



Australian Government
Australian Centre for
International Agricultural Research



AUSTRALIAN INTERNATIONAL FOOD SECURITY CENTRE (AIFSC) STRATEGY 2012 – 2022

‘Accelerating research delivery and adoption
of innovations for food security’

PREPARED FOR

**FOOD SECURITY
IN AFRICA:**

BRIDGING RESEARCH
AND PRACTICE

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aci.gov.au/aifsc



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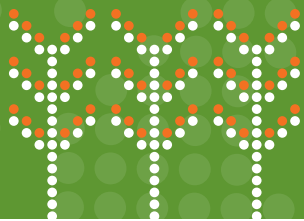
Africa Enterprise Challenge Fund (AECF) • Africa Rising • African Union Commission • Alliance for a Green Revolution in Africa (AGRA) • Australia–Africa Universities Network (AAUN) • Australian Agency for International Development (AusAID) • Australian Council for International Development (ACFID) • Australian Department of Foreign Affairs and Trade (DFAT) • Australian National University (ANU) • Bill & Melinda Gates Foundation • Bioversity International • Canadian International Development Agency (CIDA) • Centre for Agricultural Bioscience International (CABI) • Commonwealth Scientific and Industrial Research Organisation (CSIRO) • Crawford Fund • Department for International Development, United Kingdom (DFID) • East African Community (EAC) • Food and Agriculture Organization of the United Nations (FAO) • Forum for Agricultural Research in Africa (FARA) • HarvestPlus • International Development Research Centre (IDRC) • International Food Policy Research Institute (IFPRI) • International Institute of Tropical Agricultural (IITA) • International Livestock Research Institute (ILRI) • International Maize and Wheat Improvement Centre (CIMMYT) • Mazingira Institute • One Acre Fund • Southern African Development Community (SADC) • World Agroforestry Centre (ICRAF) • World Vision

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ACRONYMS AND ABBREVIATIONS

ACIAR	Australian Centre for International Agricultural Research
AGRA	Alliance for a Green Revolution in Africa
AIFSC	Australian International Food Security Centre
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AU/NEPAD	African Union's New Partnership for Africa's Development
AusAID	Australian Agency for International Development
CAADP	Comprehensive Africa Agriculture Development Programme
CABI	Centre for Agricultural Bioscience International
CARDESA	Centre for Agricultural Research and Development for Southern Africa
CEO	Chief Executive Officer
CHOGM	Commonwealth Heads of Government Meeting
CIMMYT	International Maize and Wheat Improvement Centre
CORAF	Conference of African and French leaders of agricultural research institutes
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Department of Agriculture, Fisheries and Forestry
ECA	eastern and central Africa
FARA	Forum for Agricultural Research in Africa
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
SIMLESA	Sustainable intensification of maize–legume systems in eastern and southern Africa
WECARD	West and Central African Council for Agricultural Research and Development
WFP	World Food Programme



Context

The Australian International Food Security Centre (AIFSC) was announced by the Prime Minister of Australia, Hon. Julia Gillard, in October 2011 at the Commonwealth Heads of Government Meeting (CHOGM) in Perth, Australia. The Prime Minister's statement on food security is available at www.aciar.gov.au/aifsc.

The establishment of the AIFSC reflects the importance that the Commonwealth member country governments attach to food security, as set out in the Commonwealth Principles of Food Security, which were endorsed by the Heads of Government at their 2011 meeting in Perth (Commonwealth Secretariat 2011).

The Prime Minister announced that the AIFSC would be established within the Australian Centre for International Agricultural Research (ACIAR) and the Australian Government made a financial commitment to the AIFSC of A\$33 million over four years.

The AIFSC will have an international focus, recognising the significance of food security to developing countries across Africa, Asia and the Pacific region. However, particular initial emphasis will be given to advancing food security in Sub-Saharan Africa.

The Prime Minister's announcement acknowledged that Australia has unique agricultural scientific expertise and world-class teaching and research institutions that are well suited to advancing African agriculture and food security. She committed the AIFSC to give African farmers, government agencies and the private sector access to this expertise and also to provide support by networking Australian, African and international research bodies.

The AIFSC will make a unique contribution to addressing food security through providing a bridge between agricultural research innovations and development to accelerate adoption for early impacts. It will achieve this through developing a better understanding of the incentives and barriers to adoption by smallholder farmers, including livestock keepers. Enhanced adoption of innovations by smallholder farmers will increase agricultural productivity and contribute to economic development over a shorter period of time. The AIFSC will also aim to facilitate an economic and policy environment that overcomes barriers to market access. It will give new attention to better food utilisation, so as to increase the nutritional quality of food consumed and to reduce loss of food after harvest. The AIFSC will also focus on education and building capacity in the responsible national institutions and in individuals, recognising the impacts of gender in African smallholder food systems.

Implementing this strategy will require a broad range of partners, including researchers developing new knowledge and those focused on delivery and adoption of innovations, from the public sector, private sector, community groups and civil society.



Rationale

The case for agricultural research and a focus on Africa

Almost 870 million people were chronically undernourished in 2010–2012, which equates to one in eight people going hungry every day (FAO, WFP and IFAD 2012). The vast majority live in developing countries, where about 850 million people, or slightly fewer than 15% of the population, are estimated to be undernourished. Despite these shocking statistics, the updated figures suggest that progress globally in reducing hunger has been more pronounced than previously believed. Africa, however, was the only region where the number of hungry grew – with nearly 20 million added in the past four years. The prevalence of hunger, although reduced over the entire 10-year period, has risen slightly over the past three years, from 22.6 percent to 22.9 percent, with more than one in four hungry. In Sub-Saharan Africa, the modest progress achieved in recent years up to 2007 was reversed, with hunger rising 2 percent per year since then (FAO, WFP and IFAD 2012).

In 2011, United States Secretary of State Hilary Clinton addressed the United Nations Food and Agricultural Organization (FAO) rallying that ‘food security is **the** issue of our time’ and that it needed to be addressed now or we will never catch up.

There is also an increasing demand for better quality food and more diverse diets as people move out of poverty (e.g. rising demand for meat and livestock products, especially in China and south-east Asia). This rising demand for more diverse and better quality food in the diets, coupled with growing world population, leads to the need to increase total global food production. The FAO estimates that global agricultural production will need to grow by 70% by 2050, and by almost 100% in developing countries, to feed a population of more than nine billion people in 2050 (FAO 2011).

Agriculture has proved to be the initial driver of economic development leading to food self-sufficiency in most developing countries, since the beginning of the ‘Green Revolution’ in Asia in the 1960s. The returns on investments in agricultural research are well documented. Gross domestic product (GDP) growth originating in agriculture is significantly more effective at raising the incomes of the poor than growth from other sectors like manufacturing or services. Studies by the International Food Policy Research Institute (IFPRI) have demonstrated that productivity-enhancing agricultural research provides consistently higher returns than other forms of investment, over a longer period of time.

There is a strong case for focusing the initial efforts of the AIFSC on improving food security in Africa. In contrast to many other parts of the world, particularly Asia, many African countries were adversely affected by food price hikes in recent years and the global recession, with limited access to the means and measures necessary to mitigate hardships for their populations (FAO, WFP and IFAD 2012). Hunger, as a cause of poor health, can perpetuate poverty by reducing people's ability to work and learn. In Africa, the linkages between sectoral and overall economic growth in the country are stronger for agriculture than for other sectors. About two thirds of the continent's total labour force is employed in the agricultural sector, which contributes nearly one third of the continent's GDP (IFPRI 2012). When food security is improved, nutrition and health improve, which in turn promotes labour productivity. Therefore, efforts to reduce poverty and improve food security in Africa must focus on the agricultural sector.

Africa did not benefit from the Green Revolution due to the huge diversity and weaknesses in political, social and economic status at the time. Fortunately, a new smallholder-based 'African Green Revolution' is now underway with the aim of enabling Africa to be food self-sufficient and food secure (see <http://www.agra-alliance.org/>).

The African Union's New Partnership for Africa's Development (NEPAD) and its Comprehensive Africa Agriculture Development Programme (CAADP) argue that the agricultural sector can and must grow on average by 6% per annum to play its role in Africa's development. There is arable land available for expansion of agriculture in several African countries (especially in West Africa). There is a substantial gap between yield potential and actual yields achieved by smallholder farmers and livestock keepers, and productivity could be improved if the necessary inputs were accessible to smallholder farmers and livestock keepers. These inputs include seeds and planting material of high-yielding and adapted crop varieties, fertiliser, animal health products and animal feed. Also essential are rural-sector services, such as financial services (including credit, crop and livestock insurance) and technical advice and services (including market advice). Policy research on market and regulatory frameworks, as well as the relative impact of different types of investment in the rural sector (including infrastructure investments), also have the potential to significantly boost agricultural performance.

Australia's comparative advantage

Australia is fortunate to be a food-secure country. The agricultural sector is a key strength of the economy, particularly in financially turbulent times. Australia is highly internationally competitive in the production of a wide range of food products and exports about two thirds of its agricultural products (DAFF 2012). Australia also imports some food, mainly value-added products to meet consumer demands or seasonal gaps in supply of fruits and vegetables.

Australia has unique agricultural scientific expertise in dealing with climatic variability and extreme climatic events (drought, floods, fires) that affect farming, forestry, fisheries and livestock across a variety of agro-ecological conditions. From the wet tropics through to dry Mediterranean-like climates and deserts, Australia has built an efficient and sustainable food and agricultural sector in an export-focused and market-oriented environment. Many of these agro-ecological conditions are shared between Australia and many parts of the developing world, including Africa, so Australian agricultural expertise has significant potential to assist these regions.

Australian researchers and policy makers have also maintained enduring and successful partnerships with developing-country national research institutes and universities, international agricultural research institutes and global research programs, including those supported by multilateral agencies such as the CGIAR, the Centre for Agricultural Bioscience International (CABI) and the FAO.

Australia also has world-class teaching and research institutions that are well suited to advancing African agriculture and food security with various schemes to provide access to international students, including scholarships such as the Australia Awards.

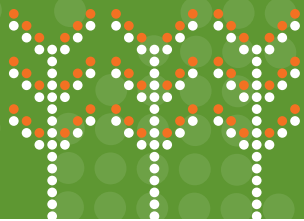
Australian aid policy is described in the Australian Government's policy document *Helping the World's Poor through Effective Aid: Australia's Comprehensive Aid Policy Framework to 2015–16* (AusAID 2012a). This framework reflects the Government's response to the 2011 *Independent Review of Aid Effectiveness* (Commonwealth of Australia 2011), which focused on areas where notable Australian strengths could be harnessed for development. Recommendation 23 suggested: 'There should be more aid funding for research by Australian and international institutions, particularly in agriculture and medicine'.

Australian aid policy supports five strategic goals; the third goal 'Sustainable economic development' is where the work of the AIFSC will contribute. The development objective under this goal, 'Improving food security', focuses on increasing the availability of food through increasing production and improving trade, while also increasing poor people's ability to access food.

The thematic strategy of the Australian Agency for International Development (AusAID) has three pillars of action (AusAID 2012b):

1. *Lifting agricultural productivity*, through agricultural research and development, whereby agricultural research develops innovations relevant to the poor.
2. *Improving rural livelihoods*, by strengthening markets and market access, through more efficient and effective value chains; and by improving and making financial services more sustainable.
3. *Building community resilience*, including supporting the establishment and improvement of social protection programs.

The AIFSC programs will address Pillars 1 and 2 of this thematic strategy.



Approach: accelerating the delivery and adoption of research innovations

The challenge to which the AIFSC has committed is to identify and invest in ways to accelerate the delivery and adoption of research innovations that will have an impact on food security over shorter time frames. This requires not only having useful research results to deliver, but also an understanding of the constraints and incentives to delivery and uptake, and devising new modalities to overcome such constraints.

The AIFSC's main approach to achieving its mission is through partnerships. In particular, we work to develop new and enduring partnerships at the local, national and regional level across social, economic and political contexts. This also requires a range of new partnerships beyond agricultural research partnerships, from the private commercial sector, community groups and civil society. These latter groups are involved on the ground in Africa and are well informed on the delivery and uptake of research results, and the social and policy factors that can constrain adoption of innovations. In particular, we work to ensure strategic linkages between the deliverers of research and the deliverers of extension.

Bridging the gap between research and development

One of the mechanisms for achieving accelerated adoption of research is through building strong, strategic linkages between the deliverers of research and the deliverers of extension. The AIFSC has been given the particular remit of working closely with both research and development partners. The Centre will ensure that development partners are built into research project design from the outset and use a range of knowledge innovations to strengthen and facilitate effective delivery by both sectors.

Incorporating a clear dissemination strategy has been recently acknowledged as a key to successful adoption of research outputs in Africa (Fisher and Holden 2012). The AIFSC's bridging role will be further enhanced by including the private sector and non-government organisations (NGOs) as recognised deliverers of services to smallholder farmers.

New and enduring partnerships

Another of the ways the AIFSC will accelerate adoption is through developing new and enduring partnerships for addressing food security at the local and national level across social, economic and political contexts.

The Forum for Agricultural Research in Africa (FARA) provides a forum for discussion among African countries, sub-regional organisations and potential partners, including the CGIAR. Australian consultations in Africa were first convened by FARA and ACIAR in early 2012 and key principles for building Australian–African partnerships were identified to facilitate the success of the AIFSC.

These principles included:

- » at conception phase, partnerships should be inclusive and have the agility and dynamics to take on the both the strengths, weaknesses, challenges and opportunities within Africa and Australia
- » during implementation, partnerships should be based on the principles of: empowering female and male farmers, defining clear roles and responsibilities for the various partners, encouraging institution-to-institution support, and joint planning, execution, reporting, monitoring and evaluation and impact assessment
- » as it moves forward, partnerships should build empathy among the partner individuals and institutions, especially taking into account differences in capacities and abilities.

Professor Chubb, Australia's Chief Scientist, chaired an expert panel in 2011 to develop a *Strategic Framework for International Agricultural Research within Australia's Aid Program* (ACIAR 2011). The panel's findings and recommendations provided early guidance for the AIFSC in developing its strategy, program and operations. In particular, the report provided principles for expanding Australia's engagement through long-term partnerships of 10–15+ years through:

- » a more program-driven approach, away from short-term projects and three-year project cycles
- » new partnership programs with specific purposes, agreed objectives and with measurable accountability to ensure success
- » ensuring partners make a commitment and contribution towards the partnerships, to increase the likelihood that partnerships achieve their intended results
- » linking institution strengthening, research and capacity building within partnerships

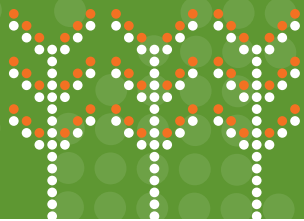
- » jointly identifying priority themes and programs with partners, matching needs with capabilities.

As mentioned above, this approach will require a range of new partners, including with commercial organisations involved in delivery of goods and services in Africa and multilateral and bilateral development agencies responsible for the widespread dissemination and adoption of innovations.

Matching African and Australian interests, needs and capabilities

There are many diverse countries in Sub-Saharan Africa, most with substantial and varying needs. The AIFSC will make clear choices in selecting countries and regions where AIFSC investments in the food and agricultural sector will make a significant impact. Similarly, choices need to be made on the programmatic orientation, so as to give a defined focus and depth to the work of the AIFSC and ensure new investments have high impact and complement, rather than duplicate, other efforts.

A key mechanism for developing this focus, and the partnerships and projects to be supported by the AIFSC, will be matching identified needs in the countries of Africa with availability of Australian expertise and experience, and then ensuring it is an area where high impact can be achieved, such as a gap or weak research area. Consultations among African and Australian partners will inform these decisions.



Program themes and outcomes

Goal and mission

AIFSC's goal is: *To help smallholder farmers and other poor households access sufficient, accessible and nutritious food.*

AIFSC's mission is: *Accelerating research delivery and adoption of innovations for food security.*

Broad platform

Food security is met when *'all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'* (FAO 2001).

Food security encompasses more than food productivity. It is underpinned by having sustainable, healthy food systems in place in country, and access to regional and global food systems, including through trade. Improving food security requires improving the three interrelated elements of availability, access and utilisation. Improving any one of the three elements alone is necessary but insufficient to improve food security (FAO 2009). In addressing these elements, there is also a need to consider institutional arrangements, gender and cultural norms that enable effective involvement of marginalised and poor communities in improving food availability, access and utilisation.

The AIFSC will work within a broad framework of enhancing these three interrelated elements as well as incorporating activities across the additional themes of gender mainstreaming, education and capacity building, and communication and knowledge management.

Prioritisation

Within this framework, the development of the AIFSC's programs and the allocation of effort will be guided by the following principles that been developed through consultation:

- » Accelerate delivery and adoption of innovations
- » Address identified in-country needs and align with regional priorities
- » Address an identified gap in existing agricultural research for development
- » Provide opportunities for leveraging off existing work
- » Be undertaken in AIFSC priority countries
- » Provide opportunities for co-investment, in particular with private sector partners
- » Encourage south-south institutional support
- » Establish long-term partnerships with the national institutions, private sector and NGOs
- » Be fully embedded in partner institutions
- » Clearly identify key stakeholders (direct and indirect) who match AIFSC beneficiaries
- » Identify and ensure successful pathways to adoption and impact
- » Consider full pathway of change (from agricultural inputs, practices, value chain, to food access and policies)
- » Facilitate community empowerment and capacity building
- » Have cross-region country applicability
- » Focus on gender mainstreaming
- » Focus on socio-economic policy research
- » Provide opportunities for where Australian comparative advantage can have impact.

This approach will result in some programs having more funds allocated for activities than others in order to achieve maximum impact.

In assessing where the gaps exist for the allocation of effort and resources among the AIFSC program areas, it is worth noting the increased focus of the AIFSC on the less well-addressed elements of food security. Over the past 30 years, the main emphasis of agricultural research institutions has been on improving productivity and the sustainable use of natural resources, with only recent investments in improving access to food for poor people by improving market access or building resilience in food systems.

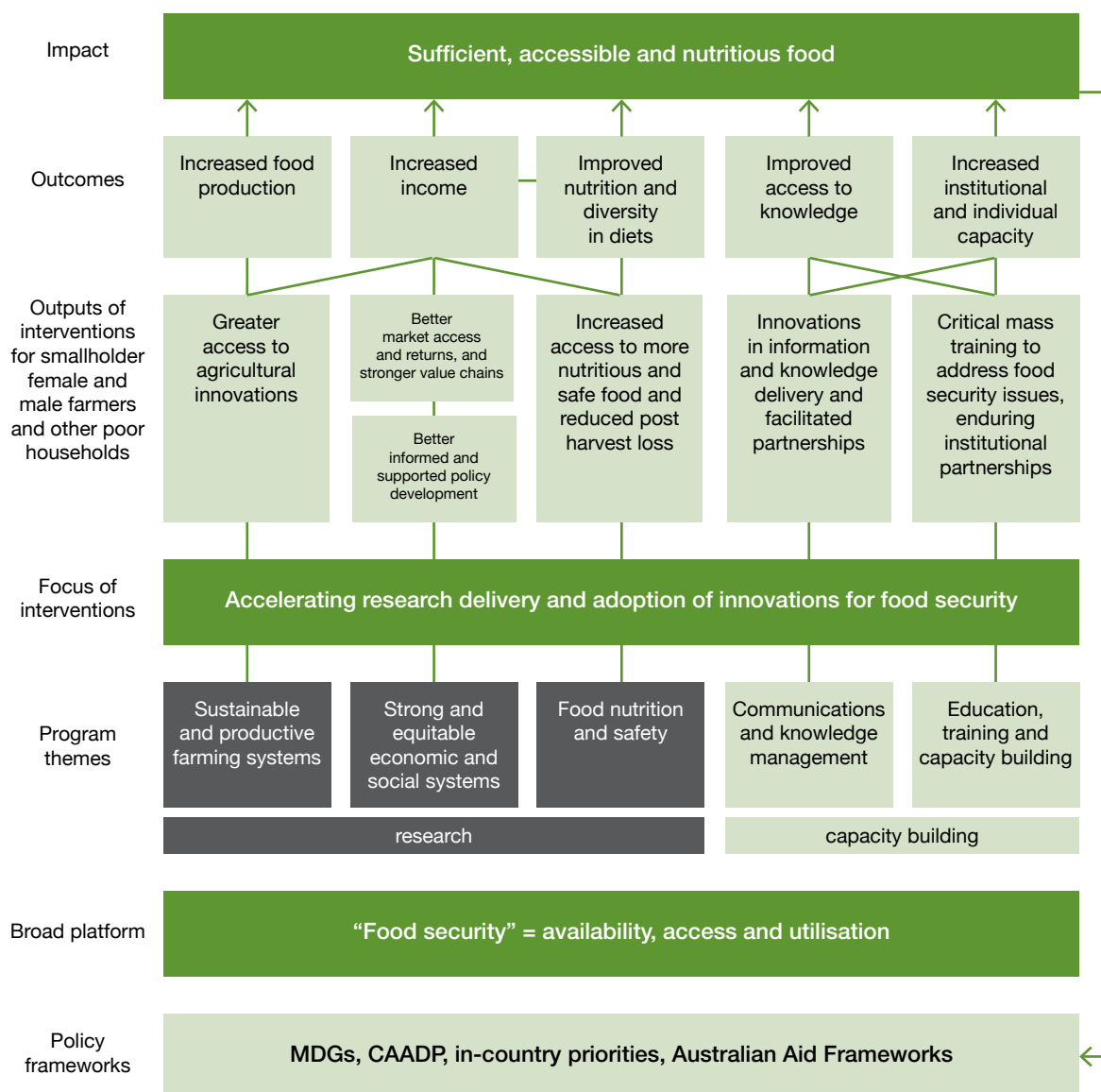
Moreover, research into food availability is relatively well subscribed in Africa by the CGIAR system and by multilateral and bilateral donors. However, there is increasing interest and support for research into food access such as market-related research and policy-related research to facilitate opening up markets to smallholders; an area the AIFSC considers an initial priority. The AIFSC also considers research into food utilisation a priority where the needs are many in Africa and identified research gaps have been widely acknowledged. These relatively underinvested areas are ones where AIFSC investments would make a significant difference and give Australia and the Centre a high profile in Africa.

Program logic

The logic behind the AIFSC program design and how the program outputs contribute to delivering the AIFSC goal of sufficient, accessible and nutritious food is illustrated in Figure 1.



Figure 1. AIFSC Program logic diagram



AIFSC Programs

PROGRAM 1 SUSTAINABLE AND PRODUCTIVE FARMING SYSTEMS

- » improving sustainable productivity in farming systems, including better natural resource management, and enabling policies to enhance productivity.

Outcome

Increased food production by women and men in target countries, through:

- » greater access to agricultural innovations by female and male smallholder farmers
- » higher rates of adoption of agricultural innovations, including more widespread adoption of high-yielding, well-adapted varieties of food crops; incorporation of trees into cropping systems; and more efficient distribution and uptake of animal vaccines.

Scope

As the AIFSC focus is on food security, its investments will complement and add value to existing ACIAR research investments in improving food production. The AIFSC will help accelerate the uptake of research results through research that develops a better understanding of the constraints to adoption of new technologies, including new crop varieties. For example, at the March 2012 SIMLESA Project Annual Meeting, Professor Derek Byrlee noted that the uptake of new crop varieties in Africa over the past 15 years has been approximately 35%, whereas a greater uptake would be desirable. Clearly, there are researchable issues as to the suitability of the new varieties to the target agro-ecosystems, availability of seed, credit, labour and other inputs, as well as other as yet-unknown constraints to adoption.

Understanding these issues and identifying means for their solution would be a valuable contribution by the AIFSC towards accelerating the rate of adoption of improved crop varieties in Africa. A similar range of researchable issues applies in livestock; for example, in relation to the delivery and uptake of new animal vaccines and in the delivery of improved breeds of animals to increase livestock productivity.

PROGRAM 2 STRONG AND EQUITABLE ECONOMIC AND SOCIAL SYSTEMS

- » better market access for smallholder farmers and livestock keepers; generating income for small-scale producers from cash crops, trees, livestock products and other rural enterprises to enable poor people to purchase food; strengthening market-related policy and socio-economic research including value chains.

Outcome

Increased income opportunities for female and male small-scale producers in target countries, through:

- » enabling policies and mechanisms to support smallholders' access to markets
- » better return on goods sold by smallholder female and male farmers
- » enabling sale of surplus production in local, regional and international markets
- » identifying how to strengthen food value chains.

Scope

This thematic area will include research into innovations enabling market access for smallholder farmers and livestock keepers, by understanding value chains and advising on enabling policies and for generating income from cash crops, livestock products and other rural enterprises to enable poor people to purchase food. The policy research in this program may include working with and at the invitation of partner countries and with international policy research bodies such as IFPRI, to improve the agricultural policies and management. The policy settings need to be designed to boost agricultural production (e.g. meeting the CAADP target of 6% growth in agricultural GDP per annum), and enabling policies for smallholder participation in markets (e.g. policy options for dealing with issues such as land tenure, gender, access to credit and other input availability, import subsidies and export restraints). Research and development on food supply chains could be as important to food security as research to improve yields.

PROGRAM 3 FOOD NUTRITION AND SAFETY

- » improving nutrition, increasing diversity in diets, reducing postharvest loss, improving food safety and adding value to food post-farm gate, which increases off-farm employment opportunities.

Outcome

Improved nutrition and diversity in diets in target countries, through:

- » increased access to quality food
- » improved efficiency of production of nutritious foods (e.g. vegetables)
- » reduced postharvest loss
- » improved food-safety systems
- » more value-added foods available.

Scope

The AIFSC can add value by expanding Australian support on food nutrition and safety, with emphasis on improving the nutritional quality and diversity of diets, reducing postharvest loss (approximately one third of food produced for human consumption is lost or wasted globally, FAO 2011) and adding value to food after harvest. The area of adding value offers opportunities for small-scale enterprises in packing and processing food for sale in urban areas in Africa. The 'supermarket revolution' is spreading across Africa, as African countries become more urbanised, and an increasing number of people buy food through supermarkets. This change, if managed appropriately, offers potential benefits to consumers and to smallholder farmer sellers of food through furthering competition and market openness. The policy issues will be addressed through Program 2.

Dialogue with the major actors working in this area, including the CGIAR Research Program (CRP 4) on nutrition and health, will assist in identifying the priority areas within the realm of food utilisation where the AIFSC could contribute.

PROGRAM 4 COMMUNICATIONS AND KNOWLEDGE MANAGEMENT

- » innovative access to information and knowledge, evidence-based policy adoption, and knowledge portal.

Outcome

Improved access to knowledge by small-scale female and male farmers and livestock keepers, through:

- » innovations in information and knowledge-delivery systems operational in target countries for distributing new knowledge on food and agriculture, including information on potentially useful innovations
- » evidence-based policy adopted as best practice, through policy briefs from research results being widely distributed within target countries to policy makers and politicians.

Scope

The scope of this program is potentially wide and includes:

- » evidence-based public awareness and policy, based on research findings
- » policy analysis, including foresight, biotechnology stewardship, and land and water rights issues
- » developing innovative ways to deliver high-quality technical advice and services to smallholders, including through the use of new information and communication technologies in Africa and other innovations in service delivery to reach millions of small-scale farmers (e.g. One Acre Fund, and the Plantwise Laboratory in the Field pioneered by CABI)
- » monitoring and evaluation, including learning lessons that inform future investments
- » *ex ante* and *ex post* impact analysis, to sustain the basis for increased investments in agricultural research and development by African and other governments
- » a knowledge bank on Australian expertise and experience on various aspects of food security, able to be drawn upon by African and international partners
- » publicly available and searchable website that hosts information, results, analysis, priority setting, lessons learned, networks and knowledge generated from AIFSC and other relevant programs that support food security.

PROGRAM 5 EDUCATION, TRAINING AND CAPACITY BUILDING

- » building individual and institutional capacity, from research development and management through to delivery and empowering farmers' organisations.

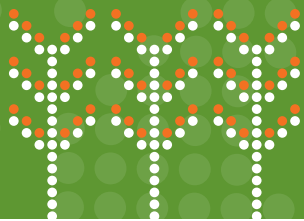
Outcome

Increased institutional and individual capacity in target countries, through:

- » a critical mass of female and male individuals trained to address the range of food security issues
- » stronger institutional capacity available to address food security in the long term
- » enduring (formal) partnerships established between African and Australian educational and research institutions.

Scope

The scope of this program includes a focus on building capacity in partner countries to accelerate research delivery and adoption of innovations, including through rapid upgrading of scientists and policy makers. The program would build capacity of both individuals and institutions in Africa, through a range of activities from PhD scholarships to in-country training. It will build formal linkages and two-way staff exchanges between Australian and African universities, thereby fostering scientist-to-scientist and institution-to-institution linkages, playing a modest yet important role in strengthening relationships, understanding and capability. This program will complement the broader education and training programs supported by AusAID, ACIAR and the Crawford Fund.



Operations and delivery

Mode of operation

The AIFSC has a Director and a small team of staff, appointed by ACIAR. The AIFSC Director reports to ACIAR's Chief Executive Officer (CEO). The AIFSC staff and operations are located at ACIAR's headquarters in Canberra, Australia. ACIAR provides administrative and financial management services in support of AIFSC operations.

In October 2012, the AIFSC opened a regional office in Nairobi, Kenya to act as an interface with African partners and to support the AIFSC's operations in Africa.

Operationally, AIFSC will adopt the ACIAR modes of:

- » consulting with partner country stakeholders—farmers, researchers, ministries, governments—to understand the challenges faced by smallholder farmers and to find out which solutions are most relevant and affordable
- » conducting research at the local and global levels and adapt approaches to diverse contexts
- » taking a comprehensive approach that includes social, technical, environmental, economic, and policy considerations
- » partnering with relevant organisations both globally and at a local level that understand the local context and realities and are best suited to address these problems
- » maintaining a strong impact orientation, ensuring relevance of science to 'making a difference' in poverty and food security

- » addressing gender gaps and inequalities by explicitly exploring, assessing and responding to the particular role of women as vital participants on small farms
- » embracing a coordinated Australian Government approach, with further coordination across the Australian innovation system to ensure efforts are maximised
- » adaptively managing partnerships, through rigorous monitoring and staff oversight of implementation, while allowing commissioned organisations considerable flexibility in consultation with ACIAR Research Program Managers.

In addition to using aspects of ACIAR's effective operational model, the AIFSC will also develop new ways of working. It will draw upon a wide range of expertise, including ACIAR's scientific staff (especially in relation to assessing research priorities, potential partners and research-related activities) and, more broadly, the scientific and development communities and the private sector in Africa, Australia and internationally to help develop and implement its program activities.

Traditional commissioned activities will occur in areas where African, Australian and international partners have clear comparative advantages, and particularly in the initial stages of AIFSC operations, in order to develop some early projects that are consistent with its overall long term strategy. A number of scoping and background studies were initiated in early 2012 to provide additional priority setting within the program areas and to identify future research areas.

A new modality, the creation of AIFSC competitive funds, will be explored to address priority areas within some program areas, especially where there is the need to bring together an array of multidisciplinary expertise and public- and private-sector parties to accelerate adoption. For example, this approach could be used to design research within Programs 3 and 4, as these areas will require multiple disciplines and a range of new public- and private-sector partners in Africa, Australia and internationally.

There are several models available for developing and efficiently managing a competitive fund that should be examined, in order to devise an appropriate model for the AIFSC. These examples include: the Africa Biosciences Challenge Fund (<http://hub.africabiosciences.org/about-abcf/>), the Canadian International Food Security Research Fund (http://www.idrc.ca/EN/Programs/Agriculture_and_the_Environment/Canadian_International_Food_Security_Research_Fund/Pages/default.aspx), the joint Grand Challenges Canada and the Bill and Melinda Gates Stars in Global Health (<http://www.grandchallenges.ca/>), and the Swedish-supported program Bio-Innovate Africa (<http://bioinnovate-africa.org/>). Challenge Funds are also likely to be attractive to other development agencies and may leverage additional investments in AIFSC programs.

Governance and advice

The AIFSC comes under the provisions of the *ACIAR Act* and the overall governance of ACIAR. It reports to the Minister of Foreign Affairs, through the CEO of ACIAR. Oversight is provided by the Commission on International Agricultural Research (the Commission), which also provides policy advice directly to the Minister.

The AIFSC will have a high-level International Advisory Committee (IAC), the overall role of which is to provide a mixture of strategic and programmatic advice to the management of AIFSC and the ACIAR CEO. The IAC will operate under the overall governance of ACIAR and oversight of the Commission and would also inform and advise the Commission when requested on matters pertaining to the AIFSC and its activities. The membership of the IAC will initially comprise six members by appointment and agreement with the Commission. Two appointments will be from Africa and a further qualified international appointee will provide breadth and external insight for the Committee. The other appointees will be qualified Australians with international agricultural research experience and skills. Nomination to the IAC will be based on individual high-level experience and expertise, rather than on a representational basis. Details of the terms of reference are attached as Annex 1.

Financial strategy

The financial strategy for the AIFSC includes leveraging the Australian Government's commitment of A\$33 million over four years into a longer-term investment in food security by African, Australian and other partners. Thus, the AIFSC structure and form will evolve over time as it begins to deliver impacts that are aligned to other donor and partner interests.

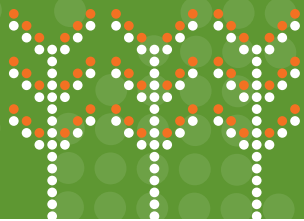
Opportunities for leveraging AIFSC investments include:

- » ACIAR, whereby AIFSC investments in food security complement those of ACIAR in agricultural research
 - » AusAID, especially in relation to education and training opportunities in Africa and Australia, including Australia Awards and food security programs
 - » other CHOGM members, especially with other Commonwealth donor countries
 - » international partners and investors, including private philanthropic foundations
 - » African governments, in target countries for AIFSC
- » development banks, such as the African Development Bank and the World Bank
 - » regional/sub-regional organisations, such as FARA and the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)
 - » private commercial sector and private not-for-profit sector agencies, including Australian NGOs active in food security and humanitarian programs Africa.

Priorities for further developing the financial strategy of the AIFSC are to develop a 10-year investment plan to ensure continuation and expansion of the AIFSC program beyond its four-year term (with Australian, African and international investments) and to identify future opportunities for public and private investments in AIFSC Programs, including by contributions to an AIFSC competitive fund.

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Annex A Terms of reference for AIFSC International Advisory

Committee (IAC)

The overall role of the IAC is to provide a mixture of strategic and programmatic advice to the management of AIFSC and the ACIAR CEO. The IAC will also inform and advise the Commission for Agricultural Research when requested on matters pertaining to the AIFSC and its activities. The functions of the IAC will include to:

- » advise on emerging research issues in Africa and the priorities of African partners at regional, sub-regional and national levels
- » assess and inform on AIFSC complementarities and scope to work with African regional organisations and research agencies as well as other country donor organisations and private sector contributors
- » assess and advise on AIFSC programs including current and future priorities
- » provide advice on the means of effective program management to achieve accelerated delivery and adoption of research results
- » provide recommendations (related to program-delivery mechanisms) on

priorities, capabilities, long-term and medium-term partnerships, commissioned research activities, challenge funds and wider cooperative-venture options

- » provide support to the AIFSC fundraising strategy, including advice on linkages to new co-investment partners
- » provide opinions and recommendations on any other matters considered necessary for achievement of the AIFSC mission and objectives.

The membership of the IAC will initially comprise six members by appointment and agreement with the ACIAR Commission. Two appointments will be from Africa and a further qualified international appointee will provide breadth and external insight for the Committee. The other appointees will be qualified Australians with international agricultural research experience and skills. Nomination to the IAC will be based on individual high-level experience and expertise, rather than on a representational basis.



Annex B Food security in an African context

Improved food security will come through working with people and institutions in the countries of Africa.

This section gives an overview of the Pan-African and sub-regional organisations within Africa that are concerned with agricultural and food issues and their contributions towards economic development. These organisations intersect with government agencies in individual countries, including the national agricultural research systems and universities, and increasingly with private-sector companies and community organisations to provide the enabling environment for a thriving food and agricultural sector across Sub-Saharan Africa.

Pan-African organisations

There are a number of Pan-African and regional and sub-regional organisations within Africa that provide fora to enable discussions on economic development issues across countries. In the agricultural sector, such fora also enable discussions amongst countries and development partners, to identify issues and enable setting of broad priority areas and principles for international engagement in research and development programs in Africa. They provide, to some extent, a 'political authorising environment' to guide partnerships with bilateral and multilateral development agencies, especially in relation to regional and sub-regional programs within Africa. The key Pan-African and regional/sub-regional entities in the agricultural sector in Africa with whom the AIFSC is likely to interact are described below.

African Union and the New Partnership for Africa's Development (AU/NEPAD) and its

Comprehensive Africa Agriculture Development Programme (CAADP) (www.nepad-caadp.net)

CAADP has set a target of African countries averaging 6% agricultural growth per annum over the next decade. Under the CAADP compacts being entered into by national governments, individual African governments agree to invest 10% of their national budget into developing their agricultural sector; this includes national support for agricultural research. The governments agree to independent peer review of their agricultural sector plans and investments. A national CAADP compact signed with AU/NEPAD is a prerequisite for some multilateral and bilateral investments (e.g. the global agricultural and food security program managed by the World Bank). So far, 39 countries have initiated CAADP processes and 29 out of 39 countries have signed CAADP compacts with AU/NEPAD.

CAADP has four pillars, through which it supports regional and sub-regional programs in Africa:

- » Pillar 1 Land and water management
- » Pillar 2 Market access
- » Pillar 3 Food supply and hunger
- » Pillar 4 Agricultural research.

Forum for Agricultural Research in Africa (FARA) (www.fara-africa.org)

FARA is responsible for implementing CAADP's Pillar 4 on agricultural research. FARA provides a forum for discussions amongst African countries, sub-regional organisations and potential partners, including the CGIAR. As an example, FARA has developed a Framework for African Agricultural Productivity (FAAP): An Integrated Approach to Research to Lead to Impact on Ground. This framework is consistent with the Paris Declaration on Aid Effectiveness. It advocates measures such as improving donor harmonisation, moving from project to programmatic support, and common processes for strategic dialogue with countries.

FARA-ACIAR consultations in relation to the AIFSC

An initial Africa-Australia consultation on the new AIFSC was convened by FARA and ACIAR in February 2012, in relation to the establishment of the AIFSC. It was attended by representatives of a number of other regional and sub-regional bodies active in agricultural research and development, and education and training. The purposes of the initial consultation were for ACIAR to introduce the AIFSC concept to FARA and its partners, and for the consultation to identify some current issues and broad themes to guide the further development of the AIFSC strategy, programs and operations. FARA has prepared a full report on the consultation, which is available on the AIFSC website (www.aciar.gov.au/aifsc). Some salient points are summarised below.

FARA themes:

- » *Farming systems*: Diversifying and enriching farming systems, including crop diversification, incorporation of orphan crops, integrated crop and livestock systems, aquaculture and food quality/nutrition for health
- » *Bridging research and extension*: fostering scaling-out mechanisms, empowering farming communities, knowledge management (of policies, technologies, etc)
- » *Strengthening policy and socio-economic research*: including value chains, postharvest, value addition, food safety, financing, foresight, biotechnology stewardship, land rights, gender, monitoring and impact assessment, and fostering uptake of the foregoing research
- » *Building individual and institutional capacity*: including research institution building, research management, strengthening trade negotiation, emerging issues and farmers organisations.

These broad themes have been taken into account by the AIFSC in developing the AIFSC priorities and program, as well as more broadly by ACIAR in developing potential future research collaborations in these areas. The FARA-ACIAR consultation also identified a number of important areas where there are gaps and underinvestments, and these are also being taken into account when determining priority areas for AIFSC investments. The resulting AIFSC Strategy was presented to FARA in July 2012 where it was enthusiastically received.

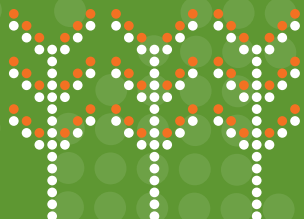
Regional/sub-regional organisations for agricultural research and development

In addition to FARA's operations at a continental level, there are also a number of sub-regional agricultural research and development organisations, who identify regional and national priorities amongst a subset of countries, and who support regional research and development programs to address these priorities and develop common solutions applicable across countries. The sub-regional organisations that focus on agricultural research and development are: the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Conference of African and French leaders of agricultural research institutes (CORAF) and West and Central African Council for Agricultural Research and Development (WECARD), and the Centre for Agricultural Research and Development for Southern Africa (CARDESA).

For example, ASARECA undertook a study with IFPRI on *Strategic Priorities for Agricultural Development in Eastern and Central Africa* (IFPRI 2006). The concept of global information system (GIS)-based agricultural development domain has been used successfully to map local variations in needs and opportunities for research and development, through this ASARECA-IFPRI regional study. See www.asareca.org for more information.

The ASARECA-IFPRI study sets out specific priorities and recommendations for actions by governments to stimulate agricultural sector growth, including identifying areas where the largest poverty reductions are likely to come from growth in sub-sectors where demand is greatest within east and central Africa (ECA). According to the study, regional priorities in ECA are staples (cereals, banana and root crops), livestock products, fruits and vegetables and oilseeds. Milk is the single most important commodity sub-sector for growth-inducing investments in agriculture to stimulate GDP growth in ECA. The study notes that regional and national priorities coincide for some countries (Kenya, Tanzania and Uganda), but not for others (e.g. Ethiopia, Sudan, Rwanda). There are also significant variations in poverty levels and food insecurity within countries, which need to be taken into account in developing targeted strategies to reduce poverty and improve food security in each country.

Similar regional and sub-regional priority setting processes have been undertaken by CORAF/WECARD (see <http://www.coraf.org>) for west Africa, and by CARDESA, which is in the process of being established to serve the countries of southern Africa.



Annex C Current Australian food security initiatives in Africa

The Commonwealth's Perth Principles for Food Security (Commonwealth Secretariat 2011) noted that Australia is one of the few countries that met the commitments it made at various international food security initiatives/summits since the 2007–2008 world food price crisis. Specifically, Australia has committed approximately A\$500 million in new funds to food security and rural development since 2009. This includes a food security initiative of A\$464 million over four years committed in the 2009/10 budget, of which A\$100 million is designated for Africa. Over half of these latter funds (A\$50 million) have been invested in agricultural research and capacity building in Africa, through the Africa Australia Food Security Initiative, with the remaining funds under this initiative directed to building community food security resilience.

The Africa Australia Food Security Initiative is improving agricultural productivity, improving market access and providing safety nets for vulnerable communities. The agricultural productivity component of the current Initiative (2009–2013) includes AusAID support for four major research and development partnerships amongst Africa, Australian and international partners:

- » *Sustainable intensification of maize legume systems in eastern and southern Africa* (SIMLESA), led by ACIAR and the International Maize and Wheat Improvement Center (CIMMYT) (A\$22.4 million, financed by AusAID and ACIAR, see <http://simlesa.cimmyt.org/> for more information)
- » Biosciences eastern and central Africa (BecA)/Commonwealth Scientific and Industrial Research Organisation (CSIRO) partnership (A\$15 million, financed by AusAID and CSIRO, see <http://hub.africabiosciences.org> for more information)
- » CORAF/WECARD CSIRO partnership in west Africa (A\$15 million, financed by AusAID and CSIRO, see <http://csiro.coraf.org/en/index.php> for more information)
- » *Research into Business Program*, with a A\$10 million grant by AusAID to the Alliance for a Green Revolution in Africa (AGRA) for the Africa Enterprise Challenge Fund, to stimulate the development of local small and medium agricultural enterprises (e.g. in areas such as seed delivery, see <http://www.aecfafrica.org/> for more information).

These recent re-engagements and expansion of Australian aid in Africa build upon previous engagements of Australian institutions and Australians in Africa since at least the early 1970s. There have been a number of other agricultural research and rural development projects supported by the Australian government aid agencies, including ACIAR, which have had an emphasis on agricultural research, rural development and/or food security. These include some projects dealing with food security (and insecurity) implemented through Australian non-government organisations (NGOs).

The Australian government has also supported the work of the CGIAR and the international agricultural research centres in Africa since the formation of the CGIAR in the early 1970s. Sir John Crawford, as the first Chair of the CGIAR Technical Advisory Committee, oversaw the expansion of the CGIAR's work in Africa as well as the formation of the first CGIAR centres located in Africa—the International Institute of Tropical Agriculture, International Lactation Consultant Association and International Laboratory for Research on Animal Diseases.

These previous projects and programs in Africa provide people, partnerships, relationships of trust and results upon which the AIFSC can draw as it develops its new strategy, priorities, programs and operations in Africa. In addition, an impact assessment of previous ACIAR-supported research projects in Africa was commissioned, to further inform the development of the AIFSC program.

