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## Improving food security in Africa



ABOVE: A woman enjoys increased maize yields as part of her involvement in the Australian-funded Sustainable Intensification of Maize and Legumes in East and Southern Africa (SIMLESA) program. Photo: ACIAR

**COVER:** A woman holds up some of the vegetables she has grown in a garden in Cape Town, South Africa, made possible through the Albalami Bezekhaya voluntary association, supported with funding from Australia. The garden helps improve food security through improving production, and generating income for the farmers involved. Photo: Kate Holt/Africa Practice

African governments are tackling hunger and poverty by improving food security, nutrition and incomes in their countries. Australia supports Africa's vision of agriculture-led development and is keen to work with African countries to share our experience and expertise in agriculture.

Australia has much in common with Africa. Our continents share dry and unpredictable climates, often poor-quality soils, challenging landscapes and vast distances. In response to these challenges, Australia has built considerable scientific and technical expertise in agricultural productivity and trade.



## A driver of development

More than two-thirds of Africans depend on agriculture for their income and their basic food needs. Research has shown that countries with higher agricultural growth have lower poverty rates. By improving agriculture and food markets, there is an opportunity to further lift millions of African people out of poverty.

African countries are making progress in improving agricultural productivity: Sub-Saharan Africa's agriculture GDP growth rate increased from an annual average of 3 per cent in the 1990s and 2000s to 5.3 per cent in 2008.

Africa is tackling food insecurity, nutrition and incomes across the continent through the Comprehensive Africa Agriculture Development Programme (CAADP).

Australia's investment in food security in Africa supports the CAADP objectives for agriculture-led development. To this end, Australia is working with African governments, African regional economic communities, the private sector, research institutions, farmers' groups, civil society and other development partners to address the priorities Africa has identified to improve food security.

## Australia's support – how we are helping

Australia is supporting African efforts to improve food security by boosting long-term agricultural productivity and building resilience, while meeting the immediate needs of vulnerable people when humanitarian crises occur.



ABOVE: A Zimbabwean woman tends to her maize crop in Epworth, in Harare, Zimbabwe. Australia is using its expertise and experience to help improve food security in African countries. Photo: Kate Holt/Africa Practice

## Zimbabwe

One in three children in Zimbabwe remains chronically malnourished. Australia's food security and agriculture program in Zimbabwe aims to ensure the poor have access to food. Australia is providing food aid for the most vulnerable, support to increase food production and the recovery of the rural economy.

Australia is the founding donor of the Africa Enterprise Challenge Fund Zimbabwe Window (AECF ZW). The AECF ZW has already funded 10 projects in agri-business and financial services. One of the selected firms, Northern Farming, started a new enterprise in contract farming which has resulted in dramatic increases in crop production and disposable income for participating smallholder farmers. Another project provides electronic banking services in rural areas. The first 10 projects of the AECF ZW are expected to benefit more than 400,000 families.

### Australia Africa Food Security Initiative

This new four-year initiative, announced at the 2011 Commonwealth Heads of Government Meeting (CHOGM) in Perth, Australia, will establish an *Australian International Centre for Food Security*. The Centre will provide global access to Australia's agricultural research and expertise in dry-land farming, tropical agriculture, commercialisation of agricultural research, and agricultural water and soil management. The early focus of the Centre will be on Africa.

The Centre will hold an international conference *Food Security in Africa: Bridging Research and Practice* in 2012.

This initiative also supports the 'Research into Business' window of the African Enterprise Challenge Fund (AECF). This is a competitive funding mechanism, hosted by the Alliance for a Green Revolution in Africa (AGRA), to stimulate private sector innovation and commercialisation of agricultural technologies to benefit small holder farmers.

### Stimulating agricultural productivity through partnerships in research and development

A primary cause of food insecurity is the decline in global food production and productivity. Through CAADP, African leaders are playing a critical role in supporting the science and innovation on which increased agricultural productivity depends.



Christine Ogola, a farmer in Lignwa village, western Kenya, is participating in ACIAR's program for Sustainable Intensification of Maize and Legumes in East and Southern Africa for the third season. She is now using improved varieties and has introduced conservation agriculture practices, intercropping maize with beans and retaining maize residues on her third of an acre plot. Christine used to harvest no more than one 90 kg bag of maize but recently harvested five bags of maize and also beans. Photo: ACIAR



## African Biosciences Challenge Fund supports cutting edge research

**“Pig production in Uganda provides smallholder farmers with food, income and employment. Rural communities see pigs as ‘walking banks’. I see pigs as banks of a different kind. Wild pigs are a reservoir for the African Swine Fever (ASF) virus. My research (through BecA) examines whether the ASF virus is transferred from wild pigs to domestic pigs. ASF devastates domestic pig production in local communities, killing between 90 and 100 per cent of infected pigs. There is no treatment or vaccine. My research will be used to produce quick diagnostic kits to detect carrier pigs, help quarantine infected pigs and lead to the development of a vaccine.”**

LEFT: Charles Masembe, Veterinarian from Uganda. Photo: CSIRO

## Australia's agricultural expertise

Agricultural research has played an important part in Australia's development. In the face of challenges including low and variable rainfall, drought, poor soils, pests and disease and vast distances to markets, Australia has developed expertise and now leads the world in many agricultural research fields from science to policy.

Australia is helping Africa overcome many of the same challenges by sharing its experience in conservation agriculture, dryland, semi-arid and tropical farming systems.

Australia's research community, through the Australian Centre for International Agricultural Research (ACIAR) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), is playing an important role in this work.



## Partnering with regional agricultural research institutions

Australia is supporting regional agricultural research institutions in Africa, providing important technical services.

The ACIAR-led SIMLESA (Sustainable Intensification of Maize and Legumes in East and Southern Africa) program is helping farmers to test and adapt conservation agriculture methods using improved maize and legume varieties. The program aims to increase maize and legume productivity by 30 per cent for at least 500,000 farmers in Ethiopia, Kenya, Malawi, Mozambique and Tanzania over the next decade. It is a collaboration between the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the International Maize and Wheat Improvement Center (CIMMYT) and national agricultural research agencies in each country, with input from Australian researchers.

Scientists from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) are working with the West and Central African Council for Agricultural Research and Development/ Consiel Ouest et Centre Africain pour la Recherche et le Developpement Agricoles (CORAf/ WECARD) and the Biosciences Eastern and

**“In terms of food production, Africa hasn’t yet seen the kinds of revolutions that have taken place in Australia. There’s a massive opportunity in Africa to be able to increase yields and increase farmers’ access to infrastructure and markets to enable a transition out of poverty and hunger. That is what the partnership with Australia is about and it is very exciting.”**

*Dr Segehet Kelemu –  
Director, Biosciences  
Eastern and Central Africa*



Central Africa Hub (BecA), along with more than 30 other African institutions across 35 countries.

This collaboration is supporting agricultural research for enhanced food security, including by improving agricultural farming systems, human nutrition and animal health. For example, Australian science is helping to stop the spread of cattle ticks in Burkina Faso, Cameroon and Benin. Australia is also funding research into highly nutritious foods, such as amaranth and indigenous mushrooms, and into reducing aflotoxin contamination, a toxic fungus that causes chronic illness and death in humans.

Australia, through ACIAR, is supporting regional cooperation in dryland farming in Tunisia, Morocco, Algeria, Libya, Eritrea, North Sudan and Mauritania as well as improving on-farm water use in Egypt to increase agricultural productivity. Australia is also working with Botswana to support its ten-year research goal of strengthening beef supply chains and the participation of small-scale producers in them.

## **Building the capacity of African researchers and policy-makers**

African researchers and policy-makers can also take advantage of valuable education and training opportunities in Australia. In 2011, 55 Africans from 37 countries received Australia Awards to undertake post-graduate studies in agriculture in Australia. For the first time, candidates were offered doctorate awards, with 15 commencing studies in Australia in 2012.

Senior African government officials are also participating in study-tours and short-term training courses to learn about Australian agricultural systems. In 2011, 126 officials from Burkina Faso, Burundi, Djibouti, Ethiopia, Ghana, Rwanda, Uganda, Egypt and Tunisia will have participated in these activities.



ABOVE: A farmer holds up some of the onions he has grown on his farm near Gilgil, Kenya. He is part of a Self Help Development Initiative supported by Australia, that teaches farmers how to make their land more productive by protecting their environment. This in turn ensures the family are well fed and healthy. Photo: Kate Holt/Africa Practice

## Improving food security at the community level

Australian non-government organisations (NGOs) and volunteers deliver Australian Government support which is improving the food security of communities in Botswana, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, South Sudan, Swaziland, Tanzania, Uganda and Zimbabwe.

Over the next five years, NGO activities will range from integrating climate change strategies with increasing crop yields to supporting women to access financial services. In South Sudan, Australian NGOs are contributing to early recovery, supporting improved livelihoods for over 3000 households in Jonglei, Lakes and Western Bahr El Ghazal.

Volunteers are often involved at the grassroots level. For example, the Australian-created Landcare movement is helping communities in East Africa form networks to tackle land degradation.



LEFT: Villagers line up to receive a monthly World Food Programme (WFP) ration of three kilos of goat meat from the local butchery at Arbakeramso Village, Wajir District, northern Kenya. Meat and camel's milk rations from local producers help to supplement their diets and support farmers through the drought. Photo: Scott Kelleher/AusAID

## Building community resilience

Rising food prices can push people further into poverty: nutrition worsens, use of health and education services declines, and productive assets are sold. The effects are often irreversible.

People's vulnerability to food prices is made worse by environmental degradation, climate change impacts and natural disasters. Approximately two-thirds of disasters are climate-related and the number is increasing.

Financial support for the most vulnerable through cash transfer programs can alleviate suffering and chronic food insecurity. African countries are increasingly implementing social protection systems, with positive effect.

Australia will assist Northern Kenya, in partnership with the UK, to provide support for up to 900,000 pastoralists through the Hunger Safety Net Programme (HSNP). In addition to providing cash transfers, the smartcard technology allows the HSNP to provide other forms of livelihood support, such as agricultural supplies and vouchers for veterinary services.



## Humanitarian support: saving lives and livelihoods

While the focus must be on building long-term productivity and resilience, Africa is experiencing weather-induced crises with increasing frequency.

The catastrophic drought in the Horn of Africa in 2011 has highlighted the need for early, well-coordinated interventions that save lives and livelihoods and prevent a crisis from escalating.

Australia has been a major donor to the global response, providing funding for urgently needed food and other support for people in refugee camps and affected communities. We have worked with the international community to avert further loss of life, displacement of people and loss of assets, livestock and livelihoods. We have supported local markets by providing cash and vouchers to allow people to buy locally where possible, to rebuild their stock and crops, and to help restore necessary infrastructure. The private sector has an important role ensuring that the market has enough supply to meet this demand.



LEFT: Foreign Minister Kevin Rudd with the Executive Director, World Food Programme, Josette Sheeran, meets 18 month-old Sadak Hassan Abdi and his mother Hukun. Mr Rudd encountered the malnourished boy when he visited the Dolo refugee camp in southern Somalia in July 2011. 5 weeks later, Sadak is now healthy thanks to food supplements funded by Australian humanitarian assistance.



## Supporting global initiatives

Australia was the first donor to the World Bank's Global Food Crisis Response Program (GFRP) in the wake of the 2007–08 food price crises. GFRP has funded activities in 23 African countries—delivering 20,000 food packages, employing 125,180 people, providing cash transfers to 25,655 people, involving 215,102 children in school-feeding programs, and distributing 325 tons of seed and 12,569 tons of fertilizer.

Australia is also a donor to the Global Agriculture and Food Security Program that provides grants to Ethiopia, Liberia, Niger, Rwanda, Sierra Leone and Togo. Funds are supporting agriculture strategies including:

- improving hillside agriculture in Rwanda
- raising rice, maize and cassava yields in Togo
- developing agricultural areas in Ethiopia, and
- protecting vulnerable households from natural disasters.

Australia also advocates strongly for open trade and the completion of the Doha Development Round to allow farmers in developing countries to participate in global agricultural and food markets.

**For further information on Australia's agriculture and food security assistance in Africa, please contact a relevant Australian Embassy or High Commission or AusAID. Contact details can be found at [www.dfat.gov.au/missions](http://www.dfat.gov.au/missions)**



Rwandan farmers apply agricultural improvement strategies to their hillside crops. Photo: GAFSP

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