sign that it is applying it.

One obvious way of doing so would be to hold Zimbabwe's ruling Zanu-PF to its commitment to SADC's new election benchmarks. These, along with MDC demands, include:

- An end to political violence, the disbanding of the youth militia and their removal from all constituencies;
- Equal access to the state media;
- The repeal or amendment of statutes that infringe upon basic civil and political liberties pertaining to freedom of speech, assembly and association;
- The repeal of those provisions in the NGO Act which seek to curtail the activities of organisations operating in the areas of governance and human rights;
- A thorough audit of the voters' roll; and
- Deployment of SADC observers.

To date, none of these reforms has been carried out and SADC has said nothing. Elections are to be held on 31 March.

The regional responses to Togo and Zimbabwe send a message to the rest of the world that while ECOWAS will not tolerate unconstitutional rulers, SADC applies its own accepted principles of democratic behaviour selectively among its peers. – Paul Adams

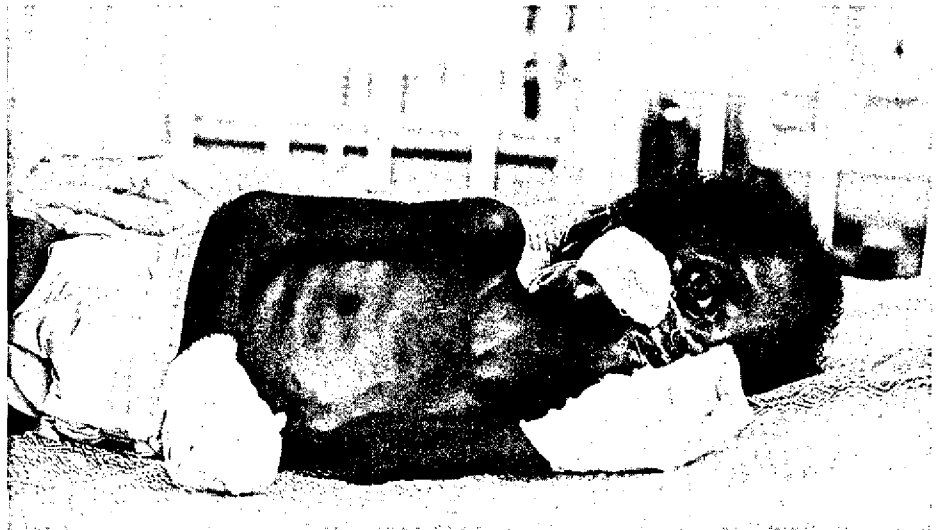
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Benefits of Nutrition Neglected In the Fight Against AIDS

AT MONTHLY support groups for children infected with the virus that causes AIDS in the hills of northern KwaZulu-Natal, South Africa, Ann Barnard doles out creams and antibiotics for simple HIV-related infections. But one of the most important bottles in her arsenal is not a drug, but a basic multivitamin, which she encourages caretakers to give daily to each infected child.

Although anti-retroviral drugs (ARVs) are becoming increasingly available across the African continent, they remain out of reach for most HIV-positive people. Only a handful of the children in the Ingwavuma Orphan Care's support group are enrolled in pre-counselling for the fledgling anti-retroviral programme at the local government hospital, Mosvold, which began offering the drugs to a limited number of patients late last year. The rest either do not yet qualify because their CD4 counts – a measurement of the number of disease-fighting cells in the blood that is usually considered the best indication of how far AIDS has progressed – are still too high or their families have decided they cannot meet the programme's stringent requirements, including frequent and often costly trips to the hospital.

In Ingwavuma and across Africa, health workers like Dr Barnard are turning to basic vitamins and good nutrition to help patients where anti-retroviral drugs are not yet available or not yet appropriate. Although scientific evidence about the benefits of such treatments are lagging behind its clinical use, anecdotal evidence shows that, especially in the African context where many diets lack essential nutrients, basic nutrition may be the first line of defence in the battle against AIDS.



BATTLE TO THE END: Good nutrition could be the only weapon most African children have against the deadly AIDS, while the wait for ARV's goes on. *Photo: Southphoto*

'I think nutrition and medicine should go hand-in-hand, but there tends to be more of an emphasis on the therapeutic interventions than preventative,' said Dr Des Marin, president of the South African HIV Clinicians Society.

African clinicians, like their counterparts in the developed world, have been using nutrition for years, based on their own experience. But so far, international health organisations have been slow to adopt practical programmes that implement such ideas and scientific research in the area has lagged behind the development of pharmacological and medical interventions. While the World Health Organisation (WHO), UNAIDS, and the World Food Programme (WFP) have all embraced nutrition in theory, they have yet to offer any practical advice about how to incorporate nutrition into AIDS care in the developing world.

But in the resource-poor environments of many societies affected by AIDS, diet is often a function of poverty

rather than choice.

Bad name for nutrition

Although long embraced in Western countries as part of a holistic AIDS treatment programme, in the developing world nutritional interventions became politicised when opponents of anti-retroviral programmes and AIDS denialists argued that nutrition could substitute for ARVs or even that the cause of AIDS was malnutrition rather than HIV. South African Health Minister Manto Tshabalala-Msimang's suggestion that people with AIDS eat African potatoes, garlic and beetroot, for example, has been much mocked by political action groups demanding a government-funded ARV programme.

In the aftermath of debates about the affordability and efficacy of universal ARV programmes, any emphasis on nutrition has been dismissed as an excuse for not doing more.

Although there is still much to be learned about the exact relationship

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between AIDS and specific nutrients, it is generally accepted by scientists that a malnourished person is more susceptible to AIDS-related opportunistic infections and experiences a speedier decline into illness. Also, the disease itself often exacerbates existing nutritional deficiencies by causing a reduction in appetite and the loss of nutrients through vomiting and diarrhoea. The wasting seen in many AIDS patients is in fact a slow starvation of the body, due to its inability to absorb food.

There is also evidence from the developed world that AIDS and AIDS-related diseases cause specific nutrient deficiencies, although here the implications for the developing world are less clear. Studies of homosexual men with AIDS in the US show that many patients have difficulty absorbing fats, carbohydrates and vitamin B₁₂ and that deficiencies of vitamin A may make patients more vulnerable to renal failure. Other studies have shown that HIV-positive pregnant women are specifically vulnerable to vitamin A deficiencies, although recent research from Tanzania showed little benefit to vitamin A supplementation alone.

Defining nutrition for the developing world

The walls of the waiting room of the antiretroviral clinic at the Princess Marina Hospital in Gaborone, Botswana, are plastered with posters explaining the four main food groups, urging HIV-positive patients to eat a well-balanced diet. But in many communities hard-hit by the AIDS epidemic, the failure to eat well is often an issue of economics more than of education.

'The problem with the whole nutritional argument is that everyone talks about how everyone must have a well-balanced diet,' said Basil Kransdorff, founder of Econocom Foods, which produces a

nutrient-heavy food supplement called e'pap used by many HIV-positive people across the continent. (See box, page 6.) 'If you're sitting in a squatter camp and are poor, it's like telling them to fly.'

'The wasting seen in AIDS patients is starvation of the body'

In Africa, the basic diet of many people lacks many essential nutrients such as protein, vitamin A, zinc and iron, Kransdorff said. HIV-positive people, many of whom are unable to work or farm, may

struggle to put even the most basic food on the table, much less a well-balanced diet.

Recognising the specific vulnerability of AIDS-affected households, the WFP and various NGOs often target such families for food aid, while some governments offer social grants to people suffering from AIDS. In South Africa, patients with CD4 counts below 200 can qualify for disability grants, while in Botswana sick people can access large, nutritious food baskets through home-based care programmes.

Some policymakers have even suggested that AIDS is making many hard-hit countries more vulnerable to famine and food crises. The phrase 'new variant famine' was coined during the recent food crises in Southern Africa to describe a situation where even minor fluctuations in weather patterns could tip AIDS-stricken societies into famine because the disease had weakened so many people's capacity to cope with crises.

But while many experts recognised that AIDS increases the likelihood that people will become food insecure, few food interventions targeted at HIV-positive people have placed much emphasis on the nutritional quality of

food aid. The standard food parcels distributed by the WFP in Africa, for example, usually include a starch, like maize meal, along with beans, oil and perhaps salt. In some AIDS-hit areas, the agency also distributes a limited amount of fortified corn-soya blend, which has a higher protein content and more nutrients.

Although such foods constitute the basic diet for many Africans, they lack many of the essential nutrients believed to be essential for good health.

The evidence

The most recent evidence that good nutrition can benefit people with AIDS came from a study of pregnant women in Tanzania published in July by the New England Journal of Medicine. A team led by Harvard School of Public Health Professor Wafaie Fawzi, in cooperation with scientists at Muhimbili University in Tanzania, found that HIV-positive patients who received a daily multivitamin tablet containing vitamins B, C and E had significantly lower death rates and higher CD4 counts.

Another recent study from Thailand showed that a multivitamin reduced mortality by 74% for people with CD4 counts under 100 and 63% for people with CD4 counts under 200.

Additionally, several studies, as well as substantial anecdotal evidence, points to rapid improvements among HIV-positive people using e'pap and other similar supplements.

'In Africa the basic diet of many people lacks many essential nutrients'

In an unpublished study from Zimbabwe, a group of HIV-positive patients from high-density

suburbs around Harare enrolled in a home-based care programme were fed either e'pap or standard rations of maize meal, beans and cooking oil. The researchers found that patients eating e'pap, which contains 28 different nutrients, showed measurable declines

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in common AIDS-related problems such as skin problems, diarrhoea and severe coughs. Their average CD4 counts remained stable initially and then eventually improved, while the CD4 counts of the non-e'pap group declined over the same period.

Research involving another nutritional supplement, Nutrifil, which was designed by scientists at the Dublin Institute of Technology after the 1994 famine in Somalia, also showed substantial weight gain and a reduction in hospital visits among HIV-positive patients in Uganda, when compared to patients fed a normal diet. A second study by the Institute, also in Uganda, also showed that the supplement had greater beneficial effects than the corn-soya blend favored by the UN. Forty-three percent of patients using Nutrifil had increased CD4 counts, compared to only 18% using the blend.

A Complex Meal Easy To Consume

JUST more than three years ago, a Johannesburg-based NGO called Community AIDS Response (CARE) approached industrial chemist Basil Kransdorff with a problem. The organisation, which distributed food parcels to the poor and HIV-positive, had a grant from the Elton John Foundation to bring some science to their work and asked Kransdorff to develop a fortified food that could address many of the specific nutrient deficiencies found in local diets, based on accepted understandings of what the body needs for basic good health.

'We saw the need to create what you call a "silver bullet",' Kransdorff said. 'We had to try to put in as much as we could into the e'pap.'

The result was e'pap, a fortified food that can be mixed with water or milk and eaten as a porridge or taken as a drink. Today, Econocom Foods distributes 2.5 million food packets a month – in strawberry, vanilla and banana flavours

NGOs providing e'pap to their clients also report a dramatic improvement in their health, often within a few days. An organisation of people living with HIV/AIDS in Botswana said users experienced an average weight gain of between 2 and 3.5kg in a period of one week, while a hospital in Entebbe, Uganda, reported that after 10 days of eating e'pap, patients had gained weight, increased their appetite and many of their skin problems had cleared up.

'We've discovered that good nutrition can help control AIDS-related sickness,' said Masike Morelle, a youth services officer at CARE, an NGO in Johannesburg that worked with Kransdorff to develop e'pap and now estimates that 80% of clients use the supplement. 'Some people take a very pro-pharma approach, but medicine won't be the solution without good nutrition.'

– in 12 different African countries, despite almost no marketing. News of the supplement and its benefit for HIV-positive people simply spread rapidly by word of mouth.

Despite its name, e'pap is far more than fortified maize meal, the staple food in much of Southern Africa, and developing it was no easy task. Kransdorff and CARE wanted the food to be affordable, nutritious and easy to prepare.

But special technology was required to prevent potential interactions between ingredients, oxidation and the destruction of nutrients in the cooking process. For example, Kransdorff had to figure out how to counteract the effects of phytate, an enzyme found in maize that inhibits the body's absorption of iron, another essential nutrient in e'pap.

'The product is a food, it's not a medicine,' Kransdorff said. 'But sometimes, the best medicine in the world is good food.'

– Nicole Itano

'In fact,' he said, 'we think nutrition may be even more important than drugs.'

Not a substitute for ARVs

Authors of recent studies on the benefit of nutrition for people with AIDS are quick to point out that nutrition is not a substitute for the gold standard of AIDS care: highly active antiretroviral therapy (HAART), which includes a triple cocktail of drugs. Instead, they argue that nutrition should be a complimentary intervention that can delay the moment when ARV drugs are needed and improve their effectiveness when begun.

Most antiretroviral programmes in the developing world follow WHO guidelines, which state that for adults antiretroviral drugs should be started when a patient's CD4 count falls below 200 or the patient exhibits certain clinical signs of advanced disease progression.

At an annual retail cost of \$15 per patient, the authors of the Tanzania vitamin study argued, multivitamins provided a cost-effective early intervention, but were not a replacement for ARV drugs: 'Introducing these supplements would preserve the use of antiretroviral drugs for later stages of the disease, avert adverse events associated with them and significantly reduce treatment-related costs.'

Still, advocating nutrition as an intervention for HIV continues to be controversial with many arguing that developing world patients deserve the same standard of care as patients in the developed world and that offering anything less is merely an excuse for not doing more. But the reality is that antiretroviral treatment is likely to remain out of reach for many patients in the developing world for the foreseeable future.

The WHO's 3 X 5 programme, which aims to put 3 million people on anti-AIDS drugs by the year 2005, is behind schedule and many believe the organisation will not meet its target.

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And while the cost of ARV drugs has declined dramatically in recent years in the private sector, they remain too expensive to purchase privately for all but a handful of Africans.

In the meantime, nutritional interventions such as vitamin pills and food supplements like e'pap offer tangible benefits at a price that even many poor Africans can afford.

In places where they are readily available, such interventions have been widely adopted by people living with AIDS. In Lesotho, for example, Positive Action, an organisation of people living with HIV/AIDS, has made e'pap and other nutritional supplements widely available across the country through member-owned stores and stalls. The supplements have helped improve the health of thousands of people and created small business opportunities for many of their members.

There is also evidence that nutrition is important within the context of an ARV programme. People on ARVs often experience extreme hunger and cravings for specific types of food, such as iron-rich vegetables like spinach. Additionally, some clinicians fear that the toxicity of the drugs may increase without proper nutrition.

While data from the developing world remains sparse – and is in great need of further investment – much research has been done in the developed world about the relationship between AIDS and nutrition, and dietary interventions have long been a part of standard AIDS care in the West.

Additionally, while further research may highlight specific nutrient deficiencies in people with AIDS in the developing world, clinicians in Africa have experienced marked success by simply ensuring their patients receive the normal recommended daily allowances suggested for healthy people.

Let the private sector lead

Private companies have been far more aggressive than governments

and NGOs in incorporating nutrition into HIV care programmes. Some companies, such as the Shinning Century [sic] textile factory in Lesotho, support vitamin supplements for their employees, while others offer wide-ranging wellness programmes.

Lifeworks, a Johannesburg-based company that designs and implements HIV/AIDS programmes for companies in several countries, including South Africa and Lesotho, sees nutrition as a vital component of any AIDS care programme. Sean Jelley, the company's CEO, says 60% to 70% of their patients have not yet reached the stage where they require ARV treatment, and the company employs a variety of methods to try and delay that point for as long as possible. While the treatment they provide is tailored to the

'Nutritional interventions such as vitamin pills and food supplements offer tangible benefits at a price many poor African can afford'

individual, the company often provides patients with vitamin supplements and a natural immune booster called Sutherlandia, whose benefits have not been scientifically proven (research is underway), but whose benefits are attested to by many AIDS clinicians.

'One of our problems in South Africa is that we've inherited a first world model, which is an ARV-intensive model that has ignored the pre-HAART stage,' said Jelley. 'The nutrition and the primary healthcare, counselling, all those things are real factors.'

Private companies such as Econocom have also been on the forefront of developing and marketing innovative new nutritional supplements. E'pap, which is probably the best known, distributes 2.5 million servings in 12 African countries each month, with

much of the profit going to CARE.

Following e'pap's success, a variety of local and international companies have developed their own food supplements with names like goAhead, a cereal created by a former employee of Kransdorff. In addition, a Kenyan business called Spin Knit Dairy has teamed up with a US company to develop a fortified nutritional drink called TRI-umph!, which is currently undergoing clinical trials at the University of Nairobi.

The public sector

South Africa is leading the way in terms of incorporating nutrition into their AIDS treatment. A new law now requires producers of maize meal to fortify their product with several basic nutrients, although some experts say much of the nutritional value is lost with cooking. The government is also providing fortified supplementary meals and multivitamin pills to people infected with both HIV and tuberculosis.

'Nutrition has been identified as one of the most critical components of the HIV/AIDS treatment plan,' said Gilbert Tshitauzi, a dietician and the deputy director of the department of health's nutrition unit. 'It's not done in isolation, but is part of a broader treatment programme.'

The primary goal of the programme, said Tshitauzi, is to delay the progression of the disease and maintain good health without ARVs for as long as possible. In theory, all people enrolled in the ARV programme should receive nutritional counselling, which should also help identify those who are food insecure and refer them to programmes in other departments.

The WHO plans to hold a conference in South Africa next year on AIDS and nutrition. For many clinicians on the ground, that's good news for patients, but long overdue. – Nicole Itano, a US journalist based in Johannesburg, is writing a book about HIV/AIDS in Africa.

Drug Trials Raise Concerns

Weak regulatory frameworks in developing countries beset efforts to control complex diseases

AT A time when Africa is struggling to gain the upper hand against killer diseases such as malaria, tuberculosis and HIV/AIDS, the urgency to find new drugs has seen the continent hosting more clinical trials to test the efficacy of new drugs. But concerns are mounting that these studies are being undertaken with laxity in procedure, regulations and ethics, making results drawn from those studies questionable.

'All our countries have national drug regulatory agencies, but some have limited capacity,' said Dr Jean-Marie Trapsida of the Africa regional office of the World Health Organisation (WHO).

This limited capacity has resulted in some countries being unable to enforce proper drug regulations. In some countries people buy medicines from pharmacies and resell them on the streets. It has also resulted in drugs being used improperly, which not only is a risk to human health but complicates the effective treatment of complex diseases.

'That should not be happening, as only registered pharmacists should sell medicines,' Trapsida said. 'Lack of inspectors makes it easy for illegal drug sellers, and the problem highlights lack of good manufacturing practices and quality control.'

Resource limitations

Drug trials and the importation of medicines are closely monitored in each country by drug regulatory agencies. These agencies require not only human resources, but also the scientific intellect to be able to make judgment on drugs coming into the country. Even South Africa's Medicines Control Council, which Trapsida touted as a reference point for other African agencies to emulate, has limited capacity.

'There is an inspectorate division that

does random checks on the firm's laboratory [the company applying to have its drug used], but there's no human capacity to do testing,' said Dr Henry Fomundam, a consultant at the HIV directorate of the South African department of health in Pretoria.

Presently, German pharmaceutical Boehringer Ingelheim has 14 trials underway in Botswana, Rwanda, South Africa and Uganda, while GlaxoSmithKline has 20 collaborative trials in various parts of the continent.

'If we want to compare a clinic in a developing country with one in New York, then we can never conduct trials in developing countries... it's an unfair comparison,' said Judith von Gordon from Boehringer Ingelheim.

One trial that came under the spotlight was conducted in Uganda to test the efficacy of Boehringer Ingelheim's AIDS drug nevirapine in curbing the transmission of HIV from mother-to-child. Nevirapine is one of the three-drugs used in triple therapy for adults and children living with HIV/AIDS and it had originally been manufactured for that indication.

The drug had initially been manufactured to be part of triple-therapy, but was later experimented on as monotherapy to be used where other forms of medication were out of reach. Though it's not the ideal treatment, the single-dose nevirapine therapy to stop the virus from passing from mother to child has shown remarkable effectiveness.

But damning reports on how the Uganda trial was conducted keep resurfacing. The first time a claim of irregularities came up was in 2002 when the manufacturer tried to have the drug registered in the US, following the Uganda trial, for a different application.

The US Food and Drug Administration (FDA) said the registration application did not meet its standards. There was data deficiency. As a result, Boehringer Ingelheim withdrew the application.

Ripple effect

The FDA's refusal to register the drug raised concerns that there had been improper reporting on some adverse events during the trial. This resulted in the WHO's Division of AIDS conducting a probe, which concluded that: 'In summary, the re-monitoring of the study determined that nevirapine, 200mg orally given to the mother at delivery and 2mg/kg given to the neonate within 72 hours, is safe and effective. However, the conduct of the study lacked the necessary documentation to support a request to the FDA to consider this study as a stand-alone pivotal trial.'

Then, in December 2004, claims that safe drug research practices were not followed at the Uganda trial site were raised again, this time by Dr Jonathan Fishbein, a researcher at the US National Institute of Health. The institute was involved in the Uganda trials. Fishbein said his job was on the line following his refusal to ignore deficiencies in the research done in the Uganda trial.

'The study came nowhere near meeting a research standard called good clinical practice... Here's what I really want to make clear, my issue is not nevirapine – my issue is the conduct of the trial. The issue is a research integrity issue,' Fishbein said at the time.

Getting these issues right is important in a continent that is battling with ever rising numbers of infections and deaths, not only from AIDS but other diseases as well. Research and the ultimate approval of life-saving drugs

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could prolong the lives of millions. Sub-Saharan Africa alone is home to an estimated 28.4 million people who are living with HIV, according to UNAIDS. Out of that number, 13.3 million are women.

For some of these women, nevirapine has come to mean the difference between death and life to their unborn children. As such, proper research on these drugs has a direct impact on their lives. But as much as questions have been raised on regulations and ethics, the efficacy of the drug has not been disproved.

'It is fair to raise questions on studies... [but] nevirapine is almost a godsend for a woman who has missed a chance to be on triple therapy,' said Dr Ashraf Coovadia, a paediatrician heading the perinatal HIV section of Johannesburg's Coronation Women and Children's Hospital.

Dr Tim Farley of the WHO also agreed that there was nothing wrong with being concerned with how studies are conducted. But he conceded that inappropriate and irrelevant standards were used in auditing the Uganda trials, resulting in regulation issues being raised.

'Malaria, for instance, is not an adverse event in Uganda [because it is common] and during the trial it was not put in that it should be signalled,' said Farley, who coordinates the section dealing with controlling sexually transmitted diseases and reproductive tract infections. As a result, when external auditors realised that malaria had not been flagged as an adverse event – which it would have been in the US, for instance, where it is not common – they interpreted that as an anomaly.

Other issues of record-keeping were made difficult because of a lack of infrastructure – for instance, computers, said Von Gordon.

So how does one harmonise the application of standards so that even when trials are conducted in developing

countries they are acceptable in the developed world as well?

Part of the answer lies in strengthening medical control councils and regulatory bodies so they are able to adequately offer support and are capable of monitoring trials.

To that effect, in 2003 the WHO Africa started assessing regulatory agencies with the aim of identifying their weaknesses and then assisting them. The review of the first seven countries should be completed by the end of this year.

'The most important thing we can do is support countries to help their regulatory bodies. We have no direct authority. We don't want to undermine the work that goes on at national level,' said Farley.

The WHO offers ongoing capacity building in different countries through universities in order to build capable human resources within the countries to oversee localised research.

'We give advice to countries, which sometimes ask us for a synthesis of the latest available information to assist on how they plan their public health programmes. But, nevertheless, the authority lies with the national regulatory agencies,' said Farley.

A number of developing countries tend to easily accept drugs that have already been approved in the developed countries such as the US and most of Europe.

For instance, the South African Medicines Control Council in July 2004 withdrew its support for the use of nevirapine as a single-dose therapy, and this followed, among others, concerns raised after the manufacturer's withdrawal of the US application to use the drug as monotherapy.

As Emmanuel Agyarko from Ghana's Food and Drug Board pointed out, staff constraints and lack of training adversely affect the performance of a regulatory body. – **Luleka Mangquku**

Briefly

Burundi by ballot box: In their first return to the polls since civil war broke out 12 years ago, Burundians accepted a new constitution in a nationwide referendum on 28 February that establishes the basis of power-sharing between the country's Hutu and Tutsi ethnic groups, marking what President Domitien Ndayizeye called 'a very important step in [our] history. We are leaving a dark period of conflict and moving toward a new era of democracy.' More than 300,000 people have died in ethnic warfare since 1993. The new constitution guarantees the minority Tutsi 40% and the majority Hutu 60% of seats in the national assembly, respectively. Military posts are to be shared equally.

Hard path back to the polls: With just about a year before Angola holds its first ballot in 14 years, a senior former election official has cautioned that a lack of transparency is threatening the country's fragile attempts to return to election-based governance. 'When everyone thinks about elections they only think about results, and only of favourable results,' said Onofre dos Santos, director-general of the national election council during the country's last elections in 1992. Failure to ensure free and fair elections, he said, could reignite political tensions. The 1992 polls were generally viewed as free and fair, but then rebel group UNITA contested the results and decided to go back to war.

Who will drive the CAR? Central African Republic was expected to have a new democratically elected president by the end of March. Incumbent Francois Bozize faced serious opposition from only one main rival – former military leader Andre Kolingba, who recently returned to the country from exile in France. Bozize seized power from Ange-Felix Patasse in a coup in 2003. Since then, the country has experienced constant instability, and the administration has now reportedly run out of money to pay salaries. Donors say they will only give aid to a democratically elected government.

Greening the Namibian Desert: An African Success Story

A determined entrepreneur turns an arid landscape into a burgeoning vineyard

SUN-scorched and starved of rain, Namibia's endless desert and scrubland is an unforgiving place for a determined farmer with a dream. Only 2% of the country receives enough rain to grow crops. Irrigation from rivers is possible only along a few border rivers in the far north and south and borehole irrigation is prohibitively expensive.

Yet Dusan Vasiljevic, a lone entrepreneur with a feel for horticulture and global markets, observed that Namibia's mild coastal climate was perfect for growing table grapes for Europe at times of the year when they are most vulnerable

to frost elsewhere in the world. Since first connecting those dots in 1988, Vasiljevic – and those who have followed in his footsteps – built a new agricultural industry from scratch on land that received less than 50mm of rainfall a year.

'The Namibian table grape industry owes a lot to one man for single-handedly, against all odds, starting and building the production and export of table grapes in this arid country,' said Achilles de Naeyer, chairperson of the Namibian Orange River Table Grape Growers Association.

A Yugoslav by birth, Vasiljevic became a commodity trader in fruits and later started his own trading company in Johannesburg, South Africa. In the 1980s, Vasiljevic learned that Europeans enjoy eating fresh grapes year-round, but few places on the planet can produce them in November and December because of frost and rainfall. Knowing that several grape varieties thrive on high heat and low humidity, Vasiljevic

recognised an opportunity along Namibia's Atlantic coast.

In 1988 Vasiljevic bought Aussenkehr, a failed vegetable farm along the Orange River. The plot offered only a few derelict buildings and rudimentary irrigations pumps and systems. But despite its low annual rainfall, the farm did have a 15km riverfront and an annual irrigation

quota – a government-determined ration based on acreage planted and pumping capacity.

But Vasiljevic was no grape farmer, and faced a steep learning curve planting his first 100 hectares. Grape vines

must be tended for three years before they bear fruit. But the farm's irrigation pumps soon failed and had to be replaced on expensive credit terms. The financial strain increased when he had to buy out his initial investment partners who lost faith in this risky venture. No South African banks would lend to him – Volkskas Bank had lost millions from the previous owner. Vasiljevic had to source his own funding in foreign currencies, an expensive exercise as the South African rand (to which the Namibian dollar is pegged) plummeted against global currencies in the 1990s.

'It was tough,' reflected Vasiljevic. 'People thought I was mad and that this was a white elephant. The perception was that it was simply not possible to grow grapes there. I was in a newly independent country planting new crops in a virgin area. There was hardly any infrastructure, a lack of quality management. The commercial banks don't deal with many farmers and refused to lend, especially in new areas.'

To keep the farm going while the

grape vines matured, Vasiljevic planted vegetables including tomatoes, cantaloupes and watermelons for the South African market. A project to supply tomato paste to Namibia's fishing industry failed, because the South African businesses dominating the industry preferred South African suppliers. Vasiljevic's grit was often the only thing that kept him going.

'If you know you are right and someone keeps telling you that it can't be done, you redouble your efforts to prove a point,' Vasiljevic said. 'I was always optimistic, I had the desire, and at times was desperate as I had invested everything. Many good businesses require time to bloom, and I was lucky that I had time.'

Gleaning government support

Although Namibia was the only country able to produce grapes at year end, winning access to the European market was a long struggle. The Namibian government successfully applied for membership of the Fourth Lomé Convention (1992-2000), an agreement offering preferential access to the EU market for certain low income African, Caribbean and Pacific (ACP) states. Once in Lomé, Namibia was free to seek particular concessions for its agriculture exports.

Vasiljevic had written to the Ministry of Agriculture, motivating why Namibian grapes should be on the negotiating table in Brussels. European grape-producing states, notably Spain, Italy and France, as well as several non-EU grape farmers cannot produce at yearend, and their fresh grapes deteriorate in quality after long, expensive periods in cold storage. These countries therefore lobbied to make any duty-free grape access time-bound. Eventually, all the ACP

'If you know you are right, you redouble your efforts to prove a point'

countries, combined, were permitted to export a relatively small quota of 600 tonnes of fresh seedless table grapes duty-free to the EU from 1 December to 31 January each year.

Even in 1992, Namibia was the only ACP country that could export table grapes to the EU, and Aussenkehr easily exceeded the 600 tonnes on its own. After constant lobbying of the EU, the duty-free quota was boosted to 800 tonnes in 1996, split between December and January, available to the first supplier to market. Namibia managed to squeeze out some relief for its grape industry, effective from January 2002. The government negotiated, for Namibia only, a tariff reduction of 2.5% for grapes over the 800 tonne quota. Namibia pays 8% duty on these grapes, and all other countries pay 11.5% duty. However, changes to EU trade rules have subsequently extended this concession to all ACP countries.

This meagre market opening nevertheless allowed Aussenkehr into Europe. The farm secured a deal to supply British supermarket giant Tesco.

'Over 80% of all fresh produce sold in the UK is sold in supermarkets,' said Stuart Symington, CEO of the South African Fresh Produce Exporters' Forum. 'Tesco imports 30% of that by value. If you impress head office, you may then be a preferred supplier to their stores in Asia. Supermarkets want grapes on their shelves 365 days a year. You get brilliant prices, if you can deliver consistently to very fussy customers. And it's all about the marketing window – if you don't take advantage, they will hunt for grapes from one of their 27 other supplier countries. Deliver what you are asked to – you are dead if you don't.'

Spreading the benefits

Vasiljevic's market knowledge and contacts paid off handsomely. Fresh table grapes sell wholesale for about \$3,800 per tonne (after duty) in

Europe, and these good prices allowed Vasiljevic to restructure his debt and start planting new vineyards. Today, about 75% of all Namibian table grape sales are to the EU.

Following his initial success, Aussenkehr Farms planted more vineyards, and currently has 350 hectares under production. Vasiljevic sold some land to the Namibian Government at a reduced price, and the parastatal agency the Namibia Development Corporation has planted more vineyards, as has a black empowerment corporation (the Namibia Grape Company (NGC), supported by the Government Institution Pension Funds of Namibia) on 360 hectares adjacent to Aussenkehr. The government is also developing new production areas on the farm Tandjeskoppie, next to Aussenkehr with assistance from the Arab Development Bank, and plans another 5,000 hectares under irrigation.

'Quite a few other farmers, although not on the same scale, have followed his example and have learned from him how to produce and successfully export table grapes of high quality standards worldwide,' said de Naeyer. 'Namibian grapes are well sought after in the European and Asian markets before and around Christmas time.'

Total Namibian table grape production has grown from 1,000 tonnes produced by Aussenkehr's first 150 hectares in 1991 to more than 12,000 tonnes in 2003. The approximate value of these exports is about N\$180 million (\$29 million).

Roughly 3,500 new permanent employment opportunities have been created by the table grape industry with another 7,000 workers employed as part-time harvesters for three to four months a year. The industry is the largest employer in the impoverished,

underdeveloped Karas Region where Aussenkehr is situated. For every 1,000 tonnes of table grapes Namibia has produced and exported, an estimated 300 new permanent and 600 part-time jobs were created, and these workers earn a total of about N\$6,000,000 (about \$967,000).

A growing sector

Vasiljevic and other entrepreneurs are now expanding Namibian table grape production beyond the original narrow band of land in Karas.

Komsberg Farming, in cooperation with a major black economic empowerment group, has opened up a production unit about 200km east along the Orange River.

Another grape production area – this time with no connection to Aussenkehr Farms – is developing 600km north of the Orange at the Hardap irrigation scheme in Namibia's South Central region. Although the new vineyards under cultivation are still small, an export licensed pack house for table grapes has been recently built at Hardap to accommodate an additional export volume of 3,000 tonnes. Previously, farms produced wheat, maize, raisins and sultanas (a form of yellow raisin) using irrigation from the nearby Hardap dam. With the rising cost of providing scarce water for irrigation, innovative farmers have been switching to high value crops – mostly fruit, vegetables and flowers – principally for export.

While this region lacks the ideal climatic conditions and agricultural experience of Aussenkehr, these excellent quality grapes have created a demand in Europe. About 12 individual farmers grow the grapes on relatively small plots, creating about 150 permanent jobs in Hardap. These farms use the same Kalahari Table Grapes brand name and joint packing facilities. They realised that ordering individual packaging material was too expensive if each farm did it alone, and space was limited. In turn they

'You get brilliant prices, if you can deliver consistently to very fussy customers'

'Deliver what you are asked to, you are dead if you don't'

came to appreciate other advantages of cooperation, such as having a single negotiator to interact with the buyers. These grapes supply a different British grocery store chain and face full tariffs, as Aussenkehr uses its climatic advantage to consistently export about three weeks before the Hardap farmers and about five weeks before South Africa. European wholesalers send their experts to Namibia before harvesting and during packing, to ensure that their quality standards are met.

Namibia has no organisation able to certify that grapes meet the EU's stringent quality standards. Exporters must pay the South African government's Perishable Products Exports Control Board (PPECB) to conduct inspections. The European supermarkets also insist that they pass their own stringent inspections. The Namibian grape producers are then eligible to export to Europe, as they have achieved EurepGAP certification – the complex, costly set of interconnected requirements covering food safety, the origins of produce, environmental standards and the social welfare of workers on farms producing for the EU.

Building new markets

Other potentially lucrative export markets, however, remain closed. Namibia has tried for the last eight years to get table grapes into the US market. But it can take five to seven years to meet the quarantine conditions needed to get an import permit from the Animal and Plant Health Inspection Service (APHIS) in the US Department of Agriculture (USDA). A Pest Risk Assessment (PRA) controlled and supervised by APHIS is normally required, and Namibia lacks the expertise to execute these complex tests on its own. While the US has shown some willingness to assist Namibia, various visits by APHIS experts have not shown real progress. With the US dollar depreciating, the industry has seen European expansion as more profitable than attempting to meet the APHIS requirements. Successive US

delegations have offered different ideas about implementing the PRA. Even intervention by the US ambassador in Namibia seems to have delayed rather than speeded up this process.

Ironically, the Northern and Western Cape Provinces in South Africa received USDA-approved table grape export permits without much trouble in 1995, perhaps the result of strong political will to integrate post-apartheid South Africa into the global trading system. But South Africa's PRA is not acceptable to APHIS for Namibia, and the laborious and expensive exercise must be duplicated although the two production zones straddle the Orange River.

Urging Collaboration

The ingenuity and determination of one person has spurred the creation of the most promising and fastest growing sector of agricultural exports from Namibia. Technical knowledge and perseverance are the motors of this industry that developed from a debt-ridden small enterprise to one of Namibia's largest companies.

The government recently established the Green Scheme project to incorporate disadvantaged Namibians into commercial operations. Budding farmers wanting to create new irrigation schemes are required to have a black empowerment component.

At the NGC's irrigation project adjacent to Aussenkehr Farms, 30 small scale farmers have been established in a mixed vegetable/grape production unit. Aussenkehr packs and markets their grapes through existing channels normally inaccessible to the low volumes produced by individual farmers. Synergies are being formed between larger commercial farms and new small farmers, as evidenced by the formation and strength of the Namibian Orange River Table Grape Association, which gives newer entrants all the benefits of access to established market channels and quality certification systems, which small farmers would be unable to develop individually. – Jürgen Hoffmann

Briefly

London Calling: The Commission on Africa, an initiative led by British Prime Minister Tony Blair to find radical solutions to Africa's complex development challenges, was expected to release its report on 11 March. The Commission, comprising prominent economists and political leaders from around the world, looked at issues of aid, debt relief, fair trade, security and HIV/AIDS. The report was expected to call for a significant increase in foreign aid to Africa as part of a strategy to help create rapid and sustained economic growth on the world's poorest continent.

Aid effectively: The wealthiest nations are failing the poor with an 'uncoordinated, self-serving and hypocritical' system of aid, which they are using to reward strategic allies and pet projects at the expense of more needy countries, according to a joint report from Oxfam and ActionAid. The agencies have called for reform of the global aid system, saying failure would undermine attempts of halving poverty by 2015 as set out in the UN Millennium Development Goals.

Sinking: Namibia's debt, compared with income, has reached the International Monetary Fund's danger zone, according to Martin Mwinga, one of the country's leading bankers. In 1990, the country's liabilities stood at about \$24.5 million, but now it has escalated to just more than \$2 billion. Lack of efficient revenue collection has been the main problem, Mwinga noted. He argued that the government urgently needed to broaden the tax base and restructure its tax-collection department.

Obstructive: The killing of nine UN peacekeepers late in February north of Bunia, in the Ituri region of the Democratic Republic of Congo, led to the suspension of aid to thousands of internally displaced people. Non-governmental organisations – including Doctors Without Borders, Oxfam and German Agro Action – operating in the region ceased all field activities, leaving about 65,000 people without food, water and medication. Some of the vital aid that has been put on hold includes the distribution of seeds and tools to 13,000 families to coincide with the start of the rainy season.