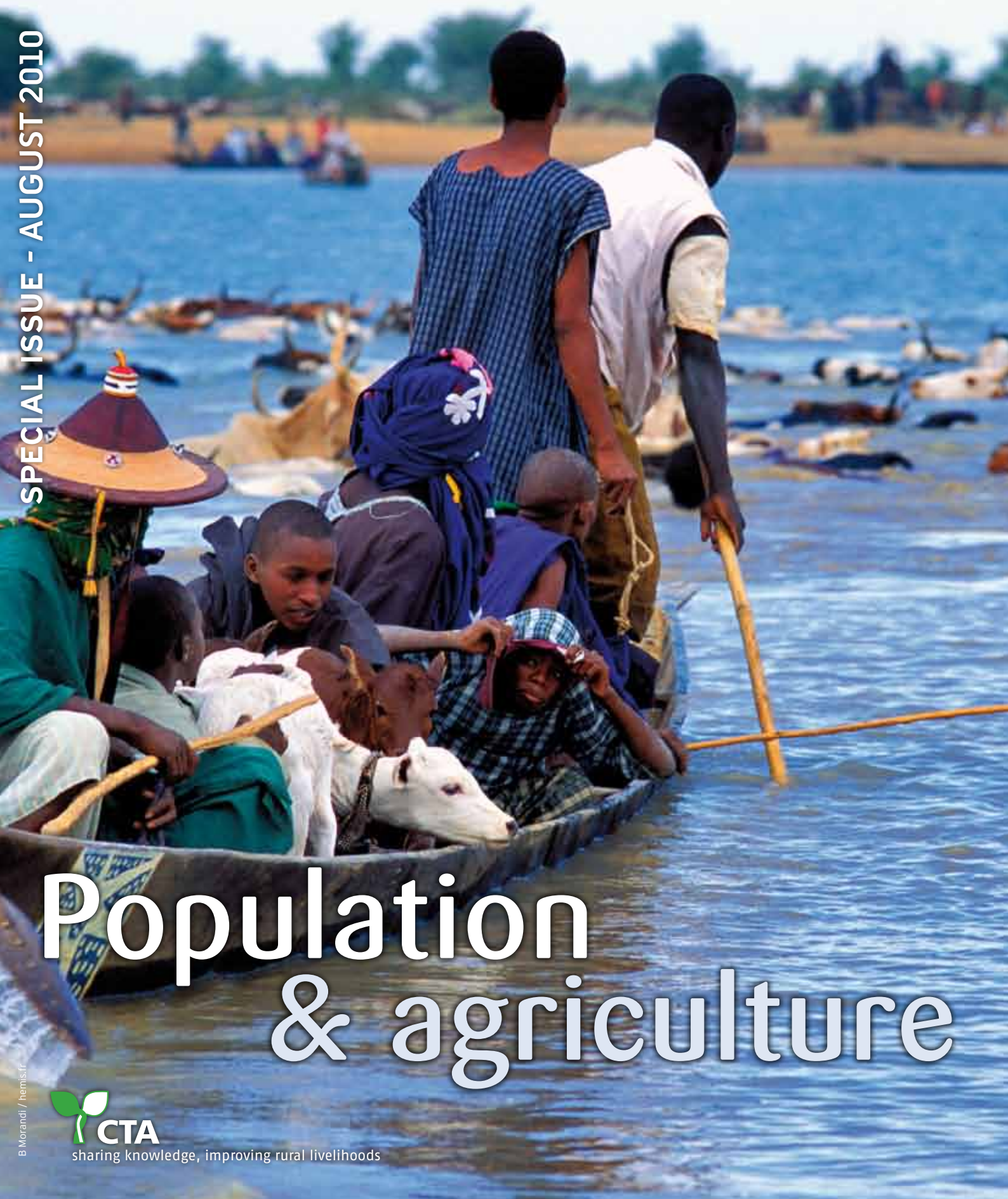


# SPORE

The magazine  
for agricultural and  
rural development  
in ACP countries  
<http://spore.cta.int>

SPECIAL ISSUE - AUGUST 2010



## Population & agriculture

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### Population and agriculture: for better and not for worse

By 2050, the world population is expected to surpass 9 billion people. Will we be able to feed this large increase or succumb to disasters as the Malthusians predicted?

Human ingenuity has surmounted previous doomsday prophecies that the world would run out of food in the face of a rapidly growing population. Thanks to the Green Revolution, global agricultural production has doubled in the last 50 years largely through improved crop varieties and better farming techniques. But the demand on agriculture is unrelenting. Not only do we need to produce more food to meet the needs of a growing population, but to satisfy changing dietary preferences for meat and dairy products and meet growing demands for bioenergy sources.

As a result, the world food system is facing serious challenges. The natural ecosystem on which agriculture depends is hurting. Twenty seven million t of topsoil are lost every year. Underground aquifers are being depleted and water tables are steadily falling. Landuse and deforestation contribute to about a third of GHG emissions. Large-scale ranching and plantations trigger biodiversity loss, and excessive use of chemical fertilizers and pesticides has caused massive water pollution.

Smallholders in ACP countries have little to do with causing these problems, but they will face the brunt of the negative impacts — more frequent droughts and floods, and dwindling land and water resources.

Tackling the growing demand for agriculture requires a multi-pronged approach. First, productivity must be increased without expanding farmland. Innovative agronomic practices, new crop varieties, conservation agriculture, and the use of water- and resource-efficient techniques can all contribute to this. Secondly, we must tackle the policy and institutional interventions that will boost smallholder productivity.

Population growth — especially in the ACP countries — need not necessarily spell disaster. With investment in education, training, health and job creation, ACP countries could create a strong base for economic development. As jobs are created and household incomes grow, the demand for food and other agricultural products will spur growth in the rural sector.

**Michael Hailu**  
Director, CTA



# 1 | Population

## The numbers game

When humans first began farming, the population of the Earth was 5 million. Now, 5 million people are born every 10 days. With global population expected to increase by almost 40% in the next 4 decades, much of it in the South, the challenge is to find ways to improve food production and access to food and halt the drift of young people from rural to urban areas.

**From** the dawn of agriculture, it took some 10,000 years for the world's population to reach its first billion. The second billion, chalked up in 1927, was achieved in just 130 years. Throughout the 20th century each additional billion was reached in a shorter period of time. Human population entered the 20<sup>th</sup> century with 1.6 billion people and left the century with 6.1 billion. Today, the population of the planet undergoes a net increase of 2.5 people every second. That makes 9,000 more inhabitants every hour, and 216,000 every day. Massive global population increase is predicted for the coming decades, with UN figures forecasting a rise from the current 6.8 billion to 9 billion in 2050.

The population increase, and the dynamics of how and where those numbers will be concentrated, poses a challenge of gargantuan proportions for agriculture. More people will mean a sharp rise in the demand for food, water, and energy in countries that can least afford it, with governments faced with trying to expand the delivery of health, education, and social services. Global population growth is almost entirely concentrated in the world's poorer countries and this trend is forecast to continue. By contrast, only 14% will live in the more developed regions.

How can the developing world feed these massive numbers with constantly dwindling supplies of arable land, water and other natural resources – without destroying the already fragile environment? And how can the South achieve this target against a backdrop of growing threats from climate change and an ever-increasing need for energy?

Fertility rates are falling in most ACP countries, but not enough to reduce the predicted population increase. Africa faces the biggest challenge in terms of extra mouths to feed. The continent's current population of nearly 1 billion is projected to more than double in size by 2050. Behind the massive rise in numbers is the impact of advances in health and medicine, leading to a rapid decline in infant and child mortality. Even with the high death rates from HIV/AIDS, mortality has declined enough to fuel rapid population growth. At the same time, fertility levels have remained high and are decreasing only slowly.

Today, African women bear 5.5 children on average, except in Southern Africa. In Niger, the figure is over 7. According to UN data, 76 countries, most of them in the more developed regions, have fertility levels below the replacement level of 2.1 children per woman. Latin America and the Caribbean now have a regional total fertility rate (TFR) of 2.3, Cuba, Costa Rica and Trinidad and Tobago having TFRs at or below the replacement rate. But 120 countries, all of them in the less developed regions, have total fertility levels at or above 2.1 children per woman. Seven countries still have fertility levels of 6 children per woman or higher, and five of these are in ACP regions: Chad, DR Congo, Niger, Somalia and Uganda.

### The challenge of youth

Between now and 2050, the population of the more developed regions is expected to remain largely unchanged at 1.2 billion inhabitants. But as the North's population continues to grow older, the ►

## Glossary

### Baby boom

A sudden and large increase in the birth rate.

### Birth control

Methods employed by couples to prevent sexual intercourse from leading to conception and birth. The term birth control is often used synonymously with such terms as contraception, fertility control, and family planning. But birth control includes abortion to prevent a birth, whereas family planning methods explicitly exclude abortion.

### Birth rate

The number of live births occurring in a population in a given period (usually a calendar year) in rela-

tion to population size, usually expressed per 1,000.

### Demographic transition

Shift in a population from a traditional demographic regime marked by high fertility and mortality to a modern demographic regime in which fertility and mortality are low.

### Fertility

The term fertility is used instead of birth rate when births are counted in relation to the number of women of reproductive age.

### Infant mortality rate

Number of deaths of infants under the age of one per 1,000 live births in a given year.

### Life expectancy

Average number of years a group of individuals can expect to live.

### Population growth

A population increase over a given period. It represents the sum of natural increase and of net migration, generally expressed for a year. The size of a population increases when there are more births than deaths (natural increase) and more immigrants than emigrants (net migration).

### Population projection

Future population assessed as a function of hypotheses on variations in fertility, mortality, and migration.

Source: INED



T. Cockrem © Alamy/hemis.fr

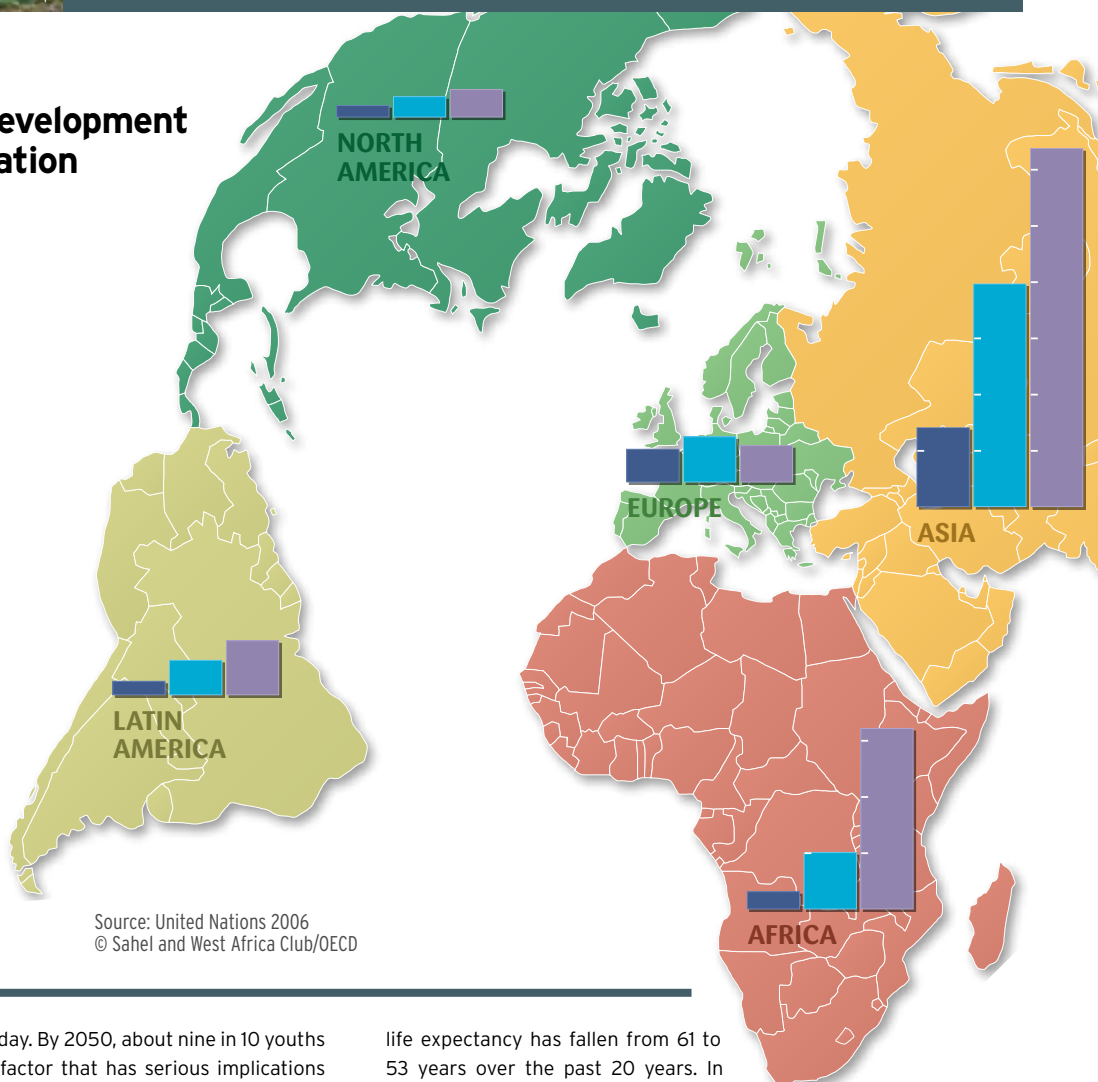
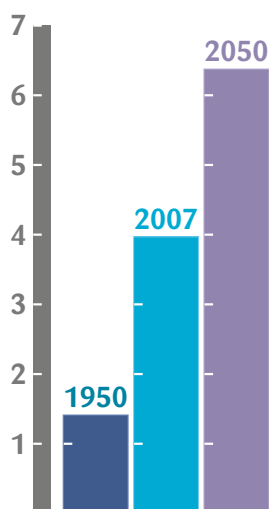
## PACIFIC A future in farming

Young people in the Pacific need more support from families and the community to help them pursue a future in agriculture. That was one of the key findings of a survey of young people in Fiji, Kiribati and Tonga carried out by the Pacific Agriculture and Forestry Policy Network (PAFPNet). Against a backdrop of increasing migration of young people from rural to urban areas, the survey is part of a strategy launched by the Secretariat of the Pacific Community (SPC) to promote agriculture as a career for young people.

The inquiry found young people are an important part of the informal labour force, involved in agricultural activities that contribute to income generation as well as household food security. Youths are mostly responsible for planting and maintaining food gardens, while a small number run and manage their own semi-commercial plantations. Yet despite this active involvement, many young people surveyed express frustration at a lack of recognition for their role. They also want relatives and community elders to support their initiatives by allowing them to share the benefits of their own endeavours and, importantly, to set aside land they can use for their own entrepreneurial activities.

## Distribution and development of the world population

Population by continent  
(in billions)



Source: United Nations 2006  
© Sahel and West Africa Club/OECD

► South is getting younger by the day. By 2050, about nine in 10 youths will be in developing countries, a factor that has serious implications for governments expected to satisfy increasing requirements for education, training and employment.

Africa has the fastest-growing and most youthful population in the world. More than 20% of the continent's population is between the ages of 15 to 24 and, since over 40% of Africa's population is under 15, that number is expected to grow significantly in the coming years.

"The great bulk of today's 1.2 billion youth, nearly 90%, are in developing countries", said Carl Haub, senior demographer at the Population Reference Bureau (PRB). "During the next few decades, these young people will most likely continue the current trend of moving from rural areas to cities in search of education and training opportunities, gainful employment, and adequate health care."

Life expectancy in Africa has virtually stagnated since the late 1980s, due to disease but also due to armed conflict and economic problems. In Southern Africa as a whole, the worst affected region for HIV/AIDS,

life expectancy has fallen from 61 to 53 years over the past 20 years. In Botswana, where HIV prevalence was estimated at 24% in 2007 among the population aged 15-49 years, life expectancy dropped from 64 in 1985-1990 to 48 in 2000-2005. The toll taken by HIV/AIDS is already countering progress in reducing child mortality, with the impact especially strong in countries that had achieved relatively low levels of child mortality before the epidemic began, such as Zimbabwe. Since 1950, the greatest gains in life expectancy on a global scale have been seen in women. In almost every country, women now outlive men. But in spite of their greater longevity, women spend about 15% of their lives in poor health, compared with 12% for men. The discrepancy is mainly due to risks associated with childbearing and gender bias, especially in the developing countries, where women are often disadvantaged from birth. Girls frequently receive less nutritious food and less medical care, and have fewer prospects of education, a factor which influences the way they rear their own children, ►



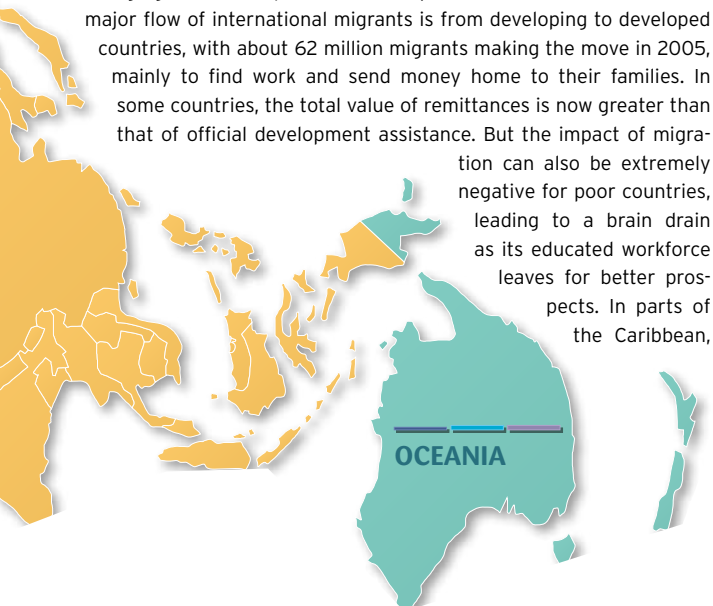


► and how many babies they have. Women who are undernourished during pregnancy are more likely to have low birth-weight babies and undernourished children. Maternal mortality rates are particularly high in sub-Saharan Africa.

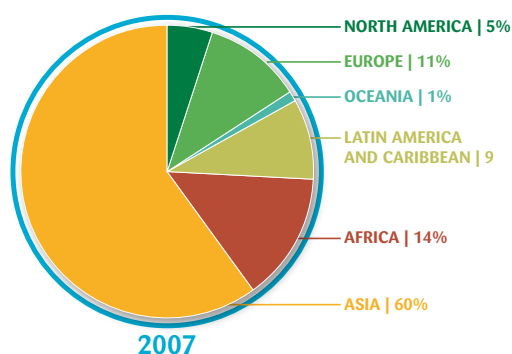
### Moving on

Two factors mitigate strongly against the possibility of raising Africa from the bottom rung of the ladder for global development, according to the 2007 Probabilistic World Population Projections published by research organisation, the International Institute for Applied Systems Analysis. First and foremost is rapid population growth combined with stagnant or declining educational attainment levels. Second are the additional environmental and agricultural problems likely to be caused by climate change.

One of the most visible side effects of population growth is migration. The numbers of people moving, on an international, regional and domestic scale has risen dramatically in recent decades. In 2005, the number of international migrants in the world reached almost 191 million, up from 155 million in 1990, constituting 3% of the world population. These already large numbers are projected to swell even further, averaging 2.4 million persons annually between 2009 and 2050. The major flow of international migrants is from developing to developed countries, with about 62 million migrants making the move in 2005, mainly to find work and send money home to their families. In some countries, the total value of remittances is now greater than that of official development assistance. But the impact of migration can also be extremely negative for poor countries, leading to a brain drain as its educated workforce leaves for better prospects. In parts of the Caribbean,



Distribution of world population in 2007



70% of the highly-educated work force has left to work in Canada, Europe or USA. Once births and deaths are taken into account Pacific Island countries and territories (PICTs) grow daily by 507 people, but they lose 34 people each day due to migration.

There is also a massive and ever-increasing flow of people who shift from one developing country to another, either for work opportunities or to escape conflict or natural disasters. This type of flow can put massive pressure on social, medical and economic infrastructures, as the 1994 crisis in Rwanda showed, when 2 million refugees fled the country, causing serious tensions in neighbouring countries.

But inter-regional migration can have advantages, both for the country of departure and the host country. There is wide agreement that Côte d'Ivoire's success with coffee and cocoa in the 1980s was due

in large part to the influx of labour from neighbouring countries such as Burkina Faso. By the same token, it is almost certain that the fragile and degraded land of Burkina Faso's central plains would have had serious problems in supporting a rapidly growing population.

### The rural exodus

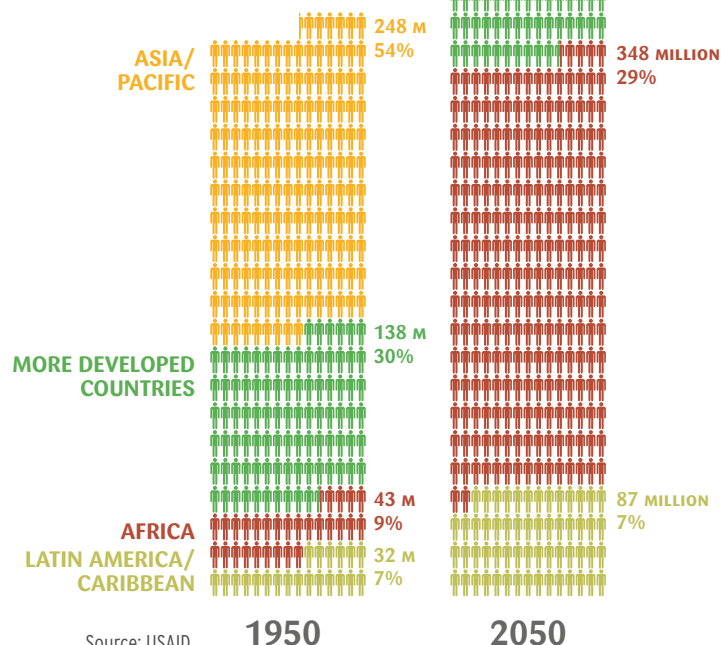
In 2008, for the first time ever, the world's urban population equalled the rural population and that tendency is set to continue. Although rural populations continue to grow in Africa, urban populations are now increasing much more rapidly. For agriculture, the prospect is a simple albeit a daunting one – rural dwellers will have to feed a massively increasing number of urban dwellers. People living in cities will themselves have to take serious steps to secure food production, through more investment in peri-urban agriculture.

The rural exodus is most spectacular in Africa. But it is happening throughout the ACP regions. Many of the Caribbean and Pacific islands are seeing strong rural-urban migration which can leave the agricultural labour force depleted. The Cook Islands' largest island, Rarotonga, struggles to attract enough young people to work in its hotels – many of which are staffed with migrant labour from Fiji – let alone agriculture. "The remote areas and outer islands are generally losing population, in part due to urbanisation and partly due to international migration", said Geoff Hayes, an expert on population in the Pacific. "In many outer islands, the working age population has migrated leaving the young and the old behind. In Fiji this is associated with the decline in the sugar industry."

### The world's young population (15 to 24 years)



= 1,500,000 young people



In the Caribbean, where rural life holds little appeal for many young people, farming is increasingly being left to the older generation (see p. 10). The average age of farmers in the region is now 55.

The boom in young people under way in all ACP countries will increase demands for education and employment opportunities. The World Bank's 2008 report *Youth and Unemployment in Africa: The Potential, The Problem, The Promise*, identifies youth unemployment and underemployment as a serious trigger for social instability and argues that creating jobs for young people is a precondition for ►



# 1 | Population

► Africa's poverty eradication and sustainable development. However, in spite of growing rural-urban migration, more than 70% of Africa's young inhabitants still live in rural areas. Indeed, the World Bank reveals that the average young African is not an urban migrant from the countryside, but a poor, literate, out-of-school female living in a rural area, a factor that highlights the importance of focusing development on rural youth and women.

The prospect of so many more young people could present a window of opportunity, if the right investments are made in health,

education, rural agricultural development and training. The so-called demographic dividend – the potential value of the greater proportion of working age people, compared with declining rates of very young and old people – may result in greater development and economic growth (see below). But experts warn that without these opportunities, and a strong economy with good governance, the presence of youth may turn out to be a sting in the tail, as disenchanted young people vent their frustrations on the society that spawned them. ■

## For further information

### CTA

Brussels Briefing  
*Population Growth and its Implications for Rural Development*  
<http://tinyurl.com/y2f6q49>

### International Organization for Migration

[www.iom.int](http://www.iom.int)

### Population Reference Bureau

[www.prb.org](http://www.prb.org)

### SPC

Pacific population trends  
<http://www.spc.int/sdp>

### UNAIDS

[www.unaids.org](http://www.unaids.org)

### UNFPA

UN Population Fund  
[www.unfpa.org](http://www.unfpa.org)  
• **State of world population 2009. Facing a changing world: women, population and climate**  
Downloadable as PDF from:  
<http://tinyurl.com/y8hmuq4>

### World Bank

Africa's Population Set to Double by 2036, 2008  
<http://go.worldbank.org/5W42H1WC30>  
• **The world's growing population, World Bank Atlas** (36<sup>th</sup> edition), 2004  
<http://tinyurl.com/3429k77>

## INTERVIEW

### A dividend for Africa

David Bloom is Professor of Economics and Demography and Chairman of the Department of Global Health and Population at the Harvard School of Public Health, USA.



The demographic dividend is the boost to economic growth that can occur as a result of changes in the age structure of a country's population. Such changes

accompany a country's demographic transition, in which death rates, particularly of infants and children, decline first, with birth rates following suit later. A decline in infant and child mortality leads to a baby boom – not because there are more births, but because more babies born actually survive.

The baby boom consists initially of a large number of young people, a cohort that needs to be fed, clothed,

housed, schooled, and provided with healthcare. All of that takes resources, which have to be diverted from other uses, and this diversion tends to slow economic growth. But within a period of 15 to 25 years, the oldest members of the baby boom generation reach the prime ages for working and saving. When that happens, the economic situation changes because of the expansion of labour supply and, potentially, because of increased savings.

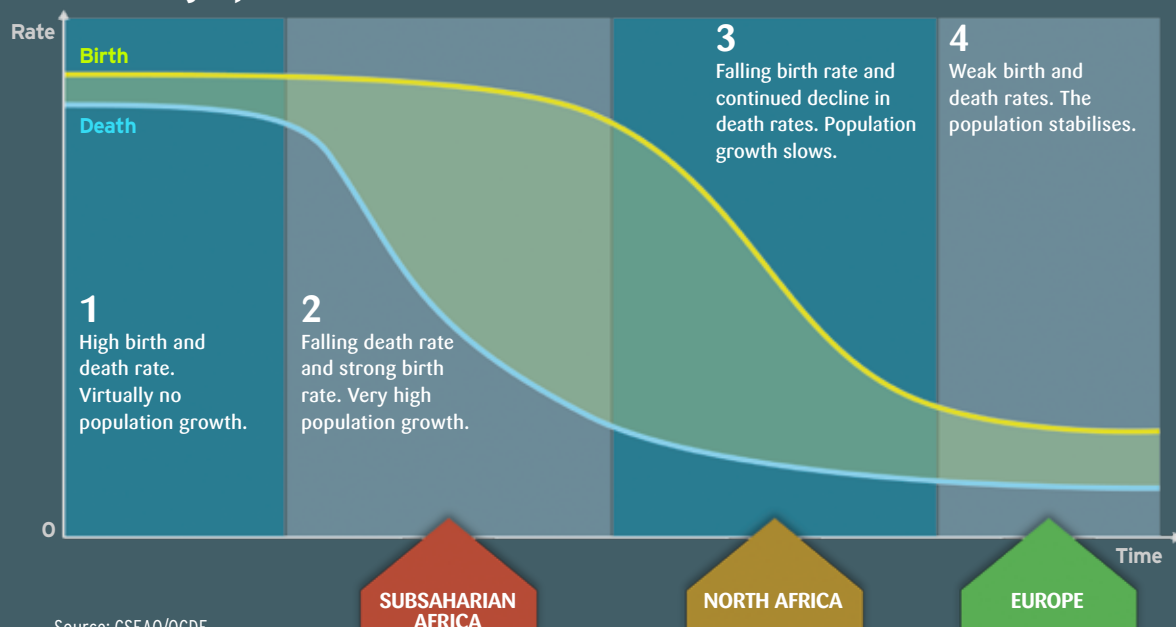
Nearly all countries have begun the demographic transition, and many completed it long ago. Other countries find themselves at various stages in between, with most of sub-Saharan Africa just beginning the transition. Infant mortality rates started to come down relatively recently, compared with other parts of the world. Fertility rate declines have followed, but in many countries the decline has so far been quite modest. Nigeria, for example, is in the early stages of the demographic transition. The United Nations forecasts a steady rise in the share of the working-age population, with twice as many working-age people as dependents in 2050. The exact size of this ratio in the future

will depend heavily on the speed with which fertility falls now.

For Nigeria, and for most other countries in sub-Saharan Africa, reaping the demographic dividend is a goal that will take work to achieve. The overall economic, social, and political environment has a huge effect on whether a country can capture the demographic dividend. With appropriate policies in place, internal conflicts reduced, and good cooperation from the rest of the world, countries may realise a huge economic boost stemming from demographic change. Examples include Malaysia, South Korea and Thailand.

Rural areas face particular challenges, because they generally have higher mortality and fertility rates and are poorer than urban areas. If governments can adopt policies that increase employment nationwide, rural areas may see increased investment or greater opportunities for outmigration to urban areas where jobs are more plentiful. The demographic dividend, if it is realised, can spur an increase in economic activity that can aid rural areas as well as cities across sub-Saharan Africa.

## Demographic transition



Demographic transition is the underlying phenomenon that creates the conditions for what economists call the demographic dividend. It refers to the change that countries undergo from a regime of high fertility and high mortality to one of low fertility and low mortality. A drop in mortality rates at the beginning of demographic transition – due typically to the spread of vaccines, antibiotics, safe water and sanitation – leads to a decline in fertility rates as people realise their children have a greater chance of survival.

Source: CSEAO/OCDE





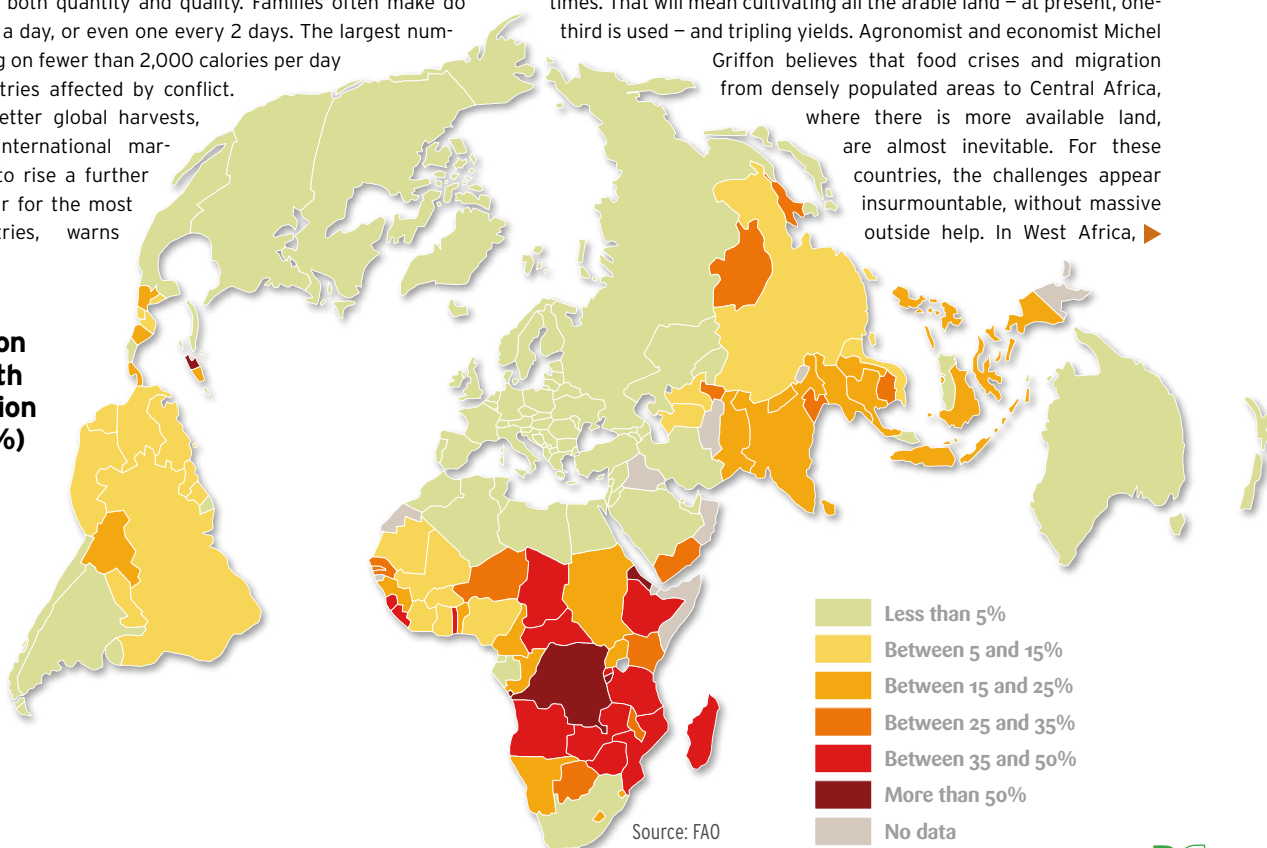
# 2 | Rural challenges 2010-2050: an uphill struggle

Ensuring food security for a population of 1.9 billion by 2050 and saving the environment and finding jobs for growing numbers of rural youth are some of the major challenges currently facing Africa.

**How** will Africa feed almost 2 billion people in 2050, when it can barely feed a billion at the moment? The sheer scale of the challenge is staggering. In sub-Saharan Africa, food security is by no means assured and is actually deteriorating in several countries. In 2009, the number of people suffering from hunger in the region rose by 11.8%. One-third of Africans are underfed and, ironically three-quarters of these are farmers, who are supposed to be in charge of producing food for everyone. In Central Africa, malnutrition levels are especially high and are rising inexorably: from 36% in the 1960s to a figure of 56% since 2000. In the Caribbean, Haiti forced the figure up to 12.8%.

Undernutrition has become chronic in many regions of the continent, in terms of both quantity and quality. Families often make do with just one meal a day, or even one every 2 days. The largest numbers of adults living on fewer than 2,000 calories per day are found in countries affected by conflict. And in spite of better global harvests, food prices on international markets are forecast to rise a further 10 to 14% this year for the most vulnerable countries, warns

**Prevalence of malnutrition compared with total population in 2009 (in %)**



FAO. Africa relies massively on imports to meet its domestic food requirements.

Feeding twice as many people in 40 years' time will therefore pose an unprecedented challenge for the continent. FAO predicts that developing countries will have to increase their availability of crop-based energy by 175%. Africa will need to increase the supply by 414% and people whose staple food is cassava, taro or yam will have to raise production of plant-based energy by 617%. Reaching such levels will involve a significant annual increase in agricultural output, way over the 2.4% achieved in Africa in the 1970s and 1980s.

In East Africa, output will have to increase by between eight and 14 times. That will mean cultivating all the arable land – at present, one-third is used – and tripling yields. Agronomist and economist Michel Griffon believes that food crises and migration from densely populated areas to Central Africa, where there is more available land, are almost inevitable. For these countries, the challenges appear insurmountable, without massive outside help. In West Africa, ►



## 2 | Rural challenges

► demands are somewhat lower – the total area of land cultivated will need to increase fourfold at the expense of forests and savannas if everyone is to have enough to eat. Output will need to rise by between two and five times, depending on the regions.

### Protecting the environment

These are chilling forecasts, and even though Africa has the resources to rise to the challenge, it will take heavy investment to succeed. There are still vast quantities of unused land. According to FAO figures – which are approximate since many countries do not know exactly how much agricultural land they have – 228 million ha are cultivated, just 22% of the potential. When the huge expanses of forest and deserts are taken into account, average population density is low (25 inhabitants/km<sup>2</sup>), but there are huge differences. Some countries such as Botswana, Central Africa and Namibia have relatively few inhabitants in comparison with their size while others – Comoros, Mauritius and Rwanda – are very densely populated, with more than 200 inhabitants/km<sup>2</sup> and even 400 or 500 in some areas.

The total cultivated area per active farmer varies considerably from one region to another even within the same country, with an average of one farmer per 0.1 to 1 ha. In the past 30 years most farmers, especially in West Africa, have opted to increase the amount of land under cultivation to meet the ever growing need for food due to rising population levels. The amount of land per active farmer has halved – in Senegal, for example, each farmer has an average of just 1 ha. Pressure on land has increased and soil fertility has deteriorated.

Extending agricultural land eats into forest and savanna reserves. According to FAO, an annual 3.4 million ha of forest have disappeared in Africa since 2000. Deforestation is particularly intense in central African countries, which are the most densely forested areas. Demand for charcoal and firewood, which still accounts for 89% of energy and

continues to rise, only serves to increase deforestation and exacerbate soil erosion.

Given the situation, the continent's natural resources and biodiversity are starting to assume a value. They can generate cash for farmers who protect endangered species or replant trees that sequester carbon or who adopt crop growing techniques that respect the environment. So it is crucial to look after these natural riches.

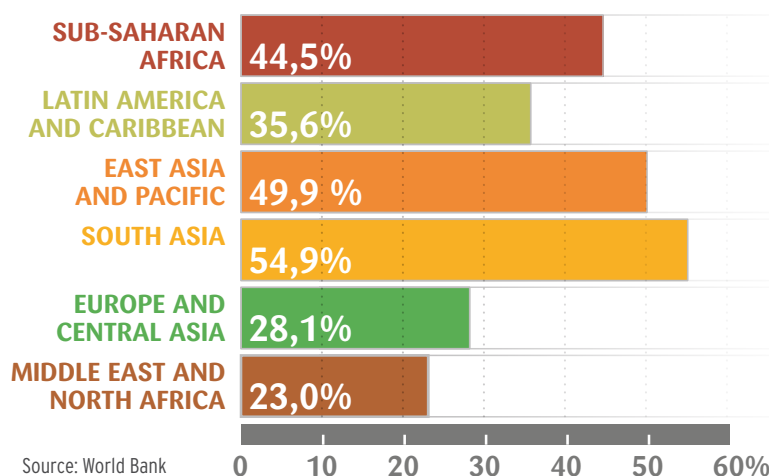
Intensifying agriculture is therefore the priority, to limit land clearance while dramatically increasing output. That involves ensuring that farmers have access to production techniques and services that will help bring about this transformation.

### Irrigating and fertilising

Irrigation is one way of boosting yields and harvests and countering increasingly inadequate or irregular rainfall caused by climate change. In Côte d'Ivoire, where 80% of rice is rainfed, yields of irrigated rice are five times higher, say experts. Small-scale crop irrigation could double the demand for agricultural labour and provide jobs for many landless, rural youth. Today, barely 4% of arable land is irrigated, compared with 38% in Asia. The potential is therefore considerable, but it will take massive investment to turn that scope into reality.

The other key strategy is rapid restoration of soil fertility to increase yields. In many regions, the rise in population has made it impossible to leave land fallow. Many small-scale farmers do not have access to fertiliser, which is either unavailable or too costly. African countries currently use an annual average of just 8 kg of chemical fertiliser per hectare compared with the global average of 90 kg. According ►

### Agricultural land as percentage of territory (in 2007)



## BENIN

### Trained to sell

Since 2009, 16,000 young people in Benin have benefited from the PSIIA, a programme to introduce young people to agriculture. Launched by the government to combat unemployment and the rural exodus, this scheme involves a 2 year pilot-phase (2009-2010), with an estimated cost of FCFA7 billion (€10.6 million), entirely funded by the state budget. From 2011 onwards, this is followed by a phase that involves promoting agricultural enterprise for young people.

"It is an original initiative compared with past experiences", says Aly Bouco Imorou, secretary-

general for the Ministry of Agriculture and Rural Development. He says previous programmes focused on extending loans, offering training and monitoring beneficiaries, who were chosen on the basis of records. No attempt was made to address the crucial issue of market access. "These schemes worked well, but they failed at the marketing stage", he observes.

According to Imorou, PSIIA is innovative on a number of fronts involving a more open selection of beneficiaries, no longer based on studying files but on motivation, with people chosen from volunteers. Other novel aspects include improving land tenure and preparation through free support to young people (by issuing land titles, helping with ploughing and

labour), as well as grants, training and practical follow-up in the field.

One of the most important factors of this programme is the improvement of market access. The state enterprise SONAPRA (National Society for Agricultural Advancement) buys the output of these young farmers for standard prices and markets their products. As a result, motivation levels are increased and yields are higher than the national average. "The youngsters are producing 2.5 t of maize and 4 t/ha of rice, compared with an average of 1.5 and 2.5 t, respectively", says the Ministry. In 2011, the programme's second phase will focus on making the best young farmers more professional by supporting their activities with a business plan to be submitted to the PSIIA.





► to the International Fertilizer Development Center (IFDC), 85% of cultivated land has lost an annual average of 30 kg of nutrients per hectare. Outputs are stagnant, with levels of 12.3 quintal/ha for cereals, unchanged since 1980. This figure compares with 30.9 quintal/ha in Asia and 54 in Europe.

Access to fertiliser and other inputs – improved seed and pesticides – as well as to agricultural equipment are essential preconditions for the very high increase in output needed in the decades to come. Governments would do well to take up the challenge, as a number of studies have highlighted.

### Promoting market access

For many farmers, another major constraint is isolation, a factor that prevents them from selling their agricultural products. So what is the point of producing more? Over 60% of rural people live and grow their crops more than 2 km from a road where vehicles can pass year-round. Almost half of all rural roads are in poor condition, which increases transport times and costs; many others are completely impassable. In some countries such as the Democratic Republic of Congo (DRC), entire regions which previously fed other regions or exported food are now totally cut off. Farmers can no longer get their products out, unless they are carried by women or transported by bicycle.

Here too, new road construction and the road repairs under way in some countries require hefty investment and the involvement of all sectors: donors, governments, private companies and local communities. But it is an essential prerequisite if farmers are to supply local, regional or national markets and thereby feed the towns.

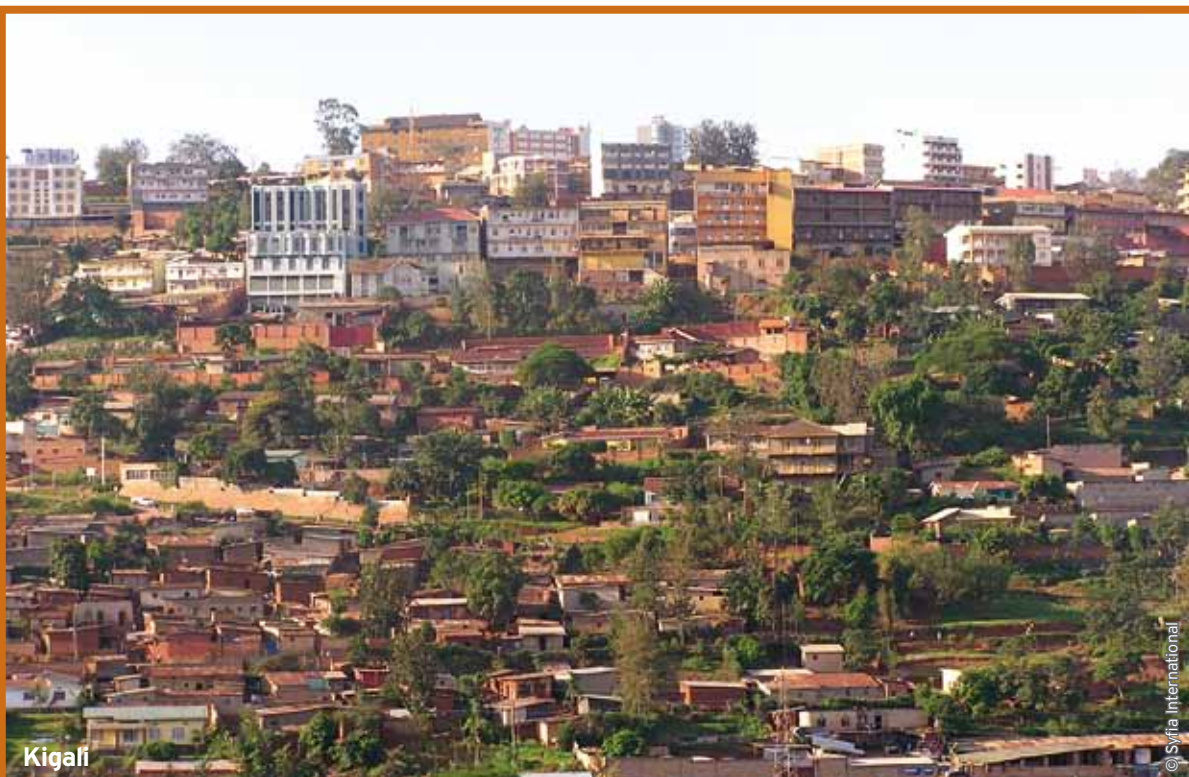
### Jobs for the young

Africa has significant physical assets to help it deal with the expected population explosion, but harnessing them will require massive investment. The population growth, which makes these outlays so pressing, is also a plus point since it brings with it a large influx of young people to the labour market. Despite a vigorous rural exodus, the number of people in the countryside will continue to grow by an annual 1.4%. Between 2005 and 2030, the rural population will swell from 473 to 604 million in Africa. In 2010, almost 70% of people still depend on farming for their livelihoods in rural and peri-urban areas. Urban areas, which have little in the way of industrialisation, do not provide enough formal employment opportunities for all the young people entering the jobs market: there are currently 10 million youth per year, a figure expected to rise to between 18 and 20 million by 2030.

In 2006, 27% of young Africans aged 15 to 35 had no formal or informal job and were not involved in education, according to the ►



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Kigali

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## [ REPORT ]

# Rwanda: working in town to invest in the village

Young rural people in Rwanda who leave their village to work in Kigali rarely want to stay there forever. They now know that the capital is no paradise where people can make an easy living. "The city attracts young people from the country because they can find small jobs there that are better paid than those in rural areas. But we advise young people to save so that they can return and invest in their home village", says an official from the domestic workers' association based in Kigali. "These days, many of them want to return to their place of birth to set up small-scale projects which serve as examples to the villagers."

Valens Mfitumukiza, 32, has worked in Kigali for

2 years as a nightwatchman. He earns RWF25,000 (€35) a month and saves the entire sum. His living expenses are covered by the small jobs he does during the day. "With this small capital, I have managed to buy a cow for RWF100,000 (€140). I'm now building a house back home in West Province", he says. Many domestic workers actually ask their employers to keep their salaries so that they have a larger sum of money when they need it.

These young people are gradually discovering that it is increasingly difficult to find reasonably priced accommodation in Kigali. Those not employed as domestic help find it hard to make a living. People working as small traders are

constantly hounded by the police, since selling on the streets is forbidden in Kigali. "It is more reassuring to go back to the countryside and set up a project or build a house", observes one of the youngsters. Having had his goods confiscated by the police on several occasions, he has finally decided to set up a shop in his village. Several of his friends who have tried unsuccessfully to fit into city life have done the same. Emeritha Mukantaganzwa, 28, has bought a plot after years working as a domestic. "I farm my land, growing vegetables, which earn me more than they paid me in Kigali", she remarks.

Djalila Bazubagira





## Taking up the mantle

Jethro Greene is Chief Coordinator of the Caribbean Farmers' Network (CaFAN)



The agricultural sector of the Caribbean has been in jeopardy for some time. Historically-based negative social perceptions, tourist and oil-driven economies, harmful free trade policies, import substitution and stagnant public investment have resulted in the virtual decay of the sector. Besides the challenges of lack of mechanisation, market and financial assistance, the sector seems to be an ageing one. In the search for financial security, more and more people have been gravitating to the urban areas to seek alternative employment. As such, across the Caribbean region there is a marked absence of young entrepreneurs. Surveys among farmers' organisations reveal that the average age of farmers has been increasing to 45 years old in most islands, with many over 60.

CaFAN recently ran a workshop to address the main contributing factors to the lack of youth involvement in the sector, and also to provide an enabling environment for the young and not-so-young to come together, exchange ideas, develop leaders and find common solutions to common problems.

Technological development, the promotion of farming as a business, sectorial linkages, as well as access to land, finance and marketing are all key areas for future action. Potential projects to encourage youth to become involved in agriculture include more programmes directed at young people, utilising technology to increase productivity and profitability, disseminating information about the opportunities through the formal education

system and the establishment of an agriculture development fund to provide financial support to young agricultural entrepreneurs.

Our goals are to improve the quality of life for small farm families and gain economic empowerment and independence in the agricultural sector. Through various initiatives and with continuing public and private sector collaboration, strides are being made to create a more favourable environment for young rural agriculturalists. We hope that young persons across the region seize these blossoming opportunities not only to gain financial independence and security but also to become involved in and contribute to reducing food insecurity across the region and deepen national attempts at economic diversification.

► International Labour Organization. This bleak situation prompts some of them to move abroad at any price or, in conflict areas, to enroll as child soldiers in a sad attempt to earn a living. If present conditions persist, agriculture and rural activities will remain the main source of employment and income for large numbers of young people in the years to come.

Many Africans are under-employed in rural areas, for example during the long dry season in the Sahel or due to land shortages in Rwanda. However, labour is often lacking when heavy agricultural work needs to be done, especially in the case of female-headed smallholdings.

But these days, farming is not an attractive prospect for young people. A career in agriculture is not widely sought after and in some cases is actively scorned. The scant interest shown by the authorities over the past decades in what is, after all, a crucial sector has added to the sense

of neglect. The lack of training suited to the needs of young rural people wanting to use modern techniques is evidence of this.

School is a first step. Attendance at primary school has increased significantly ►



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C. Dancette © Cirad

## CAPE VERDE Capping water loss

Cape Verde is one of the driest countries on the planet. It receives an average annual rainfall of just 260 mm/m<sup>2</sup> — the lower limit of rainfall in the Sahel. With no retention structures to stop it, water cascades down the steep slopes of these volcanic islands, causing serious erosion and poor infiltration. Just 17% of rainfall reaches the water table. The rest evaporates or flows into the ocean. Poorly supplied and over-used, groundwater levels are falling at an alarming pace and salinisation is increasing rapidly in coastal areas.

This acute situation has led the Cape Verde authorities to develop surface irrigation using sprinklers and micro-irrigation and to combine it with environmental protection as a strategic part of their food security policy. The total land area that could be irrigated on the archipelago is estimated at 3,000 ha. In 2004, with support

from the African Development Bank (ADB) and the Arab Bank for Economic Development in Africa (BADEA), the government installed catchment basins in the three volcanic islands of Santiago, San Antao and San Nicolau — which together make up 90% of potential irrigable land. The aim is to halt soil degradation caused by erosion and make better use of rainfall by building small dams and setting up irrigation systems.

The Chinese development agency funded the construction of Cape Verde's first major hydro-agricultural dam in Poilão on the island of Santiago. Opened in 2006, it has a capacity of 1.7 million m<sup>3</sup>. In June 2009, Portugal announced a plan to fund the building of three more dams at a total cost of €100 million. Several other technical solutions have been put forward. They include lining water ditches, increasing local storage capacity, growing crops that need less water and, most importantly, promoting localised irrigation to make the best possible use of the precious water there is, which is so crucial for the future of these islands and for the food needed by the 500,000 people who live there.





# Cameroun: jobs for young people aged 20 to 50

[ REPORT ]

"See! Fertiliser changes everything." Régine Demeze, head of a Common Initiative Group (CIG) at Mélong (130 km west of Douala), casts her eye over her rich plantation of maize interspersed with cassava and macabo. The strong young plants, with their dark green leaves give reason to hope for a good harvest, despite this year's late rains. "It's all thanks to credit from the National Employment Fund (NEF)", she explains. A loan of FCFA50,000 (€76) has enabled her to pay for help on her plantation and to buy fertiliser and pesticides.

For the past 2 years, her group, which has 10 members, has, in common with most CIGs in the region, benefited from a loan made by the Support Programme for the Development of Rural Employment (PADER), implemented by the state-run NEF. Régine, who is 40, cultivates about

3 ha of plots scattered throughout various local villages. "Without these loans, none of us could farm more than 2 ha", says Julienne Ouandji, who farms a total of 5 ha of plantations made up of mixed food crops dominated by maize. "That helps us to get two harvests a year of maize, beans and soya", adds Jacqueline Nkouakam. "I've managed to double my output." The loans, with an annual interest rate of 8%, are payable in 10 monthly installments. "The repayment rate is 100%", observes Régine Demeze, showing bank receipts and a notebook where all the monthly payments of her members are recorded.

All the beneficiaries agree that this credit system has a definite advantage over many others: "The NEF people come here into the field; each group explains what it needs and they fund it." In general, 80% of the loan is made in kind (sprayers,

fertiliser, pesticides, etc.), based on requests made by the CIG. The rest is paid into the group's account on behalf of the members involved.

"That avoids us having to pay travel expenses and commission to the various intermediaries while the funds are waiting to be released by the ministry", says Pauline Magne. Not to mention the fact that money does not always reach the people it is destined for.

PADER, which is aimed at farmers between 20 and 50 formed into CIGs, has been launched in several regions of Cameroon since 2003, in an effort to combat poverty by creating and strengthening rural employment. By the end of 2009 it had financed a total of more than 35,000 projects and created around 52,000 jobs in various sectors, including rice, cassava and maize.

Étienne Tassé



► over the past 12 years and now stands at 76%. But figures for secondary school do not exceed 30%, with attendance concentrated in the towns and amongst boys. Yet when attendance rates of girls at secondary school increase by 1%, economic growth rises by 0.3 %. Professional training adapted to the needs of young people is a gauge of agricultural modernisation and enables youngsters to free themselves from the often heavy burden of tradition.

Restoring credibility to agriculture as a career, making rural areas attractive, taking into account the needs and wishes of this sector of the

population – these are some of the challenges that need to be addressed if coming generations are to remain in the African countryside. Inevitably, some of them will continue to flock to the towns, but the advent of young well-trained farmers keen to introduce innovations opens the way for the much needed rise in output. If this happens, these large numbers of young people will prove a blessing rather than a burden.

There is little choice in the matter. Feeding and providing livelihoods for two billion people in 2050 means that agriculture will have to become the absolute priority. ■

## For further information

### CTA

16th Brussels Development Briefing on *Population growth and its implications for ACP rural development* (January 2010)  
<http://tinyurl.com/y2f6q49>

### FAO

High-Level Expert Forum on *How to Feed the World in 2050* (October 2009)  
<http://tinyurl.com/2cegdv4>  
• **The State of Food Insecurity in the World 2009**

FAO, 2009. 56 pp.

ISBN 978-92-5-106288-3

### FARM

Foundation for world agriculture and rural life  
**Les potentialités agricoles de l'Afrique de l'Ouest**  
<http://tinyurl.com/2uh4rzz>

### World Bank

• **2008 World Development Report. Agriculture for Development**  
<http://tinyurl.com/2fbkl4>

RuralStruc

<http://tinyurl.com/23l2ru7>

• **Irrigation Investment Needs in Sub-Saharan Africa**

<http://tinyurl.com/32pkxcm>

• **Conservation Agriculture. A manual for farmers and extension workers in Africa**

ACT/CTA/IIRR, 2009. 252 pp.

CTA number 1563

20 credit points



## INTERVIEW “Produce more without pollution”



Vincent Ribier, Economics researcher at CIRAD-Environment and Society

In answer to the challenge of feeding an ever bigger global population while conserving the environment, you propose intensive sustainable agriculture. What does this involve?

Intensive sustainable agriculture seeks to make better use of the natural resources available in the ecosystem. The aim is to modify the way the system works to make it more effective. At the same time, this makes it possible to reduce the use of chemical inputs such as fertiliser and pesticides and therefore cut pollution. The carbon cycle is intensified by producing biomass, which increases the store of organic material available to the

plant. This biomass provides cover for the soil, thereby reducing weeds, lowering evaporation levels and soil erosion and so improving fertility. The water cycle is also improved through simple retention procedures.

In farms that use few chemical inputs and produce low yields, as is generally the case with African smallholder farms, the strong potential availability of biomass opens the way for an improvement in natural fertility, while at the same time lowering vulnerability to climate swings and risks of disease. For farmers, this can lead to more economic stability and less risk, and help promote security.

**So this system is well suited to small-scale family farming?**

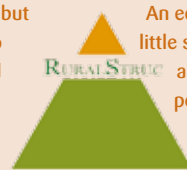
Absolutely. The lower use of inputs makes these practices more appropriate for farmers who find it difficult to pay in advance for production materials. The system works regardless of the size of the farm, so very small-scale farmers are not penalised. And this type of

agriculture requires few inputs but a great deal of labour. So it also serves as a source of livelihood for rural communities at a time when issues of jobs and the rural exodus are acutely topical. The yield increases obtained without the purchase of inputs enables farms to remain profitable, even if they use more labour.

**So everyone can easily use this system on their farm?**

Yes, but the system works best if it isn't done in isolation. It is better if neighbouring farms adopt this approach too. The results will be more substantial if these practices are widely used in the production area. If this does not happen, the transition phase will be slower and harder to manage. It is therefore a good idea to promote the adoption of these practices at the level of micro catchment basins and to encourage producers to join together when doing the work needed for these systems.

## The Mali equation



An economy which shows little sign of developing against a backdrop of a rapid population growth. That is the basis of what has been dubbed the *Mali equation* by RuralStruc

(short for Rural Structure), a World Bank study conducted over the past 3 years on the development of rural economies. In Mali, the population has quadrupled since independence and could quadruple again, reaching a total of 56 million people by 2050 — 40 million more than today. Behind this sharp growth are high fertility levels, lower mortality rates, a levelling off of emigration and the return of migrants from Côte d'Ivoire as a result of political troubles and the socio-economic fallout.

Where and how will jobs be found for the 300,000 young people who already enter the employment market each year and whose numbers will swell to 520,000 in 15 years' time? RuralStruc predicts that urbanisation will continue to develop at a steady pace. But in terms of numbers, the rural population, currently estimated at 64% of all Malians, will still predominate up until 2030. The country's economy will have to absorb 6.2 million more people of working age in the next 15 years, and rural areas alone will have to absorb 3.3 million, making an annual average of just over 200,000.

The agriculture sector therefore remains decisive for the country's future. Urban population growth offers new and sizeable outlets for agricultural products, as does the regional integration under way, which will enable producers to increase their market presence by joining together. The development of a rural economy, largely based on services rather than agriculture would also create significant job opportunities. But progress in this sector depends on increases in agricultural purchasing power.

RuralStruc claims that the importance of the issues at stake warrants new policies that favour rural communities, who are currently highly disadvantaged. With a decline in emigration, falling staff levels in the public sector and an enduring weakness in the country's industrial fabric, agriculture remains a major source of employment.

## Agrimonde scenarios

The *Agrimonde* platform is a tool developed by INRA and CIRAD (France) for projecting possible developments in the food and agriculture sector. To achieve the goal of providing each of the world's 9 billion inhabitants with 3,000 kcal/day in 2050 (one-quarter more than is currently the case in Africa), researchers have drawn up two scenarios.

### Agrimonde Scenario 1: feeding the planet while conserving ecosystems

This scenario is based on a sustainable intensification of agricultural output, conserving natural resources and soil fertility. In 2050, massive investment has enabled land to be developed, sectors to be organised and rural incomes to be increased. The rural exodus has slowed. Trade in food products is regulated by the United Nations Organisation for Food Security (UNOFS) which also manages stocks. Areas of cultivated land have been extended, but agroforestry and agroecology

practices have generally protected biodiversity.

### Agrimonde Scenario GO (Global Orchestration): feeding the planet while fostering global economic growth

Here, the priority is a rapid increase in food production. This is achieved through heavy investment in research, infrastructure, health and education, coupled with a brisk diffusion of new technologies with the help of multinational companies. The whole process is facilitated by weak trade barriers.

Crops produce far higher yields thanks to fertiliser and improved seed, much of it GMO. Most farms, both small and large, have become highly mechanised and industrialised. Global economic growth has been very strong, leading to the launch of many new enterprises, and the rural exodus has escalated. Environmental concerns are taken into account on a global scale.

For rapid agricultural development to take off in sub-Saharan Africa, researchers calculate that it would be preferable to start with *Agrimonde* Scenario GO. That would allow time to perfect the sustainable intensification techniques needed to adapt agriculture to climate change.



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# 3 | The workforce

# Health and productivity

Improvements in rural health can have a major impact on population trends, and on the productivity of the workforce. Education is another key strategy, especially for girls and women, so that they have a greater say in the future of their families.

As any farmer knows, producing food is hard work, and whether it be crop growing, livestock rearing or working in forestry or fisheries, good results depend to some extent on the health and strength of those involved. Millions of people in ACP countries lack access to basic healthcare, with shortages especially acute in rural areas. Yet extending health services to rural communities is an important precondition for establishing a strong workforce and improving food security.

Diseases such as malaria, tuberculosis (TB) and especially HIV/AIDS have a strong impact on people's ability to work, and absenteeism or low performance due to illness is a significant problem, especially in southern and eastern Africa. Costly medical care and time taken off to look after sick relatives is another drain on household income. AIDS has killed around 7 million agricultural workers since 1985 in sub-Saharan Africa. The Caribbean is the second most-affected region in the world, with AIDS remaining one of the leading causes of death among people aged 25 to 44.

TB, a disease that is both preventable and treatable, still claims 1.3 million lives each year, and while progress is being made against malaria with the use of insecticide-treated nets and artemisinin-based combination therapies, more funding and outreach is essential. UN calculations estimate that the disease could cease to be a killer by 2015 if bed nets are provided to all people who live in malaria-endemic countries.

Improved rural healthcare has tangible effects on productivity. "At Macha we have a large anti-retroviral (ARV) clinic, and many people that are now on ARVs are again productive, whereas before they were too sick to work", said Dr Phil Thuma, Executive Director of Macha Mission Hospital in Zambia, where treatment is given to patients suffering from AIDS, TB and malaria. In the Hoedspruit area of Limpopo, South Africa, a number of farms that have introduced health facilities for workers, including AIDS testing and ARV treatment, have seen productivity increase as a result. As part of the same initiative, women are offered maternity and family planning services and their children are integrated into vaccination programmes.

## Prevention and diagnosis

Vaccinating against diseases such as measles, polio, diphtheria and tetanus can make a massive contribution to reducing infant mortality. And there is strong evidence to show that when infant mortality rates fall, women have fewer children. Improved nutrition is of vital importance in promoting good health, especially for rural populations whose strength is essential to farm land and tend livestock. Other areas which can make a major difference are better hygiene conditions, including the provision of safe water to reduce diseases such as diarrhoea, a key cause of death in the under-fives. ►

## Sweet dreams in the Solomons

Malaria is not only a major public health problem but also an important obstacle to development in the Solomon Islands, and causes massive economic losses. Armed ethnic unrest, poor health services and a decline in government spending have seriously affected malaria control activities in recent years.

But the introduction of a bed-net programme launched with donor assistance is producing good

results. Incidences of malaria are generally high, with 77 out of every 1,000 islanders falling victim to the disease each year. Under-fives are especially vulnerable, accounting for more than one-quarter of hospital admissions for malaria.

However, numbers showed a significant decline in 2009 after more than 15,000 free bed-nets were distributed and 54 mosquito breeding sites were cleaned. The programme also involved staging pub-

lic health talks about malaria and how to avoid it.

Now the National Malaria Programme is preparing to distribute a further 360,000 bed-nets. National director Albino Bobogare said if used properly, the nets are expected to lead to a further decrease in infection rates.

"One of the most effective weapons in the battle against malaria is the simple bed-net", he said.



### 3 | The workforce

► Diagnosis is an essential part of any health prevention strategy, but facilities are lacking in many ACP countries. A quick, cheap test being developed by researchers in the USA offers hope for the early detection of three neglected diseases. The three-in-one test would provide a reliable diagnosis of Chagas disease, leishmaniasis and African trypanosomiasis or sleeping sickness, within just 1 h and at a cost of a few cents each. The World Health Organization (WHO) estimates that some three million people become infected each year with one of the three diseases.

Earlier this year, scientists from five East African countries formed a joint disease surveillance centre for the early detection and control of infectious diseases. The East African Centre for Infectious Disease Surveillance (EACIDS), with members from Burundi, Kenya, Rwanda, Tanzania and Uganda, should improve cross-border detection and treatment of infectious disease outbreaks, with increased laboratory capacities. But although infectious diseases remain the biggest threat to health in most ACP regions, obesity is emerging as a major problem, especially in the Caribbean and Pacific. The condition is largely caused by a change in diet and lifestyle, including a reliance on less healthy, imported foods with high concentrations of fat and sugar. In the Pacific, which has seen an alarming increase in chronic diseases due to over-consumption of imported foods in recent years, an initiative to create awareness of the benefits of underutilised species has identified several key crops and launched a campaign to improve availability and re-introduce them into local diets.

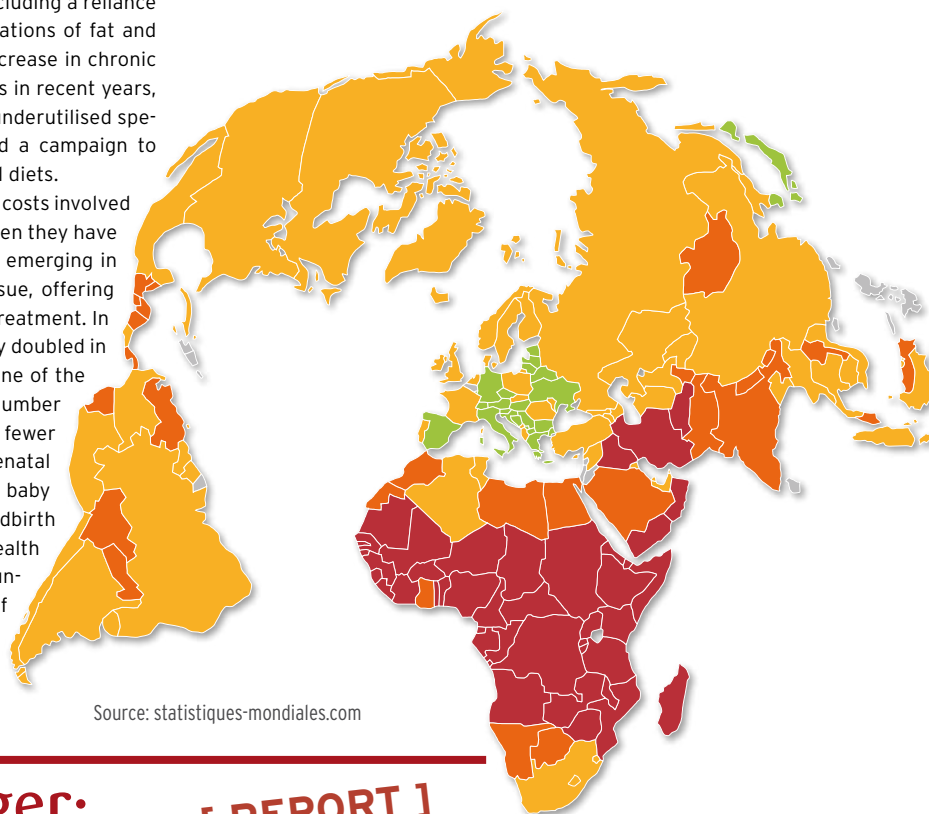
Prevention may be better than cure, but the high costs involved mean that many people only seek medical advice when they have a serious problem. Rural health insurance schemes emerging in some ACP countries are helping to address this issue, offering clients access to health services for check-ups and treatment. In Sud Kivu, the number of people signing up has nearly doubled in the past 2 years. Health official Isaac Miruho says one of the most notable effects has been an increase in the number of women having their babies in hospital, leading to fewer complications, and more mothers coming for prenatal check-ups, which is helping to improve mother and baby survival rates. More than 500,000 women die in childbirth worldwide each year, most of them in the South. E-health technologies are showing promise in several ACP countries, using ICTs to encourage and monitor use of medication among rural populations. An electronic

record-keeping system has revolutionised HIV care in western Kenya, providing medical tests and treatment for 40,000 patients.

#### Smaller families

Allowing couples to limit the number and the spacing of their children is a right enshrined by a number of international declarations. Although fertility rates are declining in the developing world, levels in Africa remain high and the use of contraception is still limited. Worldwide, government support for contraception increased steadily during the last quarter of the 20<sup>th</sup> century. But demand for family planning services is believed to significantly outstrip supply, a situation that has been exacerbated by the financial crisis. And although the use of contraception worldwide rose ►

#### Birth rate in 2009



Source: statistiques-mondiales.com



Spacing births is no longer a taboo subject in Niger. Marabouts are starting to change the way they preach in this country, which has one of the world's highest birth rates (7.1 children per woman).

"Being a devout Muslim, I cannot speak of limiting births. It is God who provides and it is He who sends children. Nevertheless, for the health of the mother and child, Islam does not prohibit

## Niger: [REPORT] marabouts to the rescue

spacing births», says marabout Mallam Adam. Once unthinkable, this kind of approach adopted by a growing number of marabouts is starting to change the way people think. Men who were once bitterly opposed to family planning are now paying close attention to the religious leaders' sermons.

In Niger, a strongly Islamic country, marabouts are consulted on every aspect of social life. They advocate breastfeeding as the best way of spacing births. But some men, generally those who are better educated, regard modern contraceptives as more reliable. "It's a real revolution. Nowadays, even uneducated men accept contraception", says Hassane Mani, 52, a farmer and father of 15 children. Rabi Moussa, 36, a housewife weakened by her six pregnancies, confides: "My husband doesn't object any more. Spacing births is no longer a problem in our household. Twelve years ago, he beat me when I told him I had gone to the

family planning centre. Now, he accompanies my young co-wife himself to the centre."

For Nana Hadiza, a teacher in Maradi — a town located more than 700 km east of Niger's capital Niamey — the change in attitude of many husbands is the result of influence exerted by marabouts. "They tell us what is and is not allowed when it comes to birth control", says Ali Ibra, 35, a dealer in Maradi who has several wives.

"Here, the number of women wanting advice on contraception has almost tripled over the past 10 years", comments Fatchima Zara, 46, a midwife in a maternity unit in Niamey. "They come asking for pills. Others have injections, but they rarely ask for condoms. I've been a midwife for more than 20 years and I'm convinced that they don't do it without the knowledge of their husbands. The men were totally opposed to all this a few years ago."

Souleymane Saddi Maâzou





## [ REPORT ] Malawi: more education, bigger incomes

A group of women in Dowa, central Malawi, are making a good income and learning about issues such as family planning and HIV/AIDS with the help of a former teacher who has organised them into a group. Chrissie Chinkhuntha was inspired to start the Tikondwe Freedom Gardens after seeing that many local women had no means of earning a living. "Each year they had food for only 3 months. Their children were starving and could hardly go to school. This was a big concern for me", said the retired teacher. Today, all the women taking part in the group earn around €500 per year and have learned a whole range of new skills. Among them are better agricultural practices, making organic compost and cooking for the growing number of visitors who come to see their farm.

Tikondwe Freedom Gardens produces more than 20 different types of fruits and vegetables, as well as various herbs. "You name any type of food. We'll cook it", said group treasurer Anna. "The tourists always want to taste the local foods here. At the end of each month, we calculate what we have collected and divide it among ourselves."

"In our group the women learn a lot of things", said Ms Chinkhuntha "For example, we disseminate messages on family planning as well as HIV/AIDS. These messages are crucial for healthy families that can survive on a small income", she said. She added that women are better placed to pass on this kind of information to girls, a worrying number of whom drop out of school in the area because of early pregnancies. "Another important issue is land. Land is getting less and less because of the increasing population. This is something that has to be checked and women are the best teachers in their communities on this."

Members of the group all help each other with the farming and their families, inspiring a strong sense of solidarity. They sell part of the harvest to pay for household needs and store the rest for use throughout the year so that they are never without a source of food or income.

"We have our own challenges", said Anna. "We need to have our own kitchen. But the money we make benefits the whole community, helping us to look after children who are orphans as well as people who are chronically ill."

Muyanga Ziba



► from less than 10% for married women of childbearing age in the 1960s to 62% in 2009, there are huge regional variations. In Africa, just 28% of married women use contraception, compared with 71% in Latin America and 67% in Asia.

If women in Africa have generally been slow to take up family planning, it is partly due to religious, economic and cultural reasons.

In many countries, having a large family is still a matter of social prestige, especially in rural areas, where children are valued as an important source of labour and as insurance for old age. While birth rates are falling in urban Africa due to different lifestyles, including better access to health and education, but also less physical space, reducing the number of children is proving far more difficult in rural settings. Many African women use contraception in secret, favouring the use of injections which last 3 months and are more difficult for their husbands to detect than other methods.

In Nigeria, one strategy having some success is the distribution of family planning and health information through community workers. The 'Kyautatawa Iyali' (family welfare) project run by international NGO the Centre for Development and Population Activities (CEDPA) has succeeded in winning the approval of religious leaders in the highly conservative community of predominately Muslim northern Nigeria. Women in Nigeria have a 1-in-18 lifetime risk of dying in childbirth – among the highest rates in the world – partly due to closely spaced pregnancies, inadequate health care and insufficient family planning services.

The most successful campaigns to lower birth rates have generally been those that offer direct support including providing family planning services through state-run facilities, such as hospitals, clinics, health centres and field services. But the high birth rates of most African countries mean that reducing the size of families to more manageable levels will take decades. Although Kenya introduced a national population policy to slow growth as early as 1963, a real decline in fertility rates did not begin until almost 30 years later (see page 16).

Reducing early pregnancies is an important part of any strategy to tackle growing populations and increase productivity. Figures show that delaying childbearing and leaving more time between births improves infant and child outcomes. Pregnancy among girls aged 15 to 19 is more common in sub-Saharan Africa and Latin America and the Caribbean than in South and Southeast Asia. In Africa, early pregnancy rates are particularly high at 118 births per 1,000 girls.

These figures partly reflect the lack of family planning services, but also shortfalls in education. Adolescent girls with less education living in rural areas are more likely to become pregnant. Some countries have reduced the prevalence of early childbearing by keeping girls in school and changing national policies on early marriage.

In Malawi, where family planning was banned for many years, the government is now attempting to halve the current average birth rate from 6 to 3 children per woman and cut the high number of teenage pregnancies. "Unless the fertility rate is reduced, the population of Malawi will jump from 13 million in 2010 to 41 million in 2040", said Dr. Chisale Mhango, Director of Reproductive Health. "In this country, 35% of young girls get pregnant every year."

### More schooling, lower birth rates

The relationship between education and fertility is unequivocal, with more schooling leading to a rise in social and economic status and a subsequent decline in the number of children born into a family. Schooling for young women in particular is a key prerequisite for addressing birth rates. Girls' education has been proved to lower fertility rates and improve the healthcare of children born later on. Statistics show that mothers who are educated want to invest in their children and therefore have fewer babies. Recent data from many least developed countries (LDCs) has revealed that women with at least a secondary-level education give birth to between one-third and one-half as many children as women with no education. Researchers examining infant mortality rates in Ethiopia, Kenya and Nigeria have found that the number of deaths in children under-five is far lower in those born to women with secondary education than it is in those whose mothers have no education or only primary education. School-based sex education has also produced good results in reducing behaviour that puts girls at risk of pregnancy, HIV infection and other sexually transmitted diseases. HIV prevention efforts are most successful when linked to family planning programmes.

But men also need to receive education about sexual behaviour and its implications. This is especially important in young men, whose attitudes towards sex, women and child-bearing will help shape the future generation. Although this aspect is widely overlooked, some initiatives do exist. To complement its work with adolescent girls, CEDPA is also reaching out to boys, providing them with the skills to help them become better partners. As part of the initiative, the organisation trains male peer educators within youth and indigenous groups, to help pass on a responsible message about family planning and reproductive health. ■



## For further information

### African Population

and Health Research Centre  
[www.aphrc.org](http://www.aphrc.org)

### CEDPA

The Centre for Development  
and Population Activities  
[www.cedpa.org](http://www.cedpa.org)

### EuroNGOs

European NGOs for Sexual  
and Reproductive Health and Rights,  
Population and Development  
[www.eurongos.org](http://www.eurongos.org)

### FHI

Family Health International  
[www.fhi.org](http://www.fhi.org)

### Global Fund to Fight AIDS, Tuberculosis and Malaria

[www.theglobalfund.org](http://www.theglobalfund.org)

### IPPF

International Planned Parenthood Federation (IPPF)  
[www.ippf.org](http://www.ippf.org)

### IUSSP

International Union  
for the Scientific Study of Population  
[www.iussp.org](http://www.iussp.org)  
IUSSP, Sexual and Reproductive Transitions  
of Adolescents in Developing Countries,

IUSSP Policy & Research Paper n. 20, 2007  
<http://tinyurl.com/3375w3b>

### PAI

Population Action International  
[www.populationaction.org](http://www.populationaction.org)

### Reproductive Health Gateway

[www.rhgateway.org](http://www.rhgateway.org)

### Reproductive Health Supplies Coalition

[www.rhsupplies.org](http://www.rhsupplies.org)

### Safe Motherhood

[www.safemotherhood.org](http://www.safemotherhood.org)

### WHO

[www.who.int/en](http://www.who.int/en)

## RESEARCH & INITIATIVES



### INTERVIEW

## Malawi: smaller families

Rev Symon Msowoya is Director of Every Home for Christ, a Malawian NGO active in family planning education.

Food security at the household level cannot be achieved without family planning. It is vital. Manageable families are very important to this nation because, unless we have these, the problem of food shortages will continue. The cost of living in Malawi is going up every year and it is only families that have few children that are able to survive. A large family means having a bigger garden and more inputs. More money is also required to dress the children as well as to send them to school.

People are already seeing the evidence in southern Malawi. In districts such as Chiradzulu and Mulanje, people can hardly find a

place to make a garden. In some areas, you can hardly find a tree. Why? Because of high population rates. Due to shortage of land, there are many wrangles, leading to fighting. That is when our focus leaders intervene to advise people to practise family planning. Young people are being targeted as well as those families in the child-bearing age bracket.

Figures from the National Statistical Office show that the population of Malawi is growing at a very fast rate. People are having six children instead of three. If this trend continues, we are going to have a population of 41 million people in 2040. Where are we going to have resources to feed all these people? Already, many school leavers do not have jobs. Places in secondary schools and the university are difficult to find. Many girls are dropping out of school at a tender age because of early pregnancies. Leaders need to find a lasting solution to this problem. Who will care for these children without a father when even the parents struggle to send these girls to school? Our focus leaders play a very important part in spreading these messages. Our consolation lies in the fact that many women now want injections to stop them having more children. This means we are making progress.

The biggest challenge comes from young people. They think family planning is a way of discouraging them not to have children. Some couples feel that pills and injections can make them completely barren. Some even think it is a foreign idea to stop them having many children and they laugh at us when we teach them family planning methods. We will, however, still fight on.

## Kenya cuts birth rate

Against a backdrop of high fertility rates in sub-Saharan Africa, Kenya is widely regarded as a family planning success story. In the late 1970s and early 1980s, under President Daniel Moi, Kenyans were encouraged to reduce the average size of families, through information campaigns and investment in public healthcare. "Because of the burden that was placed on the shoulders of many parents, especially those who had 6-10 children, the majority of Kenyans decided to adopt family planning methods", said Dr Alfred

Otieno of the University of Nairobi's Department of Population Studies.

As a result, the total fertility rate (TFR) dropped from 7.8 in 1979 to 6.7 in 1989, falling to 4.6 in 2009, according to the Demographic and Health Survey. Some 46% of married women now use contraceptive methods, up from 39% in 2008. By contrast, Kenya's neighbours Tanzania and Uganda still have high TFRs of 5.3 and 6.7, respectively, and contraceptive use is far lower.

Nicholas Okeya



*A planned family is a happy family*



# 4 | Rural development

## Agriculture: investing in the future

Strong and well structured agricultural policies that are mainly government-driven and funded are crucial to foster the transformation of African agriculture. This sector will have to find jobs for more and more young people, offer them decent incomes and feed a growing population.

“It’s a blessing, not a curse. Human capital is easily the most important asset for agricultural development”, said Mali’s Prime Minister Modibo Sidibé in February 2010 at the Forum of Bamako, an occasion for reflecting and sharing experiences on the major issues currently affecting the African continent. And it is by modernising agriculture that Africa’s vast numbers of coming generations will be able to live a decent life, stay mainly in the countryside and ensure food security for both rural and urban communities. The future of the continent and that of agriculture are therefore closely linked, a fact that has been somewhat overlooked in recent decades.

The scale and urgency of the situation due to population growth, climate change and globalisation has brought calls for rural societies to undergo radical transformations, for finance to invest in agriculture and for governments to implement vigorous policies for rural and agricultural

development. These must encompass all the different factors needed to advance agriculture and provide better living conditions for rural people.

### Vigorous agricultural policies

It is up to governments and regional organisations, in partnership with producers’ organisations and civil society, to stimulate, coordinate and fund the rapid and substantial changes that are needed. All studies concur that working together with all stakeholders involved in the agriculture sector – government, farmers’ organisations, the private sector and donors – is far more effective. In West Africa, national producers’ organisations now play an active role in implementing agricultural policies. There is even a sub-regional platform for them – ROPPA. National and regional organisations also exist in East and Southern Africa, though Central Africa is less well served. To prepare for the future, the young need to find their place in these structures and be able to express their opinion. ►

## West Africa: dynamic Farmers’ Organisations

Farmers’ organisations or associations (FOs), village committees and professional organisations – collective groups saw an unprecedented boom in West Africa during the 1990s. Organised into national federations, these associations have since acquired a growing status at both national and international levels. In all major decisions involving agricultural policy and rural affairs they play a leading role in making proposals and demands and engaging in dialogue. Key players include the CNCR launched in Senegal in 1993, the CNOP in Mali, the Farmer Platform in Niger and ANOPACI in Côte d’Ivoire.

This latter organisation, launched in 1998, groups together various strands of the country’s

entire agricultural sector, from goat rearers to producers of coffee, cocoa, rubber, cotton, fruit and food crops. Twenty producer organisations are members of this umbrella group. Representing the vast majority of the country’s farmers, ANOPACI has become the key discussion partner for Côte d’Ivoire’s Ministry of Agriculture in developing agricultural legislation. In 2009, the EU gave it the task of restructuring organisations in the cotton sector and making them more professional. It also receives funding from FAO to breathe new life into the platform for women farmers, which is a member of the association. It takes part in regional and international negotiations, sitting on the agriculture and environment commission of

the Economic and Monetary Community of West African States (UEMOA) and the regional ACP committee, and is involved in talks with the WTO.

ANOPACI seeks to increase the output and revenues of its members, in particular through a supply of better market information and by publishing a newsletter. UNACOOPEC-CI, a microfinance institution which belongs to ANOPACI, has more than 200,000 members.

In common with other FOs in the sub-region, ANOPACI is a member of the Network of Farmers’ and Agricultural Producers’ Organisations of West Africa (ROPPA), which was launched in 2000 by the national agricultural federations of 10 UEMOA countries.



► At the regional level, ECOWAP – the agricultural policy of the Economic Community Of West African States (ECOWAS) – is the result of dialogue between member states and socio-professional organisations. It promotes strategic products for food security (rice, maize, cassava, livestock and seafood), building an environment likely to foster the development of production systems, agricultural sectors and greater outputs so as to reduce poverty among farmers and bring down food prices. All these various factors are now enshrined in the majority of agricultural investment plans. Funding for these was recently valued at a total of FCFA455 billion (€693.6 million) over the next 5 years for the 15 ECOWAS countries.

### Involving the private sector

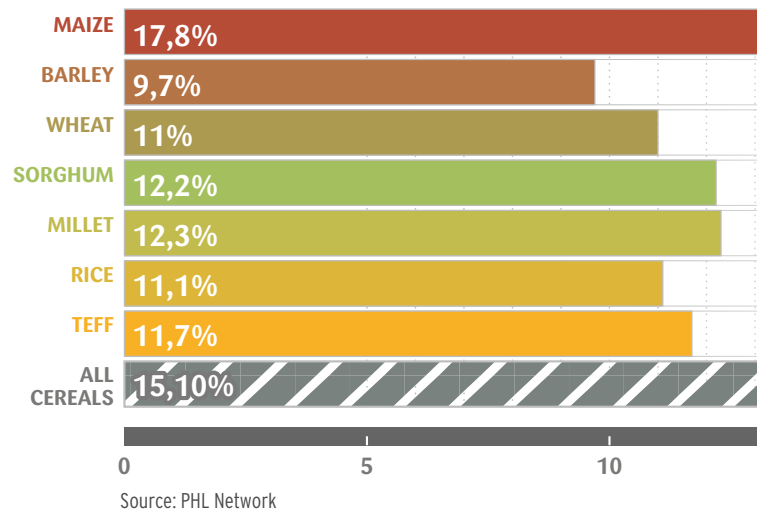
But the state is not the only player, the private sector is also being urged to play a bigger role in agriculture. In Africa, agriculture currently receives less than 3% of private investment. However, it is proving

increasingly attractive to the world of finance, with traders eyeing it as a target for profitable investment. The African Agriculture Fund (AAF) was set up to encourage private companies to launch projects and provide support to agricultural cooperatives and small businesses in their efforts to modernise. It will have a budget of €240 million in the coming months, loaned by the continent's regional development bank, as well as by international organisations and foundations. Food security is central to this initiative. Considerable attention is given to agribusiness to increase food production, especially cereals.

Partnerships between agribusiness and household farms can help small-scale producers to modernise and have access to better production techniques and markets. Maintaining household agriculture, which uses significant quantities of labour, remains crucial however as a strategy for limiting the rural exodus and intensifying output. For this to happen, small-scale farms need to develop from focusing mainly on subsistence farming to a more professional, more intensive ►



### Post-harvest losses in East and Southern Africa (Estimates in % of annual production in 2007)



## South Africa: the long wait for land [ REPORT ]

For 10 years, Nontobeko Semango from Ermelo, in Mpumalanga, has been on the waiting list for resettlement as part of South Africa's land reform. Like many female heads of household eking out a meagre living, she knows that the prospects of

getting the promised land any time soon are very slim. The slow pace of South Africa's land reform programme is proving especially hard for women. "Customary laws are still preventing us from obtaining land rights", said Semango.

This widow and mother of five children has first-hand experience of discrimination. "At one point, the chief almost took my land to give it to my late husband's brother, since our customary law doesn't allow women to own land", recalls Semango, whose husband died 7 years ago. She farms maize and fruit on her 3 ha plot, with a mixture of a few mango trees, bananas and avocados that she sells at a local market to send her children to school. In terms of subsistence farming, the plot is a fair size, but for commercial purposes it is not. And Semango's plot is in the former homelands, where black people were deliberately placed on non-productive land during the apartheid regime. Her yields are very low due to over-use of the plot, which now requires high inputs to keep the tired soil from being productive. "This land is too small for me", she said.

Impeded by insufficient funding, weak implementing institutions and the low political priority of land reform, the redistribution of 96% of arable land still in the hands of white farmers is still a remote prospect. South Africa's Land Claims Commission remains way off-target in achieving its mandate of transferring 30% of commercial farming land to black beneficiaries by 2014.

"It seems there is no light at the end of the tunnel, especially when the government recently announced that it will not be able to meet its land reform target", said Semango.

Sizane Ngubane, director of the Rural Women's Movement, said lack of political will to solve the problems of poor and landless rural women is currently one of the country's major problems. "Real economic women's empowerment has to start by addressing issues of access to land for women", said Ngubane. "Land is an important commodity for any development to occur and the food we eat, to live, is produced from the soil."

Fidelis Zvomuya







# Land deals: caution

There has been a flurry of land acquisitions in developing countries since the 2007 food crisis. Countries such as China, the Gulf States and Korea, all highly dependent on imports to feed their people are trying to secure food supplies. At the same time, the prospect of a sharp rise in food requirements, linked to the trend for biofuels, is making land a particularly attractive long-term investment. Since 2004, 30 million ha of agricultural land has been sold or leased to foreign investors in Africa, including 12 million ha during the past 3 years. Heading the list are DR Congo, Mozambique and Zimbabwe.

Leased for long periods or, more rarely sold,

this land is farmed by foreign companies and given over to food and other crops for export: India is cultivating 300,000 ha of rice in Ethiopia, Libya is growing 100,000 ha of rice in Mali. Malaysia has invested €635 million in the palm oil sector in Liberia.

For some, the advent of these companies, which offer jobs, improved infrastructures, more modern cultivation techniques and higher output with guaranteed markets, is beneficial to local farmers. Others believe that these land acquisitions are damaging to the host communities, who lose their plots in deals which fail to respect local land tenure rights.

Furthermore, contracts signed between governments and foreign companies are often lacking in transparency and generate little revenue. In Ethiopia, for example, 1 ha of land is leased for €3/year. And investors are not always obliged to employ local labour for a decent wage.

While supporting these investments, the World Bank recently conceded that such initiatives do not always work to the advantage of local communities, who are neither consulted nor involved in negotiations and are often turned off land that is crucial to their survival.

• **Land grab or development opportunity?**  
<http://tinyurl.com/ndfrpe>



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► agriculture aimed at markets. Farm owners are urged to become agricultural entrepreneurs, well trained and well informed. A number of conditions will have to be met before young people – the farmers of the future – can develop in this direction.

## Land: tenure and irrigation

Growing pressure on land, linked to the population explosion, makes policies on land tenure especially urgent. The goal is to promote fair access to land, which in turn favours peace and development. Improving land tenure is an essential prerequisite for intensification, as it encourages small-scale farmers and businesses to make long term investments, as well as fostering better natural resource management.

New forms of land tenure such as tenant farming and long-term leases are being officially introduced. These take into account a wide range of issues including customary rights, local practice, farming methods and the capacities of producers. Some countries are also making attempts to improve the rights of women – many of whom are heads of smallholdings – and young people who have difficulties gaining land access.

Land reform is already under way in a number of countries. In Benin, the *White Paper on Land Tenure Policy*, approved in October 2009, speeds up the process of obtaining land titles (Millennium Challenge project). In Rwanda, reform of the Family Code allows women to inherit land. The sale or long-term lease of land to foreign investors, a practice that is gaining ground, also requires clear rules to guarantee transparency in transactions and compensation for farmers deprived of their land (see box).

Another priority factor for increasing output is irrigation. Hefty investments are planned to build more than 130 dams in sub-Saharan Africa. A World Bank study claims that some 23 million ha of land located less than a 5 h truck drive from a main town could be irrigated by small-scale systems that are simple and inexpensive to manage and maintain. Irrigated crops, which often rely on plentiful supplies of labour, are also a source of jobs for rural people.

## Production methods for all

Production methods, often neglected during recent decades, are the keystone to the transformations needed in household farms. These days, the use of fertiliser is seen as THE priority for a rapid increase in yields. For that reason, more and more countries – Benin, Burundi, Malawi and Mali amongst them – are offering generous subsidies for these inputs, often with spectacular results. In Mali, fertiliser helped increase rice yields from an average 1.5 t to 2.4 t between 2008 and 2009. ECOWAP has included the provision of subsidies for farmers as one of its goals, to help boost outputs of cassava, maize and rice. But in the long term, sustainable intensification (see interview page 12) could be a way of ensuring soil fertility.

Improved seed – and some say GMOs – which are higher yielding and more resistant to diseases and drought, can also help boost harvests. According to the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), hybrid varieties of sorghum, millet and pigeon pea have 25% higher yields than traditional varieties. To make them available to producers, seed sectors need to be strengthened, linking state services with seed growers. ►



## 4 | Rural development

► To be really effective, it is now widely agreed that distribution of inputs should be handled by the private sector rather than exclusively by the state. But there must also be outside help so that the less profitable areas are also covered. At the same time, more measures are needed to improve access to microcredit, so that farmers can obtain supplies and young people can get started.

### Research, extension and training

Though especially important for promoting innovation and motivating young people to work the land, national extension services have largely disappeared. These days, farmers' organisations and NGOs often

provide the most efficient services. National extension and agricultural research services need to be rethought to fulfil producers' needs.

Mozambique's National Agricultural Extension Programme (PRONEA 2008-2015) is testing a new approach that involves an interactive apprenticeship to help farmers' associations, especially women's groups, work together with stakeholders in markets. Private and state advisors are on hand to offer help and guidance.

When farmers have the financial and technical resources to produce food in the right conditions, they are more likely to adopt new cultivation methods and the young are less tempted to leave the land. Youngsters also need thorough training if they are to take up all the challenges that await them. And yet, in many countries, professional training for a career in agriculture is woefully inadequate. The only effective training is given as part of projects or by NGOs. As well as technical knowledge, young people need to learn how to manage their farms, plan development and analyse markets. Projects working in this direction include RENCAR in Chad and the National Strategy on Education and Training for Agriculture and Rural Development in South Africa.

Informal education, which encourages young people to be enterprising and work together for the development of their region, also helps integrate them into economic and social life and allows them to shake up traditions that are hostile to innovation. ►

## Subsistence farming: a rich source of jobs

These days, many industrial export crops are handled by major international groups. These have invested heavily in mechanisation in order to be more competitive. The result has been a decline in the need for labour. This has been the case on pineapple, dessert banana, oil palm, sugarcane, tea and rubber plantations. Even export crops grown by small-scale producers involved in household farming such as coffee, cocoa or cotton have fairly limited labour requirements, except during harvest time when temporary help is brought in, often from immigrants. Cocoa plantations in Côte d'Ivoire are a clear case in point.

By contrast, subsistence farming is still relatively unmechanised, which raises the problem of the competitiveness of its products compared with imported food. But for the same reason it is also a significant source of rural jobs, especially for women. Maintaining a dynamic subsistence farming sector is therefore crucial for protecting rural employment, hence slowing the exodus from the countryside to the towns, which has accelerated in recent decades.

Developing processing industries for food products is another important way to create jobs. This has led some economists to call for customs duties to be reintroduced for imported food products. "The uncontrolled flood of western agri-food products into Africa destroys local output, exacerbating already worrying problems of unemployment, rural exodus and the growth of shanty towns", said socioeconomist Daniel Moukoko-Maboulou. For all these reasons, many experts believe that support for household farming is a priority in the fight against poverty.



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## Kenya: reversing the trend

[ REPORT ]

Charles Kimani is an unusual figure in a community where many people migrate to the Kenyan capital in search of jobs. He has given up his post as a human resources manager in Nairobi and gone to live in the rural village of Kikuyu to make a living as an organic farmer. So successful

has the move proved that Kimani now heads a small but dedicated band of other former city-dwellers who have decided that making a living from the land is a far better option. "For 20 years, I worked for companies which always boasted of making profits, while I earned very little", said the 49-year-old farmer, who has four children.

Kimani was introduced to organic farming in 2002 on a small plot in the village where he was born, but it was 4 years before he decided to hand in his notice as a HR executive. "By 2006, I discovered that it was possible for me to employ myself on my 2 acre (0.8 ha) piece of land, and also employ other people", he said.

He joined the Kenya Organic Agriculture Network (KOAN), which trained him in growing organically certified horticultural crops for export. Encouraged by his success, Kimani formed the Wangige Organic Farmers Self Help Group. At first, the group had a membership of eight, but its ranks have since swelled to 22. Like

the man who is their chairman, almost all the members have abandoned their city jobs to settle for organic farming.

Kimani has 120 avocado trees on his farm, as well as several tissue-cultured banana trees, 12 dairy cattle, 24 beehives and small quantities of high value horticultural crops such as cucumbers, beans, broccoli, and carrots. He also grows Napier-grass for his animals on another plot leased for the purpose. Through KOAN, he sells his produce to markets in the UK.

"From my 2 acres (0.8 ha), I earn an average of Sh210,000 (€2,100) a month, which is more than 10 times what I used to earn from the city employment. From this, I pay five casual labourers who help me on the farm and on the dairy project", said Kimani. He says he now regrets the time he 'wasted' working all those years in the city. "Little did I know that I could use my management skills on my own farm, and still make more money than the salary I used to earn", he said.

Isaiah Eshipisu



Nairobi

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# DR Congo : one road, three times more fields

[ REPORT ]

Work to repair the road between Kisangani and Ubundu (125 km), on the left bank of the River Congo, in north-eastern DR Congo began in September 2009. Less than 1 year later, new houses and even whole villages have already appeared along this vital artery.

The poor state of the road, which had become impassable for vehicles, had forced people living nearby to move close to the railway line, where a train passes from time to time, or simply to remain in the bush. Today, trucks can easily travel at 80 km/h on this well surfaced highway. Every 10 km or so, a new village has sprung up or existing villages have been given new life, such as Lusa II where people have moved back from Bagwasi, about 60 km away in the middle of the forest.

Travellers who once braved the muddy tracks to transport a few goods on foot or by bicycle, motorcycle or vehicle, had no way of finding anything to eat during the journey. With no outlets for their produce, farmers only cultivated small plots. Now that the trucks are back, producers have significantly increased their output. "We used to work fields of about 100 m<sup>2</sup>, but now we go up to 300 m<sup>2</sup>", said one farmer. "Now that people are on the move again and thanks to the intensity of traffic, we are selling a dipper of rice for almost double the price", said Aradjabu Kabali.

Fifty years ago, well served by road, river and railway connections, this area was the bread basket for DRC. Most of the regions

of this Eastern Province have been cut off for years due to poor roads. The recent road works have made all the difference.

Francine Matope



factories for milk, fruit, cassava and beans, fueling local demand, driving exports and providing jobs and livelihoods for significant numbers of rural people.

## Producing and processing for sale

Producing more, especially for sale, is the current credo of agricultural policies. Here too, the active intervention of governments plays a key role. First and foremost, their help is needed to improve transport in rural areas, thereby facilitating physical market access or lowering transport costs. The economic and social benefits from these investments are considerable, for both farmers and city dwellers alike. The building of roads between countries favours trade between producer regions. The highway connecting Cameroon and Nigeria, where work started in June 2010, will link the countries of CEMAC and ECOWAS.

Structuring local, national and regional markets is vital if producers are to benefit from the efforts being asked of them. The most interesting and promising markets are at sub-regional level. The government has a role to play in regulating them. For example, the lowering or removal of customs tariffs between countries within the same region, such as UEMOA and more recently the Economic Commission for Africa (ECA), makes growing markets even more dynamic. Governments also have a duty to make sure that red tape and taxes enforced on the roads, legal or otherwise, do not deter transport operators.

Small-scale farmers rather than large commercial ventures provide the bulk of agricultural output, so it is essential that Market Information Systems (MIS), set up to supply information on prices and sales opportunities, be effective and easy to use. Mobile telephones, radios and rural telecentres are increasingly used to relay price information. ►

► A sharp fall in postharvest losses would translate into a rise in output. As well as better storage facilities, processing units are needed to preserve and add value to food products. Most processing is currently undertaken by women, but in a number of countries, there are hardly any enterprises doing this sort of work. In Rwanda, a government-led scheme has seen the launch in recent years of several processing

## Local fertiliser

At Abuja in 2006, African governments set themselves the goal of increasing tenfold by 2015 the amount of fertiliser used by farmers. To help producers buy these inputs, which in Africa cost between two and four times as much as on the world market, more and more governments are subsidising them at rates of 25% to 30%. But the cost of fertiliser depends heavily on world prices of imported raw materials, and this support for farmers can prove a heavy burden for governments. In Malawi, which pioneered subsidies for producers, the bill doubled between 2008 and 2009 due to the rise in phosphate prices.

Local output of fertiliser is currently highly inadequate and investors show little interest in what is still, for the time being, a very small market. Faced with growing demand, phosphate producer countries such as Senegal and Togo are taking steps to revive their mining companies and factories whose output had fallen sharply. At Togo's phosphate company SNPT and Senegal's ICS, taken over by an Indian consortium, production is back on course. Elsewhere, even local factories making up fertiliser rely entirely on imports for materials.

To encourage the opening of more fertiliser factories, as well as wider distribution and more awareness among farmers, the African

Development Bank (ADB) has launched the African Fertilizer Financing Mechanism (AFFM), with a total budget of US\$10 million.

The aim of these recent developments is to help rural people achieve a significant increase in their revenues with the ultimate goal of enabling them to buy fertiliser without the need for subsidies. The early results obtained from aid policies directed at smallholders are impressive: millet and sorghum harvests increased from 43% to 120% in Burkina Faso, Mali and Niger where farmers used barely one-third of the recommended fertiliser doses. Maize producers in Benin saw their output double in 2009 thanks to the use of these inputs.



## 4 | Rural development

► SONAGESS in Burkina Faso, OMA in Mali and the Commissariat for Food Security (CSA) in Senegal have trained agents, who regularly transmit cereal prices. This enables financial operators to be kept up to date and allows food security in the country or a given region to be constantly monitored.

### A better life

Keeping young people in rural areas – or at least reducing the numbers who leave – is not just a question of helping them to produce and sell their output. They also need trade, services and distractions. Until now, most investments have been made in the capitals at the expense of secondary towns and large villages.

State intervention is essential to ensure a better quality of life, improve well-being and offer administrative, health and education

services. All activities that promote non-farm wealth and job creation help restrict the rural exodus. Decentralisation, under way in many countries, should also help, if local authorities have sufficient resources. Their role has already been considerably strengthened in, for example, Namibia, Rwanda and Uganda. Local authorities increasingly have responsibility for social services, water and microcredit among other services.

Land management on a local scale is key to ensuring the sustainable conservation and best use of natural resources – forests, water and landscapes – that are jointly owned by the people. Mobilisation of governments and all stakeholders will be decisive in determining if agriculture pursues the path of intensification and productivity needed to accommodate the growing ranks of future young, mainly rural people. It is they who will have to ensure food security in the decades to come. They must have the means to do so. ■



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## Uganda: farmers on-line

### [ REPORT ]

"The recent season, I sold my maize at UGX450/kg (€0.16). The season before I had only bagged UGX250/kg (€0.09)", said Sam Lumonya. He is one of the 3,824 farmers who own a rural telecentre called Busia District Farmers Association (BDFA) in Busia District, Eastern Uganda. The telecentre offers training in ICTs and helps farmers access marketing information. "I trained in how to use the Internet to access information from here, so when I landed on good prices in Kampala, I mobilised farmers from three sub-counties and we sold our maize in bulk", said Lumonya. The telecentre started in 2008 with the Uganda Communications Commission providing 80% of the seed money and the farmers contributing 20%. "Since then we have never looked back. If someone tells me there is a buyer in Kenya, I ask for the email or telephone. I do all the negotiations from here", said Ogama Mourice Juma, Coordinator BDFA.

The telecentre is housed in its own building and has a television, a videocassette recorder/DVD player, seven Internet-ready computers, a printer, telephone, fax machine, photocopier and a stand by-generator. Users are charged a small fee. Training is offered to help farmers use the ICT

tools and adopt a business focus. Some farmers have used the telecentre to identify good markets in nearby Nairobi where they have now set up permanent stalls. "In 1998, I was a small farmer, but BDFA has transformed me into a big farmer in less than 2 years. Now I have 24 acres of maize, sorghum and cassava", said Lumonya. "They have improved my capacity to produce more because of the market assurance. I have constructed a house and educated my children, two of them are at the university."

Thanks to a Memorandum of Understanding signed by BDFA and marketing software organisation FIT-Uganda in March 2010, Juma expects farmers to have even better success in selling their produce. "Farmers who know how to use the Internet just walk in, but there are some who still don't know. This is where FIT-Uganda comes in",

said Juma. FIT-Uganda is to provide the telecentre with software that analyses market data. The data from Busia will be integrated with market information from the rest of the country and shared with farmers through the press and mobile phones and displayed at the telecentre itself.

**Angella Nabwowe**



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## For further information

### African Union

- **Africa infrastructure country diagnostic. Roads in Sub-Saharan Africa** (2008)  
<http://tinyurl.com/2vvgg9vj>

### Agrimonde

- **Scenarios and Challenges for Feeding the World in 2050**  
Agrimonde summary report, INRA, CIRAD (2009)  
<http://tinyurl.com/37cgxfd>

### CTA

- 19<sup>th</sup> Brussels Development Briefing on *Youth and rural development in ACP countries* (July 2010)  
<http://tinyurl.com/244hz3c>
- 9<sup>th</sup> Brussels Development Briefing on *Land access and rural development: New challenges, new opportunities* (February 2009)  
<http://brusselsbriefings.net>

### ECOWAP

- Business meeting on financing agricultural investment plans - Dakar 14-17 June 2010  
<http://tinyurl.com/2vwhnvk>

### FAO

- **Towards an African common market for agricultural products**  
<http://tinyurl.com/33r7jyw>

### IFPRI

- **Millions Fed: Proven Successes in BIFPRI**, 2009. 179 pp.  
Downloadable free from:  
<http://tinyurl.com/367dgd8>

### UNCTAD

- **Technology and innovation report 2010. Enhancing food security in Africa through science, technology and innovation**  
<http://tinyurl.com/3yy8j6z>

## RESEARCH & INITIATIVES

### “Green Revolution” in Rwanda

With 400 inhabitants/km<sup>2</sup>, Rwanda has no choice but to intensify agriculture if its farmers, who have just .5 ha per household, are to make a living. In 2007, the government launched a ‘Green Revolution’, which has been vigorously and rigorously implemented. Each province can only cultivate crops that are best suited to the region: coffee, rice, maize, banana and pineapple in East Province; cassava, wheat, tea and coffee in South Province; tea, coffee and potatoes in the West; and potatoes, pyrethrum, wheat and passion fruit in the North.

Distributing crops in this way has been coupled with changes in cultivation methods. The hills are covered with so-called ‘radical’ terraces to limit erosion and restore soil fertility. Farmers must combine their small plots, uniting to cultivate larger fields. Together with a rule that each household must have a manure pit, Operation “One Cow per Poor Family” has enriched soils

that previously received an average of just 4 kg/ha of fertiliser. To increase the amount of land under cultivation, marshes have been drained and planted with rice. Farmers have been given loans to buy fertiliser and selected seed. Cooperatives have been launched to streamline harvests and administer sales.

The main goal is to produce food for sale on the national, regional or international market. Small processing factories are springing up everywhere to add value to output. They offer a source of extra income to producers who work in them.

In East Province, maize output has tripled. In the South, cassava is now being exported to the Democratic Republic of Congo. Revenues of farmers who have implemented the recommended measures, at times under duress, have risen swiftly. The efforts required of producers have been demanding and sometimes painful, but the early results are highly encouraging.

### Technology can help feed Africa



Zimbabwean-born **Lindiwe Majele Sibanda** is the Chief Executive Officer and Head of Mission at the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN).

#### How does technology affect agricultural development?

Technological innovation remains the silver bullet to boost agricultural productivity and make Africa food secure. African smallholder farmers can drive the Green Revolution if they have technologies such as irrigation, improved seed, increased use of chemical fertilisers and fewer post-harvest losses. Africa is over-dependent on rain-fed agriculture, with just 4% of arable land under irrigation. Use of high-yielding seed varieties is as low as 5% in some countries, and post-harvest losses can be as high as 40%!

Unfortunately, throughout Africa, inputs such as quality seeds, fertilizer and pesticides are expensive, and difficult to access due to market and trade barriers. There is an urgent need for policy and institutional reforms that will ensure Africa’s smallholder farmers enjoy uninterrupted access to knowledge and quality inputs at fair prices and at the right time.

#### What resources are needed to achieve this?

Making Africa a food secure continent calls for massive investments in infrastructure, agricultural research and technology development. Fortunately, some positive change is becoming visible. In February 2010, the Southern African Development Community agreed to implement a new Harmonized Seed Regulatory System, which should make it easier for seeds to be sold across borders, with less bureaucracy and at affordable prices. And continent-wide plans and investments, through programmes under the Comprehensive Africa Agriculture Development Programme (CAADP) are finally bearing fruit.



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