

MAJOR FEATURES

The 2011–12 ACIAR AOP will maintain and enhance the momentum of bilateral and multilateral agricultural research for development to underpin the Australian Government's ongoing food security policy priorities. These priorities are:

- lifting agricultural productivity
- improving rural livelihoods
- building community resilience.

Three-quarters of the world's poor live in rural areas and rely directly or indirectly on agriculture (including fisheries and forestry) for income and employment as farmers. World Bank estimates indicate that agricultural growth is especially effective in reducing poverty. Cross-country estimates show that overall gross domestic product (GDP) growth originating in agriculture is, on average, twice as effective in benefiting the poor as growth generated in non-agricultural sectors.

Research focused on agricultural productivity as the basis for growth will therefore remain the overarching driver for ACIAR projects and programs in 2011–12. Key components will include research to address: scientific and policy-related aspects of food production and nutrition; supply chain and market linkages for smallholders; water supply and use; climate change and risk; pest and disease management; agricultural diversification to meet production and dietary needs; and enhanced training and capacity building for partner institutions.

Program themes 2011–12

ACIAR's appropriation in the Federal Budget is scheduled to increase from \$64 million in 2009–10 to \$91 million in 2012–13. This growth in funding enables ACIAR to substantiate its new research-for-development directions, which commenced in 2010–11. The Centre's key new 'research for food security initiatives' address:

- safeguarding food security in rice-based farming systems of the Mekong–South Asia region
- adaptation to climate change for rice-based systems in the Mekong Delta
- sustainable intensification of maize–legume cropping systems in eastern and southern Africa
- developing high-value agriculture, forestry and fishery products in the Pacific region.

ACIAR will build onto Australia's globally recognised agricultural research and capacity-building partnerships in the Asia–Pacific region and Africa in 2011–12 by targeting three interactive research themes:

1. agricultural productivity growth in smallholder systems
2. developing market integration for improving smallholder livelihoods
3. human and institutional capacity building for developing-country national research institutions to enhance sustainable follow-up research and adoption capabilities.

The Centre will work more closely with emerging economies such as China and India to achieve scientific collaboration covering both bilateral and regional priorities, including common soil, water and climate-change challenges.

ACIAR will actively participate in the ongoing reform initiatives of the CGIAR centres and will increase funding levels in 2011–12. This is in accordance with the government's Food Security Statement of May 2009 and will enable wider involvement by Australia in multilateral research ventures.

Agricultural productivity for sustainable development

For the year ahead the above three interactive research themes will be addressed as follows:

1. Research investment into removing major impediments to agricultural productivity growth and the adoption of innovations

ACIAR has considerable experience in delivering productivity-improving research investments. In 2011–12 the emphasis will be to move beyond the traditional on-farm focus on individual biophysical issues, which are largely project based, to an integrated systems approach looking at the whole market chain from production to consumer. This will require an understanding of the systems within which the smallholder operates, including production, marketing and socioeconomic constraints. Accordingly, the research agenda will entail a combination of various disciplines and wider partnerships with whole-of-value-chain considerations. ACIAR will continue its research into these priorities, with research projects to be increasingly implemented as part of a more holistic program approach.

2. Developing high-value agriculture, forestry and fishery products through research to underpin sustainable market integration

Systems analysis shows that the issues affecting food- and agricultural-sector development in many countries include isolation from key growth markets and limited coordination of supply chains. This has been further complicated by the ongoing modernisation of the food retail and service sectors, requiring supply reliability, quality consistency and higher food safety standards. Urbanisation and higher incomes in many developing countries is putting pressure on traditional marketing systems.

An adequate and stable supply of agricultural commodities is the keystone of food and nutritional security and economic development for many countries. Sustained market integration has the potential to enable communities to improve rural incomes, but these benefits can be compromised by inadequacies in infrastructure or governance, difficulties for smallholders in managing product quality through the supply chain, or inability to produce competitive products. In this environment, rural communities and governments will need to become more market oriented.

The growing presence of internationally supported economic development programs that address these issues in relevant regions will be complemented by selected ACIAR-managed research to underpin the competitiveness of targeted high-value agricultural (including horticultural), fisheries and forestry products to improve market linkages and farm incomes.

3. Addressing the increasingly urgent need for institutional strengthening of national agricultural research organisations with both formal and collaborative capacity-building initiatives

Meeting rapidly changing market demands and environmental challenges, and improving the efficiency and effectiveness of research and development (R&D) requires collective action and suitable partnerships to adequately secure innovation. Many public research organisations in partner countries face serious institutional constraints that inhibit their effectiveness and consequent ability to attract funds. Linking technological progress with institutional innovation and capacity is essential to sustained productivity growth and market-driven improvement in rural livelihoods.

In conjunction with (1) and (2), the objective will be to expand the scope and benefits of research capacity building for individuals and national agricultural research agencies. This will involve providing for a greater range and diversity of training options at the individual level, supplemented by research design, management and delivery capabilities at the institutional level. This approach will also seek more resilient institutional partnerships and working relations with ACIAR and Australian research agencies, to strengthen R&D institutions and capabilities in many of our developing-country partners.

Multilateral ventures

In the 2009–10 Budget the Australian Government announced that it would double its financial support through ACIAR to the CGIAR over the next 4 years, with additional funding as follows: 2009–10: \$7 million; 2010–11: \$10 million; 2011–12: \$13 million; 2012–13: \$14 million. These new funds are additional to the former funding levels of around \$11 million per annum. Subject to satisfactory progress with the reforms, it was specified that Australia's increased support to a reformed CGIAR will be provided as unrestricted (or core) funds through the new multi-donor trust fund managed by the World Bank.

The multi-donor trust fund will receive contributions through three Windows: Window 1—funding provided to the CGIAR without any earmarks; Window 2—funding earmarked for specific research areas (mega programs); Window 3—funding earmarked for specific International Agricultural Research Centres (IARCs). Windows 1 and 2 have become operational following the recent approval of the new Strategy and Results Framework (SRF) in April 2011, and signing of relevant agreements.

In 2011–12 it is intended that ACIAR's new funding will be allocated to the CGIAR system primarily on an unrestricted basis through the relevant Windows. However, the details of these allocations are contingent on finalisation of the reform agenda and new program structures. The funding approach for 2011–12 and beyond will be taken up in consultation with the new Fund Council as the reforms become operational. In the meantime ACIAR will allocate both restricted and increased unrestricted funds to the individual research centres through the available payment Windows. This recognises the need to ensure that the centres are provided with the means and certainty of continuing their essential research functions with minimal disruption during the transitional reform-implementation phase. ACIAR will consult with AusAID in contributing to the ongoing reform agenda in 2011–12, and will continue to represent Pacific donors on the new Fund Council.

PROGRAM PRIORITIES FOR KEY PARTNER COUNTRIES IN 2011–12

Papua New Guinea

- Aquaculture planning systems for management agencies and improving fish husbandry techniques for primarily small-scale fish farmers
- Practical environmental sustainability indicators for soil and water resources in the oil palm industry
- Improving the livelihoods of Papua New Guinea (PNG) women in agriculture by developing their business acumen
- New farmer-driven extension models involving partnerships between the public and commercial sectors in the coffee industry
- Production and processing of plantation timbers and timbers grown in agroforestry systems

Pacific island countries

- Identification, development and adoption of new, market-driven opportunities for improving the quality, accessibility, diversity and quantity of food and other agricultural crops
- Improving soil health in support of sustainable development in the Pacific region
- Biocontrol of invasive weeds
- Agroforestry and new forest product development
- Fisheries governance
- Seeking value-adding opportunities in high-value niche products, including dealing with quarantine-related issues
- Cocoa improvement (Vanuatu)
- Papaya improvement (Fiji)

Indonesia

- Policy options and planning to guide expansion, intensification and/or diversification of aquaculture
- Improved assessment and management frameworks developed for shared (between Australia and Indonesia) and common-interest fisheries
- Development of policy and governance options and methodologies for implementing payments for environmental services, including climate-change mitigation. Detection and management of risks of disease transfer with movement of livestock

- Restoration of tsunami-affected soils, farming systems and seed-supply systems to improve field crop and vegetable production in Aceh
- Enhanced productivity and profitability of cattle and pigs through improved management practices, feeding, marketing and policy environments

East Timor

- Introduction, management and evaluation of improved crop varieties
- Development of a viable aquaculture policy in conjunction with the National Directorate of Fisheries and Aquaculture
- Enhancing cattle productivity

Philippines

- Improving on-farm productivity and enhancing supply chains for a range of fruit and vegetable products in the southern Philippines
- Improving alliances between suppliers, processors, institutional buyers and marketers
- Postharvest handling, quality, and sanitary and phytosanitary standards for focal tropical fruits and vegetables
- Mariculture-based strategies to provide livelihoods and enhance locally managed fisheries
- Developing comprehensive methods for characterisation of watersheds to assess watershed vulnerability and the requirements for developing more-productive and sustainable farming systems in watersheds
- Addressing policy and technical constraints to improving returns from low-input pig production systems

Vietnam

- Smallholder engagement in competitive value chains associated with maize, temperate fruits and temperate vegetables from the north-western highlands
- Beef and timber productivity enhancement in the north-western highlands
- Options for technology, policy and forms of market institutions, and coordination to help Vietnamese pig producers gain better access to higher value market chains
- Acacia and eucalypt timber processing and silviculture management
- Resource management practices for sustainable and profitable crop and livestock production systems best suited to conditions in the south-central coast region

- Enhancing the adaptive capacity of rice production systems in the Mekong Delta region affected by climate change

Cambodia

- Increasing and securing the productivity of rice-based farming systems in relation to irrigation, new varieties, agronomy, extension and broader policy issues
- Agricultural diversification, particularly into field and horticultural crops and ruminant livestock
- Integrated crop production and postharvest management packages in selected vegetable crops (tomato, chilli, sweet pepper and leafy vegetables)
- The vulnerability of Cambodian agriculture, particularly rainfed cropping, to climate variability and change—a new program of research to assist adaptation to climate change at the farm scale, developing capacity for more-efficient use of soil and water resources
- Exploring options to plant an additional crop following the rice harvest
- Developing plant biosecurity research and technical capabilities
- Fostering interactions with the Cambodia Agricultural Value Chain (CAVAC) program

Lao PDR

- Market-driven alternatives to shifting cultivation in upland regions
- Improving livestock productivity, especially cattle and pig husbandry, disease control and marketing
- Productivity of rice-based lowland systems in southern Laos, particularly extension, marketing and policy
- Adaptability of rice-based systems to climate change
- Silvicultural management of teak and paper mulberry plantations
- Systems for facilitating payments for environmental services in Laos

China

- Market incentives of payments to individual herders for improved grassland management
- Integrated forage–crop–fodder systems in Tibet Autonomous Region
- Analysis of Australian and Chinese land-use policy instruments

Iraq

- Adoption of improved crop germplasm in a system marked by rapid uptake of zero-tillage by Iraqi farmers
- Assessing the distribution of salt in land and water at a range of scales, and developing methods for salinity control

Afghanistan

- Increasing water-use efficiency and building the long-term sustainability of agricultural systems
- Multiplication and distribution of selected crop cultivars
- Scientific capacity enhancement

India

- Water harvesting and management
- Applying advanced crop-breeding techniques to the improvement of grain crops, especially wheat, and seeking commonalities with Australian wheat productivity enhancement
- Implications of agricultural policy change for greenhouse gas emissions

Pakistan

- Social research to foster effective collaboration and strengthen pro-poor value chains
- Development of rural policy advice, legislation and codes of practice at the national level
- Mango and citrus production and marketing
- Improved animal nutrition for dairy farmers

Bangladesh

- Maintaining the productivity of rice in the light of vulnerability to climate change
- Assisting the development of the emerging rice–maize farming system

Africa

- Intensification and diversification of mixed smallholder maize–legume farming systems
- Increasing the profitability and sustainability of livestock farming systems
- Cereal production systems in water-limiting environments

Overview of planned revenue and expenditure

	2009–10	2010–11	2011–12
	Actual \$m	Budget allocation \$m	Budget estimate (including NPPs) ^e \$m
REVENUE			
Appropriation	63.79	70.89	85.30
AusAID and other external funds	15.94	34.73	22.89
Other revenue	0.06	0.07	0.07
Total	79.79	105.69	108.27
EXPENDITURE			
Research program ^a	51.65	59.27	71.68
Multilateral program ^b	10.60	29.00	19.03
Education and training ^c	7.07	6.75	6.80
Communicating research results	0.60	0.75	0.76
Total administered costs	69.92	95.77	98.27
Total departmental costs^d	9.07	9.93	9.99
Total	78.99	105.70	108.27

^a Bilateral and multilateral projects, program support and impact assessment

^b Untied funding to international centres

^c Not including training within projects

^d Includes salaries, Executive, Commission, Policy Advisory Council and corporate support

^e NPP = new policy proposal

Bilateral and multilateral projects by region and country

Region and country	2011–12 budget estimate (source)			
	ACIAR base appropriation \$m	Food security and Africa initiatives ^a \$m	AusAID and other external funding \$m	Regional share of project total %
PNG AND PACIFIC ISLAND COUNTRIES	5.82	2.99	1.77	15.4
Papua New Guinea	2.35	0.14	1.77	
Pacific island countries				
Fiji	1.60	0.70		
Vanuatu	0.47	0.38		
Solomon Islands	1.00	0.53		
Samoa	0.20	0.61		
Tonga	0.15	0.38		
Kiribati	0.05	0.25		
INDONESIA, EAST TIMOR, PHILIPPINES	11.00		5.58	24.0
Indonesia	7.00		1.11	
Philippines	3.10			
East Timor	0.90		4.47	
MEKONG COUNTRIES & CHINA	11.25	3.59	1.86	24.2
Vietnam	4.50	0.22		
Lao PDR	3.15	1.81		
Cambodia	1.80	1.56	1.69	
China	1.40		0.17	
Thailand	0.20			
Burma	0.20			
SOUTH & WEST ASIA	5.42	1.11	6.89	19.5
India	4.25	0.27	0.08	
Bangladesh	0.53	0.84	0.08	
Pakistan	0.21		3.47	
Bhutan	0.10		0.08	
Afghanistan			1.25	
Iraq			1.82	
Nepal	0.33		0.08	
Other South & West Asian countries			0.03	
AFRICA	1.09	6.80	3.80	16.9
Ethiopia		1.29	0.83	
Algeria			0.19	
Botswana	0.10		0.40	
Egypt			0.12	
Kenya	0.15	0.95	0.08	
Malawi		0.82	0.03	
Morocco			0.22	
Mozambique		0.82	0.06	
Nigeria			0.05	
Republic of South Africa	0.29	0.27	0.01	
Rwanda	0.10			
Tanzania	0.25	0.95	0.03	
Tunisia			0.22	
Uganda	0.10			
Zambia	0.10			
Zimbabwe			0.14	
Other African countries		1.70	1.44	
Total	34.58	14.49	22.89	100.0

^a Food security and Africa initiatives form part of a 2009 budget measure and are appropriated to ACIAR.

AusAID funding to ACIAR

	2009–10	2010–11	2011–12
	Actual \$m	Budget allocation \$m	Budget estimate \$m
Papua New Guinea	2.35	2.32	1.77
Cambodia	1.00	2.14	1.69
China	0.00	0.00	0.17
Indonesia	4.19	1.81	1.11
East Timor	1.99	4.25	4.47
Africa	0.10	2.00	3.40
Botswana (separate Record of Understanding)	0.00	0.15	0.40
Pakistan	1.02	2.19	3.39
Iraq	1.48	1.45	1.82
Afghanistan	0.34	0.00	1.25
South Asian Association for Regional Cooperation (SAARC)	0.00	0.03	0.43
International Rice Research Institute (IRRI)	0.00	15.40	0.00
Postgraduate scholarships	3.45	3.00	3.00
Total	15.92	34.74	22.89

Capacity building, training and staffing

	2007–08 (actual)	2008–09 (actual)	2009–10 (actual)	2010–11 (estimate)	2011–12 (estimate)
CAPACITY BUILDING					
Non-project-specific training courses	11	9	8	0	0
TRAINING					
John Allwright Fellows: total active in year	141	149	146	133	150
Fellowships awarded in year	60	16	19	20	42
John Dillon Fellows: total active and awarded in year	10	9	9	10	11
STAFF AT 30 JUNE 2011					
Staff: Public Service Act (FTE)	40.6	44.8	46.3	47.0	47
Overseas officers: locally engaged (FTE)	20.5	19.5	16.0	18.5	18

Note: FTE = full-time equivalent