



Australian Government

Australian Centre for
International Agricultural Research

ACIAR

ANNUAL REPORT 2014–15

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LETTER OF TRANSMITTAL FROM CHIEF EXECUTIVE OFFICER



Australian Government
**Australian Centre for
International Agricultural Research**

The Hon. Julie Bishop MP
Minister for Foreign Affairs

October 2015

Dear Minister

ACIAR Annual Report 2014–15

It is my pleasure as the Chief Executive Officer to present to you the Annual Report of the Australian Centre for International Agricultural Research for the year ended 30 June 2015.

The Report has been prepared in accordance with section 39 of our enabling legislation—*Australian Centre for International Agricultural Research Act 1982*, as amended.

Consistent with section 42 of the *Public Governance, Performance and Accountability Act 2013 (PGPA Act)*, I have taken steps to ensure the annual financial statements have been prepared in accordance with relevant accounting standards and other requirements prescribed by the *PGPA Rule 2014*. The Report includes the Centre's audited financial statements, certified by the Australian National Audit Office, as required by section 43 of the *PGPA Act*.

Annual performance is reported in compliance with section 39 of the PGPA Act.

In presenting the Annual Report, I acknowledge the important contribution to international agricultural research made by ACIAR staff and commissioned research organisations, to help achieve more productive and sustainable agricultural systems for the benefit of developing countries and Australia.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Nick Austin'.

Dr Nick Austin
Chief Executive Officer



ACIAR

Research that works for developing
countries and Australia

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OVERVIEW

About ACIAR

The Australian Centre for International Agricultural Research (ACIAR) forms part of the Australian Government's overseas aid program, which promotes Australia's national interests by contributing to sustainable economic growth and poverty reduction.

As Australia's specialist agricultural research-for-development agency, ACIAR actively contributes to the overall aid objectives by improving the productivity and profitability of agricultural systems in countries of the Indo-Pacific region. ACIAR's mission is to achieve more-productive and sustainable agricultural systems, for the benefit of developing countries and Australia, through international agricultural research partnerships.

ACIAR manages research partnerships in the areas of crops, livestock and fisheries, natural resources and forestry, and socioeconomics and policy. The Centre undertakes joint research programs and projects designed specifically to generate new technologies and systems, new knowledge leading to innovation at the farm level, greater capabilities in research and production, and better informed and researched agricultural policy considerations in partner countries. The ultimate beneficiaries are the farmers and consumers in developing countries and Australia.

ACIAR contributes directly to economic diplomacy and aid for trade by working to enhance agricultural competitiveness and sustainability, increasing market access and value-chain efficiencies and effectiveness, and helping to address regulatory impediments in relation to both domestic and international food markets.

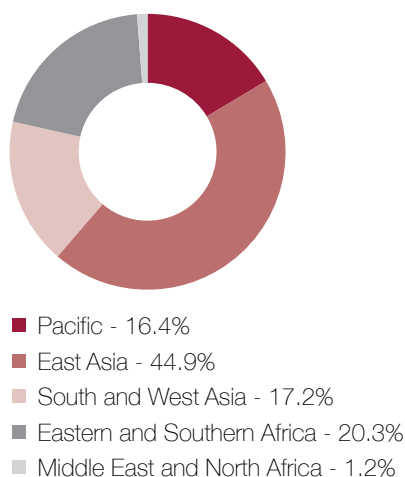
ACIAR delivers sustainable productivity gains to improve incomes, food security, employment and enterprise opportunities for smallholders, and builds institutional and human capacity in agricultural science in developing countries. Through these outcomes ACIAR contributes across the major objectives of the aid program.

ACIAR works collaboratively with the Department of Foreign Affairs and Trade (DFAT) in areas of mutual priority, with both organisations contributing to the whole-of-government emphases of the aid program.

Expenditure

The proportion of research expenditure by region in 2014–15 is shown in the chart. An overview of ACIAR's administered expenditure over the last 3 years follows in the table overleaf.

Research expenditure by region 2014–15



ACIAR administered expenditure

	2014–15	2014–15	2013–14	2012–13
	AOP budget (\$)	actual (\$)	actual (\$)	actual (\$)
Research projects by region and country				
Pacific	12,590,607	12,501,570	12,736,112	11,461,412
Papua New Guinea	5,947,150	5,836,097	4,505,349	4,330,954
Pacific island countries	6,643,457	6,665,473	8,230,763	7,130,458
East Asia	38,025,545	34,134,678	32,494,665	31,908,063
Burma	3,771,500	3,260,963	2,337,079	1,535,120
Cambodia	2,805,813	2,853,073	3,652,206	3,457,557
China	864,921	1,111,194	426,411	587,111
Indonesia	10,328,500	6,764,013	6,740,024	7,623,315
Lao PDR	6,082,015	5,437,978	5,005,075	5,241,682
Philippines	4,889,150	4,824,295	3,758,332	2,403,955
Thailand	254,358	281,134	219,821	174,291
Timor-Leste	4,539,000	4,608,377	5,492,194	5,888,024
Vietnam	4,490,289	4,993,650	4,863,523	4,997,008
South and West Asia	13,192,410	13,089,668	11,201,571	12,110,487
Afghanistan	3,695,488	3,438,078	2,102,034	3,417,424
Bangladesh	1,830,000	1,838,091	1,488,762	1,662,453
Bhutan	250,448	320,448	291,392	252,442
India	4,050,000	3,947,156	3,276,595	3,671,720
Nepal	1,443,750	1,414,084	904,195	301,584
Pakistan	1,922,724	2,131,812	3,138,593	2,803,170
Other South and West Asia	0	0	0	1,694
Eastern and Southern Africa	15,180,000	15,418,737	12,141,132	16,094,893
Middle East and North Africa	1,202,008	933,144	4,088,963	5,791,124
Research projects	80,190,569	76,423,657	72,662,443	77,365,979
Global program	18,920,000	19,809,849	21,913,147	23,082,274
Building research capacity	6,970,000	8,230,971	7,278,600	7,345,093
Communicating research results	760,000	614,898	773,745	822,195
Measuring research impacts	600,000	502,870	341,145	758,525
Research program support	3,627,631	4,416,120	4,273,365	3,519,736
TOTAL	111,068,200	109,998,365	107,242,444	112,893,802

CHIEF EXECUTIVE OFFICER'S AND COMMISSION CHAIR'S REVIEW

CHIEF EXECUTIVE OFFICER'S AND COMMISSION CHAIR'S REVIEW

For ACIAR, 2014–15 was a year of considerable achievement, and evolution. ACIAR responded nimbly and energetically to the Government's new approach to overseas development assistance, focussing on innovative ways to drive economic growth and create pathways out of poverty.

ACIAR further emphasised sustainable economic growth which, in the agriculture sector, has been consistently shown to be at least twice as effective at reducing poverty and improving livelihoods—particularly women's—as growth in other sectors of the economy.

ACIAR now meets or exceeds the performance benchmarks in the Government's performance framework and, during the year, has made impressive progress towards the key actions in the agency's five year Strategic Plan. This has included developing a position paper on private sector engagement (guided by ACIAR's Policy Advisory Council and Commission), and actively engaging in the reform and mid-term review of the CGIAR.

ACIAR made a significant contribution to formulating the aid program's new *Strategy for Australia's aid investments in agriculture, fisheries and water*¹, reflecting the priority ascribed to this sector in the Government's aid policy. Under this strategy, DFAT and ACIAR have pursued collaborative opportunities – with public and private

sector partners and through regional and global fora – to trial innovative approaches, utilise Australian expertise, and pursue our interests in the agriculture, fisheries and water sector.

Where we work

ACIAR's primary focus has remained in the **Indo-Pacific** region, consistent with the Australian aid program emphases. ACIAR phased out its programs in the Middle East and North Africa, and instead increased funding to the Pacific region, particularly **PNG**, to sustain an important partnership into the medium term. During the year, ACIAR developed a major new program, with DFAT funding, in PNG. The Transformative Agricultural and Enterprise Development (**TADEP**) program takes successful ACIAR research to scale. In **Fiji**, ACIAR has broadened collaboration aimed at sustainable economic development. And, we have continued to strengthen our important collaboration in **Burma**, and look to sustain this momentum into the future.

What we deliver

ACIAR has, through our partnerships in agricultural research for development, generated a range of new technologies, new knowledge, greater capability and better decision-making. Selected achievements in 2014–15 are outlined below, against performance benchmarks in the Australian aid program.

1 www.dfat.gov.au/about-us/publications/Pages/strategy-for-australias-aid-investments-in-agriculture-fisheries-and-water.aspx

Promoting prosperity

ACIAR studies over the past decade have shown that the canarium nut (known as galip in PNG) has commercial potential in **PNG** and in other **Pacific island countries**. Staff at PNG's National Agricultural Research Institute (NARI) have been involved in planning for kernel drying, storage and roasting experiments. Interest among farmers in East New Britain has increased with large plantings of canarium seedlings supplied by NARI. Approximately 200,000 trees have been produced in the NARI nursery and distributed to smallholders and cocoa plantations over the past four years.

An evaluation of crop–cattle integration options in north-western **Cambodia** aims to preserve crop residues, minimise soil disturbance and encourage diversification. The project is seeing results where small-scale farmers with brush-cutters, knapsack sprayers and hand-planting are adopting no-tillage farming because it is quicker, easier and cheaper than cultivation.

In **Tibet Autonomous Region** dairy cattle nutrition has improved through better preparation of fodder, provision of adequate water and the addition of mineral concentrates. Another gain involved shifting to high-butterfat Jersey cattle and away from less suitable Holstein and Simmental breeds in the higher altitudes. Overall success can be gauged in higher milk production, more calves raised and fewer losses of cows as a result of poor nutrition.

Indonesian smallholders have trialled and launched innovations to the egg and poultry production system that minimise food safety risks throughout the supply chain. The project culminated in the creation of the now popular 'Healthy Farm' brand of chilled chickens and fresh eggs for Indonesian supermarkets and provided a test of what it takes to develop a clean supply chain in the country's complex poultry sector.

The project on wood processing in Jepara **Indonesia** has helped the timber industry sector by increasing the utilisation of timber from young plantations in the production of furniture for domestic and export markets.

A 5 year project to support the significant improvement of acacia planting stock has just concluded in **Vietnam**. The staged evaluation of over 5000 hybrid seedlings and 550 promising clones of broad genetic base has positioned the Vietnamese Academy of Forest Science to deliver large economic benefits to Vietnamese growers through the deployment of a new generation of fully tested hybrid clones.

Australian sponsored research in **Afghanistan** has led to the release of seven improved wheat varieties. The wheat lines released included irrigated varieties with the potential to produce over 6 tonnes/ha, and rainfed varieties with the potential to produce 3.8 tonnes/ha. These yields are about 10 per cent better than any current variety and are more than double the current average yields of 2–3 tonnes/ha for irrigated wheat and 1–1.5 tonnes/ha for non-irrigated wheat.

In **Pakistan**, ACIAR-supported research is seeking new options for successfully growing summer vegetables. The team is identifying and characterising varieties of tomato, cucumber and okra that are tolerant to heat stress.

The Eastern Cape agricultural lands in **South Africa** are predominantly grazing lands, but in recent times much land has been used for maize production. Repeated deep tillage has led to erosion and a loss of soil structure, and ultimately abandonment of cropping. ACIAR research is helping to stabilise the vegetation cover on these lands and bring them back into permanent grazing. The project has also sought to increase the value of the forage during this recovery period, with the introduction of suitable legumes.

Engaging the private sector

ACIAR's first commercial project partnership was with chocolate manufacturer **Mars Inc.**, a family-run business, long dedicated to giving smallholders more control over the long-term sustainability of their produce. Mars Inc. helps by transferring skills and knowledge, and increasing the availability of high-quality materials. The Mars Inc.–ACIAR partnership has starkly demonstrated the immense benefits of collaborating with the private sector on projects to sustainably promote economic growth in smallholder farming communities. The ACIAR project had identified a small suite of pest and disease-resistant clones of cocoa. On its own, this might have amounted to interesting science that is devoid of practical impact. Instead, Mars Inc. saw commercial opportunity in these clones.

Seeds of Life 3 (SoL3) has helped 57 farmer groups (comprising an aggregate of more than 1500 members) to become **commercial seed producers**. The producers sell half of their seed harvest to the Timor-Leste Government and NGOs for distribution to other farming households, while traders and agricultural shops also buy seed for resale in kiosks across the country. These farmer groups are now businesses that are bringing country-wide benefits including access to improved varieties, and giving farmers more choice of varieties proven to suit the climate and soils in Timor-Leste.

Recent success for Australia's peanut farmers owes a great deal to the participation of **Australian peanut breeders** in ACIAR projects. They introduced biological traits into Australian peanuts that now provide the competitive advantage for food manufacturers as they are high in oleic acid content (such that the peanut oil resembles the profile of olive oil) and have large kernels, which stay fresher longer. The resulting market success of the Australian varieties has encouraged private-sector investment in the Australian peanut-breeding program.

ACIAR has supported the SIMLESA project in Africa, and together with the DTMA projects supported by the Bill and Melinda Gates Foundation they are driving **private and public seed company** collaboration to help smallholder farmers of Eastern and Southern Africa access new maize and legume varieties.

Reducing poverty

In **Solomon Islands**, individuals and communities have grown high-value timber plantings (predominantly teak) over the past 15–20 years. However many growers have been reluctant to thin out their plantings, meaning that they have become overstocked and reduced growth to a minimum, with resulting poor market potential. A project has established a planting system for high-value timbers such as teak that encourages thinning and also leads to better management of the land.

In **Burma's** central dry zone farmers have received higher yielding legume varieties and nitrogen-fixing bacterial inoculants to lift crop productivity. The scientists have also helped establish the country's first village-based seedbanks, a source of improved varieties of chickpea, peanut and pigeon pea that yield up to 35 per cent more than traditional varieties. The new varieties are being eagerly adopted by farmers.

A project to introduce simple mechanised tools for rice planting has enabled farmers to test successfully a dry direct seeder in Savannakhet Province, **Lao PDR** and a drum seeder in Svay Rieng and Prey Veng Provinces in **Cambodia**. These on-farm demonstrations have enabled risk-averse farming communities to explore, with support from research and extension communities, the potential benefits of direct rice establishment methods, in particular in terms of labour savings and the ability to reduce farmers' exposure to climate risk.

In Sophoun village in Phongsalay province in **Lao PDR** a project team has introduced improved-breed pigs, vaccinating against classical swine fever, deworming, providing supplementary forage and improving housing. The farmers saw their animals achieve over double the average daily weight gain when compared with indigenous breeds raised in traditional free-range systems. In addition, the pig mortality rate dropped and the number of pigs sold increased. Farmers noticed that although making these changes didn't substantially change their workload, the income generated improved, and they are now enthusiastic to grow more pigs this way.

New vegetable supply chains developed in an ACIAR agribusiness project have linked **Vietnamese** smallholder farmers in highland villages with modern retailers in Hanoi. Success has come because the ACIAR team recognised the advantages of good soil and elevation to provide the right conditions for temperate vegetables. The team then encouraged growers to adopt accredited 'safe vegetable' horticultural practices, making their produce highly desirable for urban supermarkets – and much more profitable for the growers.

A project targeting rice-based systems in eight districts across the three countries of the Eastern Gangetic Plains – **India, Bangladesh** and **Nepal** was undertaken. CIMMYT, the commissioned organisation, is seeking to determine whether farm management practices based on the principles of conservation agriculture and the efficient use of water resources would provide a foundation for increasing smallholder crop productivity and resilience.

Empowering women and girls

An ACIAR project that examined women's business acumen among smallholder food producers in **PNG** led to the development of the Maria's Family books. They aim to teach both key agricultural and marketing messages to women and also to build literacy for mothers and children.

The ACIAR/Pacific Agribusiness Research for Development Initiative (**PARDI**) project, 'Assessing potential for developing the mother-of-pearl handicraft sector in **Fiji**: Empowering women's groups and livelihood development in Fiji' has tackled the issue of developing local souvenirs of quality and value. New mother-of-pearl jewellery handcrafted by members of Fiji's Ba Women's Forum was launched at an event staged in Suva in September 2014 at the Tappoo 'Market Place' retail outlet.

In **Indonesia**, women in the village of Bosen, East Nusa Tenggara, are reviving the ancient traditions of making natural dyes for use in weaving to enhance their livelihoods. By reviving and adopting the traditional dye-making processes, and then using these dyes in their textile weaving, they are receiving up to four times as much for the textiles as they did when they used synthetic dyes.

Social and economic factors, and the need for off-farm income, have seen men increasingly move away from rural areas, to the point where up to 70 per cent of **South Asia's** agricultural work is done by women. ACIAR, with DFAT, funded a report that highlights the 'feminisation of agriculture' and the challenges facing women-headed farming households in the Eastern Gangetic Plains.

How we work

ACIAR's ethos is about quality assistance and true partnerships for development. ACIAR has consistently encouraged Australian agricultural researchers to use their expertise for the benefit of developing countries. For a long time ACIAR has directly engaged smallholder farmers and/or private sector partners in projects. Increasingly, project partners, small and medium enterprises (SMEs) and other value chain actors, have worked in partnership with ACIAR in both developing countries and within Australia.

During the year, ACIAR has built on the strengths of our existing **private sector** partnerships and explored new ways to support inclusive business models and to connect smallholder farmers and their families to business opportunities and markets that can help lift them out of poverty.

Mars Inc has been a longstanding partner of ACIAR at project level, and we now look to evolve the relationship to a strategic partnership. A potential new private sector partnership with **Visy Industries**, is emerging, focussed on reducing food loss and waste in India.

As a learning organisation, ACIAR has processes in place to learn from our gender-focussed research and development and feed these learnings back into our organisational and future project design. As ACIAR learns how best to achieve **gender equity** and participation, our processes and policies evolve. Within ACIAR's current processes, structures and templates, questions have been integrated into new project proposals to help ensure that ACIAR has a positive impact on gender equity and participation in our workplace and in the communities with which we work.

The 2013 Independent Review of ACIAR recommended, *inter alia*, that ACIAR introduce an integrated program management database. During the year, ACIAR implemented a comprehensive Business System Improvement Project (**BSIP**) to thoroughly overhaul all of our project, finance, record and human resource systems. The BSIP is on schedule to conclude in December 2015 and will greatly enhance the efficiency of our operations.

ACIAR has radically adjusted our **security** posture which has created some operational frustration but ensures we satisfy our obligations under the Government's protective security policy framework (PSPF).

ACIAR's Australian International Food Security Research Centre (**AIFSRC**) was funded in 2011 under the Australian

Government's 4-year, \$46.6 million enhanced Africa Food Security Initiative, which concluded on 30 June 2015. As funding to ACIAR for the AIFSRC is non-lapsing, ACIAR commissioned an independent review to examine the appropriateness, effectiveness and efficiency of the AIFSRC as a modality; and to make recommendations for the future of the AIFSRC after 30 June 2015. The review commended the AIFSRC's focus and its commitment to the themes of nutrition-sensitive agriculture, gender-sensitive approaches and accelerating adoption. The review also made several recommendations, all of which have been accepted by Government. The strengths and themes of the AIFSRC will be mainstreamed into ACIAR's core programs, and the AIFSRC brand will be phased out. All current projects delivered under the AIFSRC will continue to completion, with future projects in Africa to be delivered through ACIAR management methodologies.

How we deliver

Key to how ACIAR works is **partnership** at home and in country. People-to-people relationships underpin our work with the private and non-government sectors. ACIAR acknowledges the Australian and international partners implementing ACIAR projects with developing-country research institutions include CSIRO, state and federal government departments, Australian universities, private-sector entities, Cooperative Research Centres, CGIAR Centres and non-government organisations.

ACIAR's key global research partner is the **CGIAR**, a global partnership that unites organisations engaged in research for a food-secure future. ACIAR is responsible for funding towards the work of CGIAR and some of the non-CGIAR international agricultural research centres (IARCs) on behalf of the Australian Government. Non-CGIAR partners include CABI, World

Vegetable Center (AVRDC), the Asia Pacific Association of Agricultural Research Institutions (APAARI), and the Secretariat of the Pacific Community (SPC).

ACIAR, recognised for its experience in the delivery and **impact** assessment of agricultural research in partnership with developing countries, continues to monitor the adoption of project outputs leading to development outcomes and evaluate the long-term impacts of our investments as part of our reporting to the Government's Australian aid performance framework.

During the year the adoption of outputs from previous ACIAR projects was reviewed by the Impact Assessment program. The *Adoption of ACIAR project outputs 2014* summarises the **adoption** level of outputs from seven projects completed around 2009–10 in five individual partner countries including China, India, Pakistan, Papua New Guinea and Vietnam. All seven studies, across a diverse range of subjects, revealed medium to high levels of adoption of results. New technologies or practical approaches were the major outputs for most of these projects.

As well, ACIAR commissioned several independent assessments of research investments, from crop-livestock projects in the Tibet Autonomous Region, People's Republic of China, to investments in cocoa production in Indonesia and Papua New Guinea, along with an investigation of methods to better capture and evaluate capacity building in ACIAR projects. In the case of Tibet, the independent study identified significant economic benefits from four ACIAR projects with a total investment of \$A8.28 million (present value terms) from ACIAR and its research partners, estimated to have produced a net present value of \$A116.73 million and a benefit:cost ratio of 15.1:1. The most pleasing aspect of these findings is that the economic benefits created will flow mainly to women and families who are smallholder producers.

ACIAR continues to invest in building the **capacity** of individuals and institutions in our region through a range of projects and the John Allwright and John Dillon Fellowship schemes. During 2014–15, there were 137 active John Allwright fellowships at Australian universities, and 10 John Dillon fellows from Bangladesh, China, Indonesia, Lao PDR, Papua New Guinea, Philippines, Samoa and Vietnam.

ACIAR is a very lean organisation that continues to attract eminently qualified appointees, leaders in their fields, dedicated to delivering high-quality research outcomes to improve the lives of rural poor in our partner countries. This year saw the appointment of one new Research Program Manager, Dr Werner Stur (Livestock Production Systems).

The year ahead

While remaining aligned with the Australian Government's aid policy and performance framework, ACIAR will hone its efforts in support of global efforts toward the new **Sustainable Development Goals** (SDGs). We will continue to direct our geographic focus on the Indo-Pacific region as described in our **Annual Operational Plan** (AOP) for the 2014–16 financial year. The AOP confirms our expanded programs in Papua New Guinea, Burma and Pakistan. We will continue our support of global programs, especially CGIAR. An ongoing commitment to gender mainstreaming, research adoption and capacity building at both individual and institutional levels is core to all of ACIAR's activities.

ACIAR will directly contribute to the Government's aid policy by working to enhance and promote agricultural competitiveness and sustainability, increased market access, and value-chain efficiencies and effectiveness. Farm-level productivity and the competitiveness of both traditional and emerging value chains to achieve access on domestic and international markets will continue to be a primary focus of the Centre's projects.

In Australia, we will seek to increase our partnership base and support efforts to increase the involvement of **young professionals** in international agricultural research. In developing countries ACIAR will continue to devise new partnership models with greater regional collaborations and approaches, and increased collaboration with the commercial sector. As a continuing response to the recommendations of ACIAR's independent review, the Centre will strengthen its programmatic approaches and pilot new ways to select collaborators in our research partnerships.

ACIAR will continue to develop and support innovative **partnerships** for research and capacity building. All new investments will explore innovative ways to promote private-sector growth or engage the private sector in achieving development outcomes. In particular, ACIAR will develop processes to ensure that at least 80 per cent of all investments, regardless of their objectives, effectively address gender issues in their implementation.

In response to the need for ACIAR to highlight and **communicate** its research results, and to tell the ACIAR story in a compelling way to a wider audience, the Centre will continue to develop clear, high-level narratives about its work and use them to raise community awareness. It will also further develop its whole-of-government approaches to public affairs and a strategic approach to engagement with stakeholders in Australia.

ACIAR will maximise the impact of its research for development (R4D) investments by capitalising on new opportunities to link with the **private sector** through inclusive business models that contribute to poverty alleviation and the generation of profits. The Centre will strengthen the collaborative nature of existing partnerships with non-government organisations (NGOs) and SMEs, particularly in rural value chains.

ACIAR will remain an active participant in the work programs of **CGIAR** and forthcoming organisational improvements. In addition, ACIAR will build on its current close working relations with regional agricultural associations and forums to promote the development and coordination of national agricultural research systems (NARS) in the Indo-Pacific region.

ACIAR remains committed to being a **learning organisation**. During 2015–16 the Centre will mainstream lessons learnt from completed projects and activities throughout its work. To improve the effectiveness of delivery of ACIAR's programs, the IT applications that currently support the Centre's operations will be replaced with an integrated business system to enable more-effective management, reporting and communication of the programs.

And finally, as we reflect on the past year, and look to the year ahead, we extend our **thanks** to the Commission, Policy Advisory Council, staff and project partners, who all contribute to the real difference that ACIAR makes in our partner countries and in Australia. We particularly record our appreciation for the work of outgoing Policy Advisory Council President, Professor Beth Woods OAM, and welcome new President, Professor Kym Anderson AC.



Nick Austin
Dr Nick Austin
 ACIAR Chief
 Executive Officer



Don Heatley
Mr Don Heatley OAM
 Chair ACIAR
 Commission

**THE YEAR
IN REVIEW—
REGIONAL AND
PROGRAM
ACHIEVEMENTS**

PACIFIC

Papua New Guinea

The program in Papua New Guinea (PNG) is working to help secure improvements in food supply, food access and rural incomes for smallholders through increased productivity and enhanced access to markets and services. Major research topics focus on vegetables and starchy staples, export tree commodities such as timber, palm oil, coffee, cocoa and coconut products, village-based aquaculture and other fisheries. ACIAR also promotes equity for women, emphasising the health and welfare of them and their children, and recognising the need to increase their effectiveness in rural industries.

- A survey of plant and insect species in areas of Madang Province affected by Bogia coconut syndrome identified a phytoplasma microorganism in several species of insect as a possible cause.
- A 'PNG Tree Growers Tool Kit', designed as a repository for project-generated and related knowledge about agroforestry for smallholders, has been distributed to landowners at the pilot research site and to around 400 forestry officers.
- A team investigating the potential for developing local-based sport fisheries in PNG affirmed the great opportunities possible for the development of such an industry.

Pacific island countries

ACIAR is working in Pacific island countries, including Fiji, Solomon Islands, Vanuatu, Samoa, Tonga, Kiribati and Tuvalu, to improve food and nutritional security, develop integrated and sustainable agriculture, develop fisheries and forestry resources, and improve market integration in agriculture, fisheries and forestry products. ACIAR collaborates with regional organisations to bolster the limited research capacity of many countries.

Papua New Guinea

Highlights

- Approximately 200,000 canarium nut trees have been produced by National Agricultural Research Institute (NARI) and distributed to smallholders and cocoa plantations over the past 4 years.

Country overview

PNG is one of Australia's most important development partners. ACIAR's investment reflects this, and its program recognises the many challenges to agricultural development in PNG—including poorly developed infrastructure, weak market signals and services, new pest and disease threats, poor product quality, and pressure on land and renewable resources as a result of population increases and mining development.

ACIAR ensures that its research program is economically, culturally, socially and environmentally relevant to the smallholder farmers. The program has a focus on the role of women in agriculture from a variety of perspectives, for example marketing access and constraints to uptake of new technologies. There are emphases on plantation crops, root and other horticultural crops, forestry and fisheries. These include exported and domestically traded commodities that generate smallholder income and underpin improved food security and economic development.

A key component of Australia's involvement in PNG has been the ACIAR–DFAT research partnership, in which DFAT co-invests in ACIAR-managed activities. Current research area priorities include: overcoming social, cultural and policy constraints that hinder adoption of agricultural technologies; lifting smallholder incomes from horticultural crops, especially vegetables and starchy staples; and poverty reduction through more diverse activities and strategies that lift smallholder income. They also include improving smallholder returns from plantation crop production and marketing, especially for cocoa, coffee and oil palm, and enhancing livelihoods from smallholder fisheries, aquaculture and forestry. Agricultural biosecurity is a vital concern, with special focus on invasive and economically damaging species affecting livestock, crops, fisheries and forestry.

Research achievements

ACIAR studies over the past decade have shown that the canarium nut (known as galip in PNG) has commercial potential here and in other Pacific island countries. Staff at PNG's NARI have been involved in planning for kernel drying, storage and roasting experiments. Interest among farmers in East New Britain has increased with large plantings of canarium seedlings supplied by NARI. Approximately 200,000 trees have been produced in the NARI nursery and distributed to smallholders and cocoa plantations over the past 4 years. At present there is no commercial market or processing factory for these nuts and the focus of immediate study is how to work with commercial partners to drive the nut processing industry.

Bogia coconut syndrome (BCS) is a plant disease reported to have caused increasingly severe losses to coconut palms in the Bogia and Madang areas of Madang Province of PNG. Many hundreds of palms have died. An ACIAR-funded small research activity surveyed various plant and insect species in BCS-affected areas of Madang

Province and identified a phytoplasma microorganism in several species of insect as a possible cause. A new larger project now seeks to confirm that the phytoplasma is causing the disease, to determine which insects transmit it, and to define the range of host plants affected.

In a project to value-add to PNG agroforestry systems researchers have developed a 'PNG Tree Growers Tool Kit', designed as a repository for project-generated and related knowledge. Written mostly in Pidgin, it is freely available on the Internet or through direct provision of material to inquirers. A copy of the first of the Tool-Kit publications was distributed both to landowners in the Markham/Ramu pilot site and to around 400 PNG Forest Authority forest officers in the field.

A team investigating the potential for developing local-based sport fisheries in PNG affirmed that there are great opportunities for the development of such an industry, with long term benefits to livelihoods, environments and resource sustainability. To develop such an enterprise the research team recommended further study on fisheries ecology, operational issues, maintaining habitat and water quality, along with development of business models and determination of social impacts.

Food Bowl is a TV series made in partnership between ACIAR and Australia Plus TV. The series describes how agriculture, science and the art of farming come together to lift lives out of poverty, ensuring a safe food future. It features the human stories that emerge from ACIAR projects. In an episode filmed in PNG the hosts tour research projects located in East New Britain and New Ireland. They discover how research at the Coco Coconut Institute is supporting the revival of the PNG cocoa industry. They also learn about PNG's National Fisheries Authority, supporting the recovery of a sustainable PNG sea cucumber industry, with a visit to the local community in Limonak Island.

***Maria's Family* books answer literacy needs of PNG women and children**

An ACIAR project that examined women's business acumen among smallholder food producers in PNG led to the development of the *Maria's Family* books. They aim both to teach key agricultural and marketing messages to women and also to build literacy for mothers and children.

Authors Professor Barbara Pamphilon and Dr Kym Simoncini from the University of Canberra developed two books – one about preparing and getting produce to market, the other on saving money – after their early studies revealed that the women they met were making simple mistakes in marketing their produce, and they also knew little of how to budget for their futures. The book about marketing has been produced in two versions, one for the Western Highlands and the other for East New Britain, to reflect the different characteristics of the two locations. All the books are bilingual in English and Tok Pisin, and there are 'big book' versions to work with in classrooms.

The Foreign Minister, the Hon Julie Bishop MP, launched the Western Highlands version in Goroka in December 2014. She later read from one of the big books to a group of children. The hope is that these big books will be available for both the children during school time and their illiterate mothers in after-school classes. In this way the mothers' new knowledge will be supportive of their children's learning.

In May 2015 the East New Britain version was launched at the National Agricultural Research Institute in Kerevat. The Deputy Prime Minister, the Hon. Leo Dion, performed the launch. He spoke fervently about the crucial place of agriculture in PNG and the importance of strengthening women's involvement. In support of this he announced that the government would fund copies of the big books to be distributed to all primary schools in East New Britain Province.



Minister Bishop at Buk bilong Pikinini library in PNG about to read '*Maria's family goes to market*'. Photo: Eva Kusun/DFAT

Pacific island countries

Highlights

- Three Pacific fisheries scientists, who were among the first to graduate with Masters' degrees under the ACIAR University of the South Pacific (USP) scholarship scheme, are now making significant contributions to science and education.
- A PARDI project that has helped to develop the mother-of-pearl (MOP) jewellery industry in Fiji has showcased jewellery handcrafted by members of Fiji's Ba Women's Forum at an event staged in Suva.
- A project helping to train village fishers in postharvest handling and processing of sea cucumbers to meet market preferences has produced a manual and DVD in English and local languages, and these have already been used successfully in village-based workshops.
- In Solomon Islands a project has established a planting system for high-value timbers such as teak that encourages thinning, introduces alternative income-generating activities and also leads to better management of the land.

Regional overview

ACIAR's program in the Pacific island countries (embracing Fiji, Solomon Islands, Samoa, Tonga, Vanuatu, Kiribati and Tuvalu) helps to transform the agricultural, fisheries and forestry systems in these countries from subsistence to sustainable income-generating activities. The program seeks to improve productivity and marketing, enhance food security and self-reliance, and reduce poverty. It has a special focus on women to amplify the central role they play in household food gardening, tree crop production, and in marketing of horticultural, tree crop and fisheries products.

ACIAR's program acknowledges the need to work with individual countries where there are marked differences in climate and soils, availability of natural resources, institutional capacity, infrastructure and potential for economic growth. At the same time there are many challenges in common that are best tackled through regional cooperation.

In Pacific Island agriculture, ACIAR focuses on adaptation to changes in climate, and identification and management of constraints to productivity and market engagement in both staple root and high-value crops. The program seeks to identify suitable markets and to develop new high-value horticultural crops (fruits, vegetables and ornamentals) and products derived from them for domestic, regional and international markets. The fisheries component addresses sustainable production from oceanic and inshore fisheries, development of alternatives through aquaculture, and increases in economic returns through improved product quality and better market linkages. The forestry program promotes the development of value-adding forest industries, whereby landowners derive benefits from both timber and non-timber forest products.

ACIAR works closely with other Australian agencies to develop complementary and jointly funded projects aimed at addressing national development priorities and regional issues. The ACIAR-funded Pacific Agribusiness Research for Development Initiative (PARDI) is designed to provide, among other objectives, research and technical underpinning for the Australian-funded PHAMA – an initiative to assist Pacific island countries to gain and maintain access to key markets for selected high-value Pacific products.

Its strong emphasis on building R&D capacity within the region has led ACIAR to form a partnership with the USP to implement a postgraduate training program by way of scholarships for research associated with relevant ACIAR projects.

Research achievements

Three Pacific fisheries scientists, who were among the first to graduate with Masters degrees under the ACIAR-USP scholarship scheme, are now making significant contributions to science and education in their home country of Fiji. Two who studied oyster culture, Marilyn Vilisoni and Pranesh Kishore, are now helping to develop Fiji's pearl industry; Mr Kishore is involved in his third ACIAR-funded pearl project and is currently studying for his doctorate in Australia under a John Allwright Fellowship. The third MSc graduate, Shalini Singh, now lectures in the Fisheries Department at Fiji National University.

The ACIAR/Pacific Agribusiness Research for Development Initiative (PARDI) project, 'Assessing potential for developing the MOP handicraft sector in Fiji: Empowering women's groups and livelihood development in Fiji' has tackled the issue of developing local souvenirs of quality and value. New MOP jewellery handcrafted by members of Fiji's Ba Women's Forum was launched at an event staged in Suva in September 2014 at the Tappoo 'Market Place' retail outlet. The jewellery range encompasses 20 variations of fashion wear and 14 variations of everyday wear items. It was the first opportunity since the PARDI research project began in 2013 for fashion connoisseurs and retail representatives to view and purchase the jewellery, and discuss being part of the new venture.

Under another PARDI initiative seven judges from boutique chocolatiers came to Port Vila for the inaugural Annual Vanuatu Chocolate Competition Salon Culinare. The judges determined that there could be a viable, high-quality, boutique chocolate industry in Vanuatu. The recommendations made two years earlier for some simple agricultural interventions have made a difference, and there is a future for using the Vanuatu heirloom tree stock to produce a high-quality, complex-flavoured chocolate. Cocoa farmers will now take up further

recommendations to refine the basics of pruning and pest and disease management, and improve the fermenting and drying of beans to reduce an undesirable smoky taint.

In Fiji, Kiribati and Tonga an ACIAR project is helping to train village fishers in postharvest handling and processing of sea cucumbers to meet market preferences. There is a ready market for sea cucumbers in Asia but the price depends on the quality of product and too often those harvested in the Pacific are damaged or poorly prepared. To overcome these constraints the project has prepared a training manual and DVD in English, Fijian, Kiribati and Tongan that provides step-by-step instructions on best practice processing techniques for the different species of sea cucumber. Already the resources have been used successfully in village-based workshops.

In Solomon Islands, individuals and communities have grown high-value timber plantings (predominantly teak) over the past 15–20 years. However, many growers have been reluctant to thin out their plantings, meaning that they have become overstocked and reduced growth to a minimum, with resulting poor market potential. A project has established a planting system for high-value timbers such as teak that encourages thinning and also leads to better management of the land. The scientists have achieved this by alternately planting teak with flueggea, a species that is widely used for housing and construction. Growers can profit from thinning flueggea while the teak is left to grow out. Food and cash crops can also be grown between the trees, ensuring the land is productive throughout the 20–25 year rotation.

ACIAR helps Vanuatu after Cyclone Pam

When ACIAR's research program managers (RPMs) assess potential risks and strategies during project development for the Pacific, tropical cyclones are up near the top of the list. But the harsh reality is that it is hard to mitigate this particular risk. After Cyclone Pam struck Vanuatu on March 13 2015 there was massive damage on the islands that lay in the cyclone's path.

ACIAR managers of projects in Vanuatu have now had the chance to determine how their projects fared and see what role they might play in the country's recovery process. As well ACIAR has worked with the Secretariat of the Pacific Community (SPC) and other project partners to develop and implement a six-month project to support the rehabilitation effort. The investment focuses on repairing research facilities and restoring infrastructure at community level that will help to get key industries back in action — hatcheries and nurseries, boats and fishing equipment, chainsaws and pruners, new covers for solar dryers and new roofs for stores.

ACIAR's aquaculture project in Vanuatu lost hatcheries and equipment in the capital Port Vila and on the island of Espiritu Santo. Brood stocks of the main aquaculture species tilapia and freshwater prawns were destroyed. In another fisheries project, communities involved in the coastal resource-management project lost fishing equipment, boats and canoes. Dr Chris Barlow, ACIAR Fisheries RPM, commented: 'Natural disaster recovery is not our normal mandate, but where loss of facilities impacts on project implementation, then it can be within ACIAR's charter to respond.'



Australian forestry researchers inspecting cyclone damaged whitewood seed orchard trial on Efate. Source: Tony Bartlett

For the aquaculture project, ACIAR's priority is to support repairs to the hatchery facility in Port Vila. Robert Jimmy, aquaculture adviser at SPC, explained that this is critical not only to restoring project activities, but also to addressing national food security in the medium term. 'The hatchery is the main facility supplying tilapia and prawns for aquaculture across the country,' he said. 'After a disaster such as this, aquaculture takes on a more important role as a food source, because other options have been destroyed.'

For ACIAR's cocoa project, an assessment revealed damage to seedling nurseries, sheds and equipment such as solar dryers, and to the trees themselves. Many farmers also lost their stores of processed cocoa beans, which were waiting for shipment to Port Vila—and represented their next 'pay cheque'. The immediate ACIAR response has been to support repairs and replacement of lost equipment and nurseries. Most of the cocoa trees are likely to survive and, ironically, to thrive in the coming months as a cyclone provides a severe pruning, which usually leads to a flush of flowering. 'If the trees recover as expected, and we can give a helping hand with repairing dryers and other processing equipment, then the farmers should have regular income again within a few months,' RPM Dr Richard Markham says.

ACIAR has three forestry projects in Vanuatu that all focus on high-value native trees—one works on genetic improvement of whitewood and sandalwood, another is developing value-added products for nangai (canarium) nuts, while the third is concerned with adding value to whitewood trees grown by farmers. RPM Tony Bartlett found that most of the long-term forestry trial sites, which are mainly located in northern Vanuatu, did not suffer serious damage. In the south the biggest damage was to the tree nursery facilities and solar dryers that farmers use to dry nangai nuts

EAST ASIA

Burma

The main focus in Burma is to secure improvements in food security and rural incomes for smallholders through increased production and enhanced access to markets and services. Projects target improvements to productivity in the crop, fisheries and livestock sectors through research and capacity building.

Cambodia

Around 80 per cent of Cambodia's people rely on agriculture for their livelihoods. ACIAR supports research to increase and secure the productivity of rice-based farming systems and associated postharvest systems. It also supports efforts to increase agricultural diversification (particularly into non-rice field and horticultural crops and ruminant livestock). A third thrust recognises the vulnerability of Cambodian agriculture, particularly rainfed cropping, to climate variability and change.

China

ACIAR's program in China now focuses on strategic partnerships to improve the sustainability of agricultural production. Projects are directed at policy and technical issues associated with better management of livestock, land and water resources in north-western China and crop-livestock systems in Tibet Autonomous Region. The need to raise farmers' incomes through increased productivity and marketability of produce is also covered in research design.

Indonesia

Agricultural research has an important role to play in addressing the main policy priorities for the Government of Indonesia. For over 30 years ACIAR has supported research in the country and substantial benefits have flowed to farmers and the whole agricultural sector. ACIAR support now focuses largely on some of the poorest regions of the country, notably the six provinces of eastern Indonesia and Aceh, but it also assists the more developed provinces of Bali, Java and Sumatra. The program seeks alternative approaches to improve livelihoods; these involve issues of food and nutritional security through enhanced productivity and food quality, as well as developing improved market linkages for high-value products sourced from smallholder production systems.

Lao PDR

Food security is still central to agricultural development in Laos, which is one of four countries involved in a new ACIAR initiative on safeguarding food security in rice-based farming systems. ACIAR's program aims to increase the productivity of these systems, working in cooperation with other international agricultural development centres. At the request of the Lao PDR Government, there is an increased emphasis in southern Laos.

Philippines

ACIAR continues to support Philippine research for development to improve market competitiveness of products from aquaculture, horticulture and livestock enterprises. A new priority aims to reduce the adverse effects of climate change on the rural poor. Underpinning these two priorities is the need to develop more effective extension processes and greater responsiveness to market opportunities, while better land and water resource management is also vital.

Thailand

ACIAR's program in Thailand has seen increasing co-investment in the partnership. ACIAR is investing in implementation of the results of earlier projects (with relevance to the poorest farming communities): these include biosecurity systems implementation and managing Mekong fisheries in a partnership regionally with Laos, Cambodia and Vietnam.

Timor-Leste

ACIAR projects seek to improve productivity and resilience of livestock and fisheries systems, transform smallholder and community livelihoods, and raise individual and institutional capacity. To deliver these projects, ACIAR focuses largely on the second of the four objectives in the Australia–Timor-Leste Country Strategy (2009–2014): to increase employment by investing in increasing agricultural productivity, improving infrastructure, promoting vocational education and developing the private sector.

Vietnam

ACIAR's program in Vietnam supports technical, agribusiness and enabling policy research to enhance smallholder incomes from selected areas of high-value agriculture, aquaculture and forestry. The program currently focuses on three geographic regions—the Mekong Delta, the south-central coast and north-western highlands—where poverty persists and where there are threats to sustaining the agricultural natural resource base.

Burma

Highlights

- Newly introduced higher yielding legume varieties and nitrogen-fixing bacterial inoculants are helping to lift crop productivity.
- ACIAR is testing Mobile Acquired Data (MAD) technology to connect research teams in remote locations to send and receive data in a digital and real-time fashion.

Country overview

Australia is providing support to activities in Burma that target immediate needs of the rural poor, to improve their livelihoods through better health, education, and food security. The main focus of ACIAR's program is to secure improvements in food security and rural incomes for smallholders through increased production and enhanced access to markets and services.

ACIAR's aim is to continue to work cooperatively with international organisations and NGOs, including Australian-accredited organisations. Working with agencies with a longstanding presence on the ground has proved an effective and accountable means of delivering assistance. Promising results have been achieved in a multilateral ACIAR project led by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) on improving the productivity of legumes in the central dry zone of Burma.

Research achievements

In Burma's central dry zone farmers have received higher yielding legume varieties and nitrogen-fixing bacterial inoculants to lift crop productivity. The scientists have also helped establish the country's first village-based seedbanks, a source of improved varieties of chickpea, peanut and pigeon pea that yield up to 35 per cent more than traditional varieties. The new varieties are being eagerly adopted by farmers.

In the Ayeyarwaddy Delta a research team is examining how to increase crop diversification. The scientists are determining best practices for crop selection and management, introducing more nutritious varieties while both increasing and sustaining crop yields. The aim is to lift daily nutrition intakes towards the recommended levels, an important facet in breaking the cycle of poverty.

ACIAR is testing MAD technology as a means of providing research teams with a central platform from which data can be directly uploaded in a digital and real-time fashion. This technology also has the ability to scan livestock radio frequency identification (RFID) tags, give GPS location, capture and annotate videos and photographs, and play audio files. It will not only benefit the research teams but it will also allow ACIAR to monitor and evaluate projects it has invested in with faster access to project data and information. Part of the evaluation involves pilot studies, first in Indonesia and then in Burma, to ascertain the value to project scientists who find themselves in locations remote from their office base.

The research program also focused primarily on animal health and adoption of technology by smallholder farmers. For example, current socioeconomic research is looking at constraints to the acceptability and adoption of promising technologies in the central dry zone and Ayeyarwaddy Delta regions of Burma. The project will strengthen institutional capacity and extension services to improve adoption rates. One animal

health project to enhance the management, nutrition and health of small ruminants, indigenous cattle and village poultry was in place in the central dry zone. Proposed animal biosecurity research will aim to develop improved methods to assess disease risk and strategies for disease control, providing research to support the South-East Asia and China Foot-and-Mouth Disease (SEACFMD) control program of the World Organisation for Animal Health (OIE) and participating countries to assess and control livestock biosecurity risks in the Mekong region.

Fish management aimed to improve the capacity of Burma's inland capture and culture fisheries, and facilitate the emergence of fisheries co-management and small-scale aquaculture as cornerstones of rural food security and livelihoods.

Cambodia

Highlights

- Researchers seek reasons why Cambodian growers get two crops of mangoes each year compared with Australia's one – there are benefits to be gained by both countries.
- Studies of water and nitrogen management in rice crops has led to new recommendations for optimum fertiliser rates of application for growing dry season rice.
- Evaluation of crop–cattle integration options in north-western Cambodia has enthused farmers to take up the techniques and actions of conservation farming, while studies of cattle feeding are shedding light on why farmers ignore nutritious non-rice crop residues as cattle feed.

Country overview

Although Cambodia has made considerable progress in raising living standards it still remains one of the poorest countries in

South-East Asia. Agriculture is a significant part of the Cambodian economy, with about 80 per cent of Cambodia's population relying on agriculture for their livelihoods. The predominance of rice-based farming systems on infertile, poorly structured soils means that Cambodia has rather low agricultural productivity on both a labour and a land area basis.

ACIAR's program in Cambodia has three thrusts, all of which are in line with both the agricultural and water priorities under the country's National Strategic Development Plan and under its newly promulgated Rice Export Policy. First it supports research to increase and secure the productivity of rice-based farming systems and associated postharvest systems. The second thrust supports applied research and development that underpins agricultural diversification, particularly into non-rice field and horticultural crops and ruminant livestock. A third thrust recognises the vulnerability of Cambodian agriculture, particularly rainfed cropping, to climate variability and change.

ACIAR's programs focus on the southern provinces (Kampot, Takeo, Kandal, Prey Veng and Kampong Cham), two Tonle Sap provinces (Kampong Thom and Siem Reap) and two north-western provinces (Battambang and Pailin), mainly emphasising maize-based field crops. These provinces were selected on the basis of access to emerging domestic and international (Thailand, Vietnam) markets and as key production locations for the agreed priority crops and ruminant livestock.

Research achievements

A research initiative underway is seeking to expand the domestic and export opportunities for mangoes. In one facet of the work, Cambodian and Australian mango growers stand to benefit from understanding how Cambodian growers are getting two crops a year from their trees – the two mango seasons are March/April and then again in October/November. Although the

double cropping of Cambodian mango trees seems to affect the health of some plants, the researchers believe an improved fertiliser program could help sustain them. There are also incentives for Australian growers to learn how Cambodia double-crops its mangoes. The opportunity to have a double crop, which would spread the yield and double the use of infrastructure such as packing houses (currently only used for six to eight weeks each year), would lift the industry's profits.

Another project aims to increase water security and reduced agronomic investment risk. Research is being undertaken in three provinces: Kampong Thom, Takeo and Kampot. Progress has been made on the modelling activities within the project and field data collected by the project on dry-season rice cropping trials has been used to calibrate the Agricultural Production System Simulator (APSIM) model for dry season rice. This has allowed scenario modelling that looks at the interaction of water and nitrogen management on dry-season rice. Results indicate that traditional recommendations of fertiliser rates will need to be lifted, particularly when aiming to increase yields above 5–6 tonnes/ha.

An evaluation of crop–cattle integration options in north-western Cambodia has two lines of research. The project's crop study aims to preserve crop residues, minimise soil disturbance and encourage diversification. The project is seeing results where small-scale farmers with brush-cutters, knapsack sprayers and hand-planting are adopting no-tillage farming because it is quicker, easier and cheaper than cultivation. The cattle study is investigating the socioeconomic and technical reasons why, despite their abundance, non-rice crop residues are not used as feed for cattle. The team wishes to encourage better use of locally available crop by-products, residues and concentrate feeds, to provide an opportunity for expansion of cattle for breeding or fattening for beef production.

Cambodian and Laos farmers eagerly adopt rice seeding technology

A project to introduce simple mechanised tools for rice planting has enabled farmers to test successfully a dry direct seeder in Savannakhet Province, Lao PDR and a drum seeder in Svay Rieng and Prey Veng Provinces in Cambodia. These on-farm demonstrations have enabled risk-averse farming communities to explore, with support from research and extension communities, the potential benefits of direct rice establishment methods, in particular in terms of labour savings and the ability to reduce farmers' exposure to climate risk.

Following positive feedback from farmers in 2013 the project received additional funding from ACIAR to conduct a second year of on-farm trials, with the additional subjects of weed control and fertiliser placement. In Lao PDR the project helped to develop a locally manufactured dry direct seeder that enabled placement of fertiliser in the soil together with seed.

Farmers were attracted to the potential labour-saving potential of mechanised rice establishment compared with traditional transplanting practices. In Lao PDR analyses of results show that, where weeds are well controlled, dry direct seeding can provide economic benefits of up to 22 per cent over puddled transplanted rice due to reduced labour requirements. Similarly, strong economic gains were found for drum (or wet) seeding compared with traditional transplanting practices in Cambodia.

Additionally, mechanised planting tools have the potential to reduce farmers' exposure to risks associated with increased climate variability and change by avoiding drought stress at both ends of the planting season. The research team has produced information and training materials that were used in farmer field days and training and exposure events in five provinces. The team concluded that direct-seeding technology has a high prospect of adoption and future impact.



Demonstrating a 4 row seed drill in Takeo, Cambodia. Source: Enamul Haque

China

Highlights

- In Tibet Autonomous Region relay sowing of vetch in winter wheat and barley crops can generate fodder without sacrificing food security – a gain for the crop-livestock zone at lower altitudes.
- Also in Tibet, dairy cattle nutrition has improved through better preparation of fodder, provision of adequate water and the addition of mineral concentrates.
- The communication of successes to other Tibetan organisations has resulted in commitment of substantial funding for further extension.

Country overview

The ACIAR program in China targets strategic partners to work with in improving the sustainability of agricultural production. In view of the substantial human and financial resources now available within the Chinese national agricultural research system, and the strong mutual benefits to Australia, ACIAR now requires that all new partnerships involve significant co-investment by the Chinese partners.

Research focuses on policy and technical issues associated with better management of livestock, land and water resources in north-western China and crop-livestock systems in the Tibet Autonomous Region. To reach those most affected by poverty and land degradation the program has increasingly targeted rainfed crop-livestock systems, with emphasis on working with its Chinese partners to engage in joint regional- and national-level research initiatives.

Research achievements

Four projects undertaken in the Tibet Autonomous Region of China were the subjects of a recent impact study. The assessment team determined that at higher altitude areas farmers have intensified barley production and set aside arable land for oats

and triticale to produce fodder. In both zones cereal haymaking has been augmented with more nutritious species.

Dairy cattle nutrition has improved through better preparation of fodder, provision of adequate water and the addition of mineral concentrates. Another gain involved shifting to high-butterfat Jersey cattle and away from less suitable Holstein and Simmental breeds in the higher altitudes. Overall success can be gauged in higher milk production, more calves raised and fewer losses of cows as a result of poor nutrition.

The strong collaboration within the projects has been a significant element in the successful delivery of outputs from the projects. ACIAR's Tibetan partners have further developed and extended initial outputs using participatory approaches and micro-extension techniques. The communication of successes to other Tibetan organisations has resulted in commitment of substantial funding for further extension and support for the purchase of inputs that will assist farmers in taking up the ACIAR recommendations. It is gratifying that 10 per cent of farms in the crop-livestock zone have already adopted ACIAR research outputs, and this is forecast to increase by 3–5 per cent yearly in the medium term.

China's temperate grasslands work is underway to develop sustainable livestock grazing systems. The project is contributing by developing models to use in grazing systems research, thereby understanding the balance between feed demand and forage supply and optimising the best management systems that will guarantee the long-term sustainability of management actions. The principal Australian contribution to this project is the development of a series of models that can then be used by livestock producers to improve their efficiencies, incomes and management of their natural resources. The team has acknowledged that the ideas brought back from China are helping to better devise ways of protecting our local environment and sustainably develop the productivity of agricultural land.

Indonesia

Highlights

- Researchers developed a test that can distinguish between chickens that have been vaccinated against the H5N1 strain of avian influenza virus or 'bird flu' from those that have been naturally infected.
- Innovations to the egg and poultry production system minimise food safety risks throughout the supply chain.
- Village women in East Nusa Tenggara have received guidance to revive the ancient traditions of making natural dyes for use in fabric making.

Country overview

Strengthening agriculture, including the crop, livestock, forestry, marine fisheries and aquaculture subsectors, is critical for poverty reduction and equitable development across Indonesia. The geographic focus of the Indonesia program encompasses some of the poorest regions—including six provinces in eastern Indonesia—as well as the more-developed provinces of Java and Bali. The research program has the flexibility to address rural poverty through some alternate approaches. These include initiatives to address food and nutritional security through enhanced productivity and food quality, or to improve market linkages for high-value products sourced from smallholder production systems. In undertaking these initiatives the program encourages better linkages between national and province-based research agencies.

Wherever opportunities exist, ACIAR implements its Indonesian research program as part of a whole-of-government approach involving DFAT and the Department of Agriculture. In 2014–15 ACIAR contributed to the development of the whole-of-government strategy for the Australian aid program in Indonesia. ACIAR projects also increasingly involve major private sector partners.

ACIAR's medium-term research strategy (2012–16) focuses on: improving policies to underpin agribusiness development; strengthening livestock production and biosecurity systems; underpinning the development of competitive horticultural and field cropping systems; supporting profitable smallholder aquaculture systems; enhancing capture fisheries management; enhancing forestry products and services; and developing profitable agribusiness systems for eastern Indonesia.

Research achievements

Researchers undertaking studies at the University of Adelaide have developed a test that can distinguish between birds that have been vaccinated against the H5N1 strain of avian influenza virus or 'bird flu' from those that have been naturally infected. This is a significant step in the fight against this often fatal strain of avian influenza which is widespread in the poultry populations of South-East Asia, particularly in Indonesia and Vietnam. Birds that have been vaccinated but still have the live, naturally infected H5N1 virus in their systems are the main source of emerging strains of the virus—and these new strains may be even more dangerous to birds or humans.

Indonesian smallholders have trialed and launched innovations to the egg and poultry production system that minimise food safety risks throughout the supply chain. The project culminated in the creation of the now popular 'Healthy Farm' brand of chilled chickens and fresh eggs for Indonesian supermarkets and provided a test of what it takes to develop a clean supply chain in the country's complex poultry sector.

The project on wood processing in Jepara Indonesia has made a significant contribution to wood science and technology both in Indonesia and internationally. It has helped the timber industry sector by increasing the utilisation of timber from young plantations in the production of furniture for domestic and export markets. A valuable output is a book

entitled *Furniture from plantation timber. A manual for furniture manufacturers in the Jepara region of Indonesia*, prepared in both English and Bahasa. The manual combines the knowledge of Australian and Indonesian wood scientists involved in the project who worked closely with local sawmillers and furniture manufacturers in Jepara; it is designed to improve processing efficiency, product quality and worker safety.

In Indonesia, hand-woven and dyed textiles play an important role in the spiritual, social and economic aspects of life. An ACIAR project has partnered with Threads of Life (an organisation that encourages enterprise from traditional crafts) to work with women in the village of Bosen, East Nusa Tenggara. They are reviving the ancient traditions of making natural dyes for use in weaving to enhance their livelihoods. By reviving and adopting the traditional dye-making processes, and then using these dyes in their textile weaving, the women of Bosen are receiving up to four times as much for the textiles as they did when they used synthetic dyes. The project staff are supporting these activities and researching how the natural dyes can be made more uniform and colour-fast.

Partnership helps to revitalise Indonesia's cocoa industry

ACIAR's first commercial project partnership was with chocolate manufacturer Mars Inc., a family-run business, long dedicated to giving smallholders more control over the long-term sustainability of their produce. Mars Inc. helps by transferring skills and knowledge, and increasing the availability of high-quality materials.

The Mars Inc.–ACIAR partnership has starkly demonstrated the immense benefits of collaborating with the private sector on projects to sustainably promote economic growth in smallholder farming communities. The ACIAR project had identified a small suite of pest and disease-resistant clones of cocoa. On its own, this might have amounted to interesting science that is devoid of practical impact. Instead, Mars Inc. saw commercial opportunity in these clones.

Through its sustainability program, Mars Inc. has worked with about 30 farmers in South Sulawesi, Indonesia, helping them with the technical and business skills required to become small businesses supplying grafted seedlings to other farmers. Over time, this has risen to around 600 farmers nationwide selling about six million grafted seedlings annually.

Not only was this a huge benefit to those small farm businesses, but the improved germplasm is also driving the revitalisation of the Indonesian cocoa industry as the clones – combined with good agricultural practices – have the potential to increase productivity two-to-threefold.

'The partnership between ACIAR and Mars Inc. has led to some extremely influential results at the research level,' says Peter van Grinsven, the company's cocoa and sustainability director. 'Improved planting materials are now part of an extensive breeding program. Some clones are now officially approved by the Indonesian Government and are even being planted in parts of Vietnam and the Philippines.'

Mars Cocoa Village Centres (CVCs) are proving an attractive business model for other smallholder farmers who, in turn, may be encouraged to establish their own centres and roll out much-needed goods and services.



Lao PDR

Highlights

- The first dry season crops have just been harvested around four villages in central Laos, where trials of combine harvesters have been possible following adaptations to cropping methods.
- Farmers who introduced recommended interventions of improved pig breeds and better nutrition and husbandry saw their animals achieve over double the average daily weight gain when compared with indigenous breeds raised in traditional free-range systems.
- A survey in the Nam Ngum River Basin in Laos is helping to identify areas at risk of food insecurity and malnutrition, and will be a basis for formulating research strategies that will best assist families and communities.

Country overview

ACIAR's program in Laos is directly aligned with the rural development initiative, as outlined in the Australia–Laos Development Cooperation Strategy 2009–15. The country is one of four involved in a new initiative to safeguard food security in rice-based farming systems.

At the request of the Lao PDR Government, ACIAR is increasing its emphasis in southern Laos, funding research to improve food security from rice-based and other farming systems in both lowland and upland districts. There is also technical and agribusiness research collaboration to understand and develop domestic and export market opportunities for rice, cattle and other agricultural products.

ACIAR is partnering with programs of the International Fund for Agricultural Development, the Asian Development Bank and the World Bank to underpin biophysical, socioeconomic and agribusiness development for southern Laos. Its program

priorities in the medium term are: efficient and sustainable forestry industries, including non-timber products; innovative livestock systems that allow for intensification and land-use requirements while raising animal health and biosecurity levels; fisheries programs that focus on habitat and fish-passage detection, while also improving returns from indigenous aquaculture and wild fisheries; improved institutional, training and communications networks; more cost-effective and sustainable rice-based farming systems through the application of mechanisation, diversification and intensification; improved natural resource management.

Research achievements

A combine harvester is commonly used to harvest rice crops in Thailand, Cambodia and Vietnam, but farmers in central Laos often mention difficulty in introducing combines to the area – due to small and irregular rice fields, lack of resources to dry harvested paddy rice, and high fees charged by the combine contractor. A project funded by ACIAR is evaluating combine performance under different conditions, working with farmer groups in central Laos to develop larger, levelled fields of around 5 hectares to test combine performance. The first dry season crops have just been harvested around the four villages involved in the trials.

In Sophoun village in Phongsalay Province farmers are now aware of the importance of better breeds, feed and disease management to help raise pigs that prosper and grow. A project team has worked with them to test interventions – introducing improved-breed pigs, vaccinating against classical swine fever, deworming, providing supplementary forage and improving housing. The farmers saw their animals achieve over double the average daily weight gain when compared with indigenous breeds raised in traditional free-range systems. In addition, pig mortality rate dropped and the number of pigs sold

increased. Farmers noticed that although making these changes didn't substantially change their workload, the income generated improved, and they are now enthusiastic to grow more pigs this way.

A project led by the University of Sydney is undertaking a survey of households in the Nam Ngum River Basin to gain more understanding of the relationships between natural resource pressures, household wealth, nutritional status and health. The information gained is helping to identify areas at risk of food insecurity and malnutrition, and will be a basis for formulating new research strategies designed to assist families and communities.

Philippines

Highlights

- Research confirms that the current fungicides aimed at removing rot fungi from melons after harvest were ineffective, and scientists are now testing a newly released fungicide for rockmelons, which stands to benefit Australia as well as the Philippines.
- In the ongoing battle against Panama disease of bananas the researchers are encouraging farmers to grow groundcovers between the banana plants – enabling a favourable environment for a range of antagonists to develop naturally and suppress the growth of the banana fungus.

Country overview

The mountainous nature of the Philippines means there is relatively little new land suitable for expanding rice areas, and productivity growth in existing areas in recent years has been low. In addition, the population continues to grow at more than 2 per cent per year (expected population will rise from 95 million to 101 million over the next seven years). While production of rice remains a dominant national priority,

there is increasing pressure in the country to diversify and produce a range of other food, livestock and fisheries products, on increasingly marginal land in the uplands.

ACIAR support focuses on increasing productivity, marketability and international competitiveness for Philippine agricultural products, and a new priority aimed at decreasing the adverse effects of climate change on the rural poor. Underpinning this improved competitiveness is the need to enhance agricultural productivity through more effective extension processes and greater responsiveness to market opportunities.

The following are the lead priorities for the Philippines under ACIAR's medium-term research strategy (2012–16), agreed in February 2012: increasing the market competitiveness of Philippine horticultural products; competitive and sustainable fisheries and aquaculture production; land and water resource management for profitable and sustainable agriculture; improving returns from low-input animal production systems; tackling the adverse impacts of climate change on the rural poor; improving agricultural technology uptake through better understanding of extension and uptake processes. Undertaking the program involves engagement with a wide range of local 'next-user' partners (such as local government units, NGOs, commercial agribusiness companies and farmer community groups).

Research achievements

In the southern Philippines, a project is helping to improve the performance of smallholder value chains for fruit and vegetables, together with community capacity. The study focuses on selected vegetables – such as eggplant, tomato, sweet pepper, ampalaya (bitter melon) and leafy vegetables – and also mango in Eastern Visayas, Northern Mindanao and Davao. Involving around 2400 smallholders and 160 wholesalers, collectors and

retailers, the advances stand to benefit 3000 members of smallholder communities through enhanced income with greater individual and community well-being.

Another aspect of the project is studying the best means of protecting melons from postharvest rots. The scientists are examining the best ways to apply fungicides and how to optimise packing house processes to ensure long shelf life and safe melons for consumers. They found that the fungus *Fusarium* was a common potential cause of fruit rot but the fungicides used had no efficacy against the fungus. In fact fruit going through a chlorine dip followed by a fungicide showed minimal reduction in fusarium and other fungal organisms. The scientists are now testing a newly released fungicide for rockmelons, which stands to benefit Australia as well as the Philippines.

Advances are also being made in fighting Panama disease of bananas caused by a fusarium fungus termed Foc TR4. Earlier work in Indonesia looked at specific antagonists to Foc, especially other fungi living in the soil that could compete with and control it. The Philippine project focuses on encouraging farmers to grow groundcovers between the banana plants – these can provide a favourable environment for a range of antagonists to develop naturally. They also provide additional benefits such as reducing soil erosion and surface water flow that can carry the fungus from plot to plot, while reducing the risk of farm workers carrying the disease in contaminated soil on their shoes. In addition the team has talked with the farmers to determine how they liked the Foc-TR4-tolerant variants of Cavendish banana, selected in Taiwan and made available to countries including the Philippines through Bioversity International's Banana Research Network for Asia-Pacific (BAPNET).

Lifting food production through aquaponics

Fish farming (aquaculture) and hydroponics are two promising ways that have become increasingly popular as alternative methods to conventional agriculture. The combination of these two sustainable technologies, termed 'aquaponics', offers an opportunity to enhance food production with greater water and nutrient efficiencies through recycling of waste water and organic materials. Studies have focused on the optimisation of the system design including plant-fish and water-nutrient stabilities within the system.

Aquaponics has now gained considerable attention from both researchers and growers worldwide, due to its practical applications and resource benefits. However, there are questions of sustainability relating to nutrient use efficiency to maximise plant production without chemical fertiliser supplementation. This is where the research work of John Allwright Fellow Jonathan Mangmang is currently focusing. Jonathan, on secondment from Visayas State University, Philippines, is completing his PhD at the University of Sydney. Prior to this he worked on an ACIAR-funded protected vegetable cropping project.

Through his research Jonathan is seeking to integrate beneficial microbes in aquaponics vegetable growing. He is exploring the role of plant growth promoting rhizobacteria (PGPR) that can colonise plant roots and enhance plant productivity. They help to increase mineral nutrient solubility, fix atmospheric nitrogen and produce beneficial hormones. These properties help to suppress disease and improve stress tolerance.

Jonathan has discovered that strains of the rhizobacterium *Azospirillum brasilense* are effective in lessening pathogen attack and damage to plants. They compete with pathogens for suitable environment and eventually displace them; this enhances general plant vigour to resist pathogen infection and may also inhibit fungal growth through the production of microbial toxic substances and activation of plant defence systems. His work is helping to promote the use of PGPR as a bioinoculant, a process that is gaining rapid acceptance as a means of lifting food production in aquaponic systems while protecting the environment.



A John Allwright scholar is working on an ACIAR funded vegetable cropping project.
Source: Jonathan Mangmang

Thailand

Highlights

- A program is underway to find a biological control solution to combat the gall wasp, an imported pest of eucalypts.
- An experimental fish passage facility developed during earlier ACIAR research is now being evaluated at an aquaculture research station.

Country overview

In line with the Memorandum of Understanding signed in July 2007, ACIAR continues to foster opportunities for partnering with Thailand to support other countries in the region. In this context the emphasis is placed on improving regional research programs, with particular attention to Burma, Cambodia, Lao PDR and Vietnam. ACIAR's current program focuses on three issues: implementation of the results of earlier projects, with relevance to the poorest farming communities; implementing Mekong regional biosecurity systems; and regional partnership with Laos, Cambodia and Vietnam to manage Mekong fisheries.

Australia and Thailand are active participants in a range of International Agricultural Research Centres (IARCs) and other multilateral research and assistance agencies, a number of which are located in Thailand. This will continue to provide a suitable platform to address wider regional research initiatives with both Australian and Thai involvement.

Research achievements

Scientists from the Royal Forest Department in Thailand are contributing their expertise to help control the gall wasp (*Leptocybe invasa*), an Australian-origin insect pest, that is threatening the viability and sustainability of the expanding eucalypt plantations in the Mekong Region and worldwide. The project seeks biological control options to overcome losses caused by the wasp and enhance the productivity of eucalypt plantations, directly benefiting plantation growers, communities and smallholder farmers.

Thailand is collaborating with Lao PDR to establish an experimental fish passage facility, based on designs tested in earlier ACIAR research. The design chosen allows variation of the major physical components controlling water flow, and these will be tested at an aquaculture research station where physical design, water flow and fish species can all be manipulated to evaluate and display the efficacy of different combinations.

Is short-rotation plantation forestry in Asia sustainable?


Sustainable management of agricultural and forestry systems is one of the most important challenges facing people all over the world. But much of the public commentary about the sustainability of plantation forestry has not been informed by good science. A recently published ACIAR Technical Report (Sustainable plantation forestry in South-East Asia) has weighed into the debate, representing the first comprehensive scientific study on the sustainability of fast-grown plantations of eucalypts and acacia trees.

First introduced into Asia over 60 years ago to help address shortages of fuelwood and timber, the suitability of these trees for a wide range of environments and their good growth rates make them ideal for planting by smallholders and plantation companies. Over the past 30 years, ACIAR has helped ensure that the use of these trees in Asia is based on good science. Working collaboratively with partner-country colleagues, Australian forestry scientists have helped Asia develop the techniques to grow eucalypts and acacias as short-rotation plantations to produce wood for pulp mills. There are now more than 7 million hectares of eucalypt and acacia plantations grown in Asia, with rotations of 5–8 years.

There have been critics of the use of these trees in plantation forestry or social forestry schemes since the 1980s – they have been blamed for negative environmental effects such as reduction in water yield and depletion of soil nutrients. In addition, the critics consider the practice of repeated planting of short-rotation plantations of exotic trees to be unsustainable.

The new report, written by forestry scientists Drs Chris Harwood and Sadanandan Nambiar, includes reviews of actual inventory data from successive rotations of fast-grown plantations in five countries – Indonesia, Malaysia, Vietnam, China and Thailand. The authors found that, in most situations, the mean yields are actually increasing over time, rather than decreasing.

However, as pointed out clearly in the report, there are a range of other issues that, if not addressed, will impact on plantation yields in the future. These include the way the sites are managed between and during rotations, and the increasing incidence of disease. The report emphasises that sustainability is not a destination but a journey, and that further research and creative partnerships are required for successful progress.

A photograph showing two people, a woman and a man, standing in a forest. The woman on the left is wearing a white long-sleeved shirt, a blue lanyard, and a blue cap. The man on the right is wearing a white short-sleeved shirt, a white cap, and a blue lanyard. They are both looking towards the camera. The background is a dense forest with many trees.

Dr Nguyen Hoang Nghia and Mr Stephen Midgley in an *Acacia auriculiformis* progeny trial in central Vietnam. Both of these scientists have been ACIAR partners for more than 20 years and when the research first started this species of *Acacia* had a very crooked form but now it produces the best trees for plantation grown sawlog production in southern Vietnam.
Source: Tony Bartlett

Timor-Leste

Highlights

- Seeds of Life 3 (SoL3) helping farmer groups to establish commercial seed producing and selling enterprises.
- Participatory diagnostic studies highlighted the concerns of three fishing communities, who stressed that food security and livelihoods were increasingly compromised by fishing-related issues.
- Project to help local farmers fatten Banteng cattle by growing high-protein forages is showcased on ABC Australia Plus Network.

Country overview

Australia is the largest development partner for Timor-Leste. ACIAR's research agenda supports the Timor-Leste Government's Strategic Development Plan 2011–30 and the Australia–Timor-Leste Country Strategy (2009–14) through the following strategies: improving smallholder and community livelihoods through improved varieties of staple crops and legumes; improving productivity and resilience of livestock, fisheries and horticultural systems; improving individual and institutional R&D capacity in the Ministry of Agriculture and Fisheries, and University of Timor Lorosa'e.

Opportunities for ACIAR assistance in Timor-Leste lie in the food crops sector, where yields are low by regional standards. It is critical to make available improved varieties with higher yields than local varieties. Increasing the production and acceptability of legumes would also contribute to improving the poor nutrition of many Timorese, especially women and children.

Livestock production is almost totally managed by individual households, very few of which are specialist livestock raisers. Pigs and poultry survive largely by scavenging, while grazing animals rely on native pastures, crop margins and crop stubbles. Traditional

management systems and poor market access mean that farmers tend to maximise the numbers of unproductive animals.

While Timor-Leste is well endowed with marine fisheries resources, the country needs a coherent policy framework and fisheries investment strategy, as well as help to protect its fish stocks against illegal fishing by foreign fleets, and better integration of freshwater aquaculture with agriculture.

Research achievements

SoL3 has helped 57 farmer groups (comprising an aggregate of more than 1500 members) to become commercial seed producers. The producers sell half of their seed harvest to the Timor-Leste Government and NGOs for distribution to other farming households, while traders and agricultural shops also buy seed for resale in kiosks across the country. These farmer groups are now businesses that are bringing country-wide benefits including access to improved varieties, and giving farmers more choice of varieties proven to suit the climate and soils in Timor-Leste.

The Seeds of Life program was showcased in an episode of *Food Bowl* on ABC Australia Plus Network in December 2014. *Food Bowl* describes how agriculture, science and the art of farming come together to lift lives out of poverty ensuring a safe food future. It featured some human stories that emerge from ACIAR research; stories of farmers and researchers working together to improve livelihoods. As well as SoL, the program visited the Loes Research Station where Geoffry Fordyce, University of Queensland project leader, explained how his team was helping farmers to fatten local Banteng cattle using high-protein forages. It showed an example of one farmer, who with his sons was working with the project, growing forages in combination with cassava and maize. This project is being managed as the initial 3-year phase of a 10-year activity to build capacity within Timor-Leste for smallholders to efficiently produce and sell beef cattle.

Another project is exploring options for improving livelihoods and resource management in Timor-Leste's coastal communities. The project has established a presence in three focus communities. At all sites participatory diagnosis highlighted that food security and livelihoods were increasingly compromised by fishing-related (as opposed to agricultural) issues. Declining reef resources and increasing competition for resources were highlighted as the biggest issues, while rising costs of inputs relative to declining catch rates was also perceived as a major problem.

Vietnam

Highlights

- A new generation of fully tested hybrid clones of acacias show promise of delivering large economic benefits to Vietnamese growers; the new superior releases should be available commercially by 2020.
- A comprehensive program through the World Agroforestry Centre (ICRAF) is set to transform the livelihoods of smallfarmers in north-western Vietnam through the introduction of agroforestry practices on sloping degraded lands.
- New vegetable supply chains developed in an ACIAR agribusiness project are linking Vietnamese smallholder farmers in highland villages with modern retailers in Hanoi.

Country overview

ACIAR's program in Vietnam supports technical and agribusiness research to enhance smallholder incomes from selected areas of high-value agriculture, aquaculture and forestry. In recent years the program has focused on three geographic regions—the Mekong Delta, the south-central coast and north-western highlands—where poverty

has persisted and where there are threats to sustaining the agricultural natural resource base. These are also opportunities to employ Australian agricultural technical skills to assist in development.

Vietnam will continue to have a comparatively high percentage of rural population over the next decade or two, and issues of rural poverty and structural adjustment remain at the top of the policy agenda. Productivity on a land or labour basis is still low. The small scale of production on individual farms, fragmented land holdings and increases in input costs are significant problems, and also conceal huge potential. Ethnic minority groups and those in remote regions are particularly affected and the Vietnamese Government is providing greater focus on programs to assist these groups.

ACIAR's projects link with programs of DFAT and other donors working in these regions. These projects are increasingly multidisciplinary, and there is a growing focus on linking central research institutes with provincially based research and extension departments. ACIAR acknowledges the following key areas as medium-term research priorities: securing rice-based farming systems in the Mekong Delta through resilience to the negative impacts of climate change; optimising resource management for profitable and sustainable agricultural production in south-central coastal Vietnam; poverty reduction through market engagement for smallholder farmers in the north-western highlands; development of high-value plantation forestry products; developing higher-value aquaculture industries; and providing advice on climate-related impact and adaptation policy for future agriculture.

Research achievements

A 5-year project to support the significant improvement of acacia planting stock has just concluded in Vietnam. The staged evaluation of over 5000 hybrid seedlings and 550 promising clones of broad genetic base has positioned the Vietnamese Academy of Forest Science to deliver large economic benefits to Vietnamese growers through the deployment of a new generation of fully tested hybrid clones. These clones could be ready for commercial deployment by 2020, and early trials already show superior early growth to those commercial hybrids currently planted.

Work supported by ACIAR through ICRAF seeks to develop agroforestry to improve the livelihoods of smallfarmers in north-western Vietnam. The work is helping to alleviate significant soil degradation and erosion brought about by shifting cultivation and monocropping of staple food crops such as maize, rice and cassava on sloping land. Experience has shown that introducing agroforestry helps to restore soil fertility, improves the function of ecosystems, and provides these struggling communities with much needed income.

New vegetable supply chains developed in an ACIAR agribusiness project have linked Vietnamese smallholder farmers in highland villages with modern retailers in Hanoi. Success has come because the ACIAR team recognised the advantages of good soil and elevation to provide the right conditions for temperate vegetables. The team then encouraged growers to adopt accredited 'safe vegetable' horticultural practices, making their produce highly desirable for urban supermarkets – and much more profitable for the growers.

SOUTH AND WEST ASIA

Afghanistan

ACIAR's collaboration with Afghanistan provides support to increase wheat and maize production. Activities include on-farm participatory testing of imported germplasm to identify better-adapted improved cultivars, and undertaking local multiplication and distribution of selected cultivars.

Bangladesh

ACIAR's program in Bangladesh focuses on eradicating extreme poverty through improved productivity of food grain crops. It has strong emphases on conservation agriculture, farm mechanisation, saline land management and adaptation to climate change, with significant effort directed to rice-wheat and rice-maize systems.

Bhutan

In Bhutan, ACIAR has already contributed to develop Newcastle disease vaccines for village chickens, and other projects have helped manage fruit fly damage and footrot in ruminants. A major initiative to improve citrus production through pest and disease management is now underway.

India

Collaboration with India includes projects on better water management to improve livelihoods in the more marginal rain-fed areas of central India, and also to develop policy to assist India with the implications of its transition from a highly regulated economy to a more open market economy.

Nepal

The focus of ACIAR's collaboration with Nepal is to address poor farm productivity and help build capacity in agricultural institutions to improve the livelihoods of the rural poor.

Pakistan

ACIAR's long-term focus in Pakistan is on linkages within the horticulture and dairy sectors, along with natural resource management issues such as efficient water use, salinity management and tillage options for irrigated cereal cropping.

Afghanistan

Highlights

- Australian sponsored research has led to the release of seven improved wheat varieties, including irrigated varieties with the potential to produce over 6 tonnes/ha and rainfed varieties with the potential to produce 3.8 tonnes/ha – more than double the current average yields of 2–3 tonnes/ha for irrigated wheat and 1–1.5 tonnes/ha for non-irrigated wheat.
- A project undertaken by ICARDA with ACIAR funding seeks to improve livestock farmers' livelihoods by evaluating appropriate options for forage and fodder production, and by developing community-based seed enterprises for feed and forages.

Country overview

ACIAR's collaboration with Afghanistan started in 2002 and focuses support on wheat and maize production. Activity in Afghanistan continues through collaboration with CIMMYT and ICARDA. The operating environment is complex as a result of poor security and political uncertainty, which limits access by Australian scientists and hinders donor capacity for long-term planning.

Principal objectives have been to import seed of suitable cultivars, establish on-farm participatory testing of imported germplasm for the identification of better adapted improved cultivars, and undertake local multiplication and distribution of selected cultivars. Particular attention has been paid to capacity building, improving rust resistance in wheat (with specific attention to the new stem rust race variant designated Ug99) and promoting improved crop management, together with provision of improved cultivars of both wheat and maize.

The country program has a new focus on crop and livestock intensification and better water management. The researchers are fostering linkages between the improvement of wheat varieties and agronomy, the development of forages for small ruminants, and community-based watershed management.

Research achievements

Australian-sponsored research has led to the release of seven improved wheat varieties in Afghanistan. The wheat lines released included irrigated varieties with the potential to produce over 6 tonnes/ha, and rainfed varieties with the potential to produce 3.8 tonnes/ha. These yields are about 10 per cent better than any current variety and are more than double the current average yields of 2–3 tonnes/ha for irrigated wheat and 1–1.5 tonnes/ha for non-irrigated wheat. To accelerate adoption of the new varieties, the project has established four technical support hubs where the varieties and appropriate wheat growing methods are tested on farmers' fields and

demonstrated to farmers. Adoption of new varieties is constrained by factors such as seed availability and quality, timeliness of distribution, cost of seed, and localised agro-climatic requirements. However, ACIAR estimates that adoption could reach up to 20 per cent of the planted area in the medium to long term, with the prospect of benefiting up to 1.5 million households.

ACIAR has funded a project undertaken by ICARDA that seeks to improve livestock farmers' livelihoods by evaluating appropriate options for forage and fodder production, and by developing community-based seed enterprises for feed and forages. The project is also building the capacity of Afghan researchers in forage and livestock systems research. The main output will be a 'best practice' package for forage production in the Baghlan, Nangarhar and Mazar provinces that will lead to increases in meat and dairy production, ultimately improving household food security and income.

Bangladesh

Highlights

- Researchers are establishing how adaptations to ground and surface irrigation have addressed structural, institutional and energy constraints.
- Farm management practices, based on the principles of conservation agriculture and the efficient use of water resources, have been assessed for their capacity to increase smallholder crop productivity and resilience.

Country overview

ACIAR's focus in Bangladesh has been on food grain crops, and its strategy addresses one of the country's key development challenges—food availability within the context of increasing climate-change vulnerability. Research activities are strongly related to agricultural food production. Bangladesh also faces the problem of

inadequate nutrition, which is just not limited to food availability. It is derived from multiple factors, for example gendered consumption practices, international market variations and effectiveness of government structures.

With re-emerging concerns about Bangladesh's ability to maintain food security in the light of its high vulnerability to the impacts of climate change, ACIAR's emphasis is shifting towards a farming systems approach supporting broader improved food security. The program includes research on conservation agriculture, farm mechanisation, saline land management and adaptation to climate change, particularly in the rice-wheat and rice-maize systems. Low-lying areas and rainfed cropping systems in Bangladesh are particularly negatively impacted by the effects of seasonal climate variability and change. Consequently, Bangladesh is one of four partner countries involved in ACIAR's climate-change adaptation initiative.

Research achievements

Earlier research in the Indo-Gangetic Basin, which encompasses Bangladesh, the Tarai in southern Nepal and the states of West Bengal and Bihar in India, established the interactions between poverty and access to water. A new project is now seeking to determine the distribution of ground and surface water, irrigation demand and extent of irrigation in the study sites, and to identify the technical constraints to existing irrigation systems in the region utilising a range of energy sources.

The research team is also determining how existing patterns of vulnerability and the social structures (e.g. land tenure, role of women and young people), institutions and policy context determine access to ground and surface irrigation and shape livelihood outcomes in the areas under study. Specifically in the case of Bangladesh, they wish to establish how adaptations to ground and surface irrigation have addressed structural, institutional and energy constraints.

Another project targets rice-based systems in eight districts across the three countries of the Eastern Gangetic Plains. CIMMYT, the commissioned organisation, is seeking to determine whether farm management practices based on the principles of conservation agriculture and the efficient use of water resources would provide a foundation for increasing smallholder crop productivity and resilience. The researchers are also investigating whether institutional innovations that strengthen adaptive capacity and link farmers to markets and support services enable both women and men farmers to continue to innovate in the face of climate and economic change. Already a total of 191 on-farm participatory trials were implemented in the Kharif (summer) season of 2014.

Bhutan

Highlights

- Installation of drip irrigation and the encouragement of good cultivation practices enables a participating farmer to double her income from citrus production in one season.

Country overview

ACIAR's strategy is to work closely with the Bhutanese Government, local industry and other donors to ensure that planned activities are appropriate, consistent with the most recent government 5-year plan and complementary to the work of other donor agencies.

Citrus is Bhutan's largest horticultural export industry. A major initiative to improve citrus production through improved planting material and integrated crop management is being implemented. The work is focusing on crop irrigation management, integrated crop management of vegetables (particularly chilli) and development of contract farming crops (e.g. walnut, grapes, asparagus, pomegranate).

Research achievements

A small farm chosen as a demonstration site for ACIAR's citrus project enabled the researchers to set up drip irrigation from a permanent nearby spring and to evaluate its benefits. In addition to installing storage tanks, pipes; and drippers the team encouraged the farmer to prune her trees then form and maintain weed-free 'basins' around each tree to catch water and nutrients. She also applied manure and other organic matter and removed any fallen fruit to reduce the population of the highly destructive Chinese citrus fruitfly. This intensive effort enabled the farmer to more than double her income from the 300 trees. The irrigation has also enabled the planting of a wide range of vegetables for home consumption and sale.

India

Highlights

- In Madhya Pradesh, two fertiliser management strategies were developed in collaboration with the farmers, then evaluated by almost 300 farmers in their own on-farm trials.
- A report highlighting the 'feminisation of agriculture' and the challenges facing women-headed farming households in the Eastern Gangetic Plains makes gender-sensitive recommendations to improve education for women-headed farming households.
- A simulation tool capable of providing information on the spatially distributed availability of surface water and groundwater resources is helping to assess hydrologic impacts of farm-level land-use changes and watershed treatment activities at both the micro and meso-scales.

Country overview

Australia and India share many of the same agricultural and natural resource management problems and research challenges. ACIAR has supported a program of collaborative agricultural research with India since 1983. The large and well-developed national agricultural research system led by the Indian Council of Agricultural Research (ICAR) is a cornerstone of ACIAR's program, and has great potential to underpin cooperative activities in the region, such as the Rice-Wheat Consortium.

ACIAR's strategy for 2011–16 focuses on joint partnerships with increasing co-investment by ICAR and other partners. Research themes reflect strong common interests and point to areas with potential for positive impacts at both field and national levels in both India and Australia.

ACIAR's research activities have been increasingly linked to the food security problems of other South Asian countries and thus have a growing regional character, including the programs delivered in conjunction with CGIAR, state agricultural universities, NGOs, autonomous and private-sector institutions active in the region. Its current strategy focuses around creating regional collaborations that target: managing agricultural water, including rainfed areas and the Eastern Indo-Gangetic Plains; sustainably intensifying and diversifying cropping systems with support of conservation agriculture/zero tillage; breeding improved varieties of wheat and sorghum, and exploring new legume improvement projects; assisting policy development in relation to agricultural adjustment and climate change.

Research achievements

An evaluation of the research to integrate manure nutrient management into soybean/wheat cropping systems on Vertisol soils in Madhya Pradesh determined that the most important technical outputs were two fertiliser management strategies. These were

developed in collaboration with the farmers and evaluated by almost 300 farmers in their own on-farm trials. The first strategy, 'integrated nutrient management', combined farmyard manure with inorganic fertiliser. The project demonstrated that substantial benefits could be gained from a smaller farmyard manure application of 5 tonnes/ha than from the traditional 20 tonnes/ha application, permitting farmers to treat a larger area with manure each year. However, even at the reduced 5 tonnes/ha application there was not enough farmyard manure for application to all of the cropped area. Hence there was a need for the second management strategy; an inorganic fertiliser regime called 'balanced fertilisation'. Both fertilisation strategies increased yield and profitability. The project also acted as a catalyst for the adoption of other improved farming practices.

Social and economic factors, and the need for off-farm income, have seen men increasingly move away from rural areas, to the point where up to 70 per cent of South Asia's agricultural work is done by women. ACIAR, with DFAT, funded a report that highlights the 'feminisation of agriculture' and the challenges facing women-headed farming households in the Eastern Gangetic Plains. The report makes a series of recommendations, based around strategies that are gender sensitive, to improve education for women-headed farming households and thus enable them to learn more productive agricultural methods and profit from extension services. The report is helping to raise awareness of the feminisation of agriculture over the past 50 years and the need for agricultural scientists and development agencies to ensure their project activities reflect the actual needs expressed by women.

The ACIAR meso-scale project on watershed development (WSD) was the first study in India to examine the impacts of WSD programs in an integrated manner that included the hydrologic, socioeconomic and livelihood dimensions. As part of that integrated assessment, the research

team developed a surface water–ground water modelling simulation tool that can provide information on the spatially distributed availability of surface water and groundwater resources (expressed in terms evapotranspiration, groundwater recharge and surface runoff). The model can generate data on a monthly basis for a range of watershed intervention, land-use and climate-related scenarios. The model, named EWAC (Equitable surface and ground Water Allocations in Catchments) is applicable to assessing hydrologic impacts of farm-level land-use changes and watershed treatment activities at both the micro and meso-scales.

Nepal

Highlights

- Raised bed technology first developed in the Philippines now available to help Nepalese farmers.
- ACIAR seeking ways to help restore agriculture affected by the earthquakes and landslides of 2015.

Country overview

Agriculture in Nepal faces a set of numerous interdependent challenges – associated with degrading resources, underdeveloped agricultural institutions and policies, and lack of productive technologies – that limit the improvement of farm household livelihoods. The challenges take different shapes in the lowland Terai rice-wheat farming systems (an extension of the Ganges Plain of India) compared with the mixed crop-livestock-tree farming systems of the hill and mountain areas.

ACIAR's program in Nepal supports integration of soil, water, livestock and tree components of the farm system, and seeks to increase productivity of the respective components through adoption of appropriate technologies.

Research achievements

A project scientist from the University of Adelaide, originally from the Philippines, is now working with Nepali colleagues to train farmers in how to establish their own tree nurseries. The scientist has introduced farmers in Nepal to the raised nursery bed technology that was used in an ACIAR project in the Philippines. These nursery beds are easy for farmers to construct from locally available materials; they have an advantage over traditional ground-based nursery beds because the plants don't become waterlogged and the root systems are 'air-pruned'.

In another aspect of the project the ACIAR team is revisiting a community forestry enterprise originally set up with the help of Australian aid in the 1990s. Numerous problems in recent years have culminated in the closure of the community sawmill. The research team is working with the local community and staff of the local district forest office to analyse the conflicts that led to the closure and suggest possible ways to restore this enterprise that generates substantial returns to the local communities and makes better use of their natural resources.

After the devastating earthquake in Nepal on 25 April 2015 and subsequent severe aftershocks and landslides, ACIAR has focused on how to ensure its program helps Nepalese agriculture to recover. The most severely affected are the hill farming systems, which are located across the hilly mountainous areas from east to western Nepal. Here farmers grow rice in the bottom of the valleys, and typically cultivate corn, millet, forages for livestock, potatoes and legumes on the sides of the slopes. Up to 11 million people who rely on these mountainous regions of Nepal were in the danger zone.

Pakistan

Highlights

- Researchers evaluate the performance of indigenous and exotic cultivars of tomato, cucumber and okra under heat stress conditions, and their potential profitability in commercial farming – based on vegetable yield and quality, and seed production.
- In the dairy industry research focuses on nutrition, seeking better options for managing fodder and alternative feeds to keep a supply of quality feed for dairy animals throughout the year.
- Researchers are introducing integrated crop management (ICM) practices – for citrus in Punjab and Khyber Pakhtunkhwa provinces and for mangoes in Punjab and Sindh provinces. The work focuses on disease-free planting material, superior cultivars and optimal tree management.

Country overview

Pakistan is a strategically important country where the development challenges are considerable. One challenge is the increasing pressure on availability of water resources for irrigation, due to competing demands for urban and industrial uses. Often the water available is saline, largely because of poor irrigation management practices combined with poor drainage and soil management. High-value horticultural crops such as citrus and mangoes for both domestic and export markets are an important source of farm income; however, crop management practices are often suboptimal and losses along the value chain are high. Cereal productivity is lower than in equivalent environments elsewhere in south Asia, and there is also unrealised potential for smallholder diversification. Pakistan is one of the world's largest milk producers, with slightly less than half of that production from dairy cattle. Unit animal production is very low, although genetic potential is quite good.

ACIAR's strategy for Pakistan is to work closely with the Pakistan Government, Australian agencies, other donor partners, NGOs and the Pakistani private sector – providing research, development and technical capacity building, technical support and carefully targeted interventions to underpin Pakistan development programs. Poverty reduction, linking smallholders to markets and gender equality are major issues for development programs in Pakistan, and are key considerations for the ACIAR strategy. Australia is well placed to assist Pakistan in addressing irrigation, drainage and salinity management in major cropping systems, and this is an important focus of the program.

ACIAR's work in Pakistan revolves around the Australia–Pakistan Agriculture Sector Linkages Program (ASLP), with the program initially focused on the mango, citrus and dairy sectors. As the work progresses, there will be an increasing focus on gaining benefits for smallholder and poor farmers, benefits for other disadvantaged groups, greater involvement of women, dissemination of results and maximising project impacts.

Research achievements

Three ACIAR projects are currently looking at mango and citrus productivity and value chains. A primary aim is to identify, develop and improve domestic and export value chains for mangoes, with an emphasis on capacity building and linking poor farmers to markets in Sindh and Punjab provinces. It is further looking to extend the markets into China, Europe and the Middle East. Two other projects are researching integrated crop management (ICM) practices – for citrus in Punjab and Khyber Paktunkhwa provinces and for mangoes in Punjab and Sindh provinces. The work focuses on disease-free planting material, superior cultivars and optimal tree management.

Vegetable growing is popular, providing dietary variety and a potential source of income. However, it is partly limited by high temperatures that reduce yield and quality. ACIAR-supported research is seeking new options for successfully growing summer vegetables. The team is identifying and characterising varieties of tomato, cucumber and okra that are tolerant to heat stress. Main activities include evaluating the performance of indigenous and exotic cultivars under heat stress conditions, and their potential profitability in commercial farming – based on vegetable yield and quality, and seed production.

The ASLP continues to look for ways to improve the dairy industry, which is the largest livestock industry in Pakistan. Research focuses on nutrition, seeking better options for managing fodder and alternative feeds to keep a supply of quality feed for dairy animals throughout the year. Another arm of research aims to strengthen dairy value chains, addressing the constraints in production, marketing and extension that keep most small farms in Pakistan at very low levels of productivity.

EASTERN AND SOUTHERN AFRICA

Australia's strategic approach to aid in Eastern and Southern Africa (ESA) has been to help selected African countries progress towards the Millennium Development Goals (MDGs). ACIAR focuses on areas where Australian research strengths can contribute to increased agricultural productivity through farming systems intensification, diversification and improved market access.

Highlights

- The introduction of Android devices has enabled electronic recording of data in a project in Ethiopian trials, meaning that five times more information can be gathered than was typically being recorded in the sorghum breeding program.
- The Chameleon sensor, developed as a tool to assist farmers in developing countries in determining how much water is in the soil as an aid to irrigation, is already helping farmers in Tanzania to reduce irrigation while achieving higher yields.
- Better land management and the introduction of suitable legumes is helping to set up a system of permanent sustainable grazing on the veld in the Eastern Cape of South Africa.

Regional overview

The region encompassing eastern and southern Africa is the most food-insecure in the world, with approximately one in four people suffering from chronic hunger. Low food crop productivity, rising food prices, increasing fuel costs, climate change and deteriorating agricultural research capacity have worsened food and nutrition security outcomes.

The research program focuses on themes that have emerged from consultations with national and regional partners, including through the Comprehensive Africa Agricultural Development Programme (CAADP) and the Forum for Agricultural Research in Africa (FARA). Building on Australia's expertise in dryland farming systems management, ACIAR is focusing on: livestock and cropping systems for disadvantaged farmers in South Africa, Botswana and Zimbabwe; maize-legume intensification in Malawi and Mozambique; water security in South Africa, Zimbabwe and Mozambique. Botswana, Rwanda, Uganda and South Sudan are benefiting through organised spillovers of the results of sustainable intensification research.

Complementing the backbone of cropping intensification research, the Australian International Food Security Research Centre (AIFSRC) supports a number of other research thrusts in south-eastern Africa – in areas such as mechanisation, village poultry farming and peri-urban vegetable production. This new research is examining the capacity of agroforestry and crop farming systems to enhance food security in eastern Africa. It is also looking at constraints to technology adoption (more under the AIFSRC report, page 58).

Research achievements

SIMLESA-2 (Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa) commenced in July 2014. It represents the second phase of a long-term effort to lift productivity in the core countries of Ethiopia, Kenya, Malawi, Mozambique and Tanzania, with spillover benefits reaching Botswana, Rwanda, South Sudan and Uganda. CIMMYT manages the project, which involves a broad range of international and national agricultural research partners.

Researchers at the Ethiopian Institute for Agricultural Research (EIAR) are taking on the latest technologies in plant breeding including electronic data capture using Android devices (mobile phones and tablets). The technology is being used as part of a project jointly funded by ACIAR with the Bill and Melinda Gates Foundation to improve their sorghum breeding program. In 2014 the Ethiopian researchers recorded more than 160,000 sorghum data points using the system: this is five times more information than was typically being recorded in the sorghum breeding program. The information is also available for analysis immediately. Increased data and early availability will accelerate the breeding program. This Australian technology, available freely to all researchers, has 'gone viral' in the Ethiopian research system, with EIAR sorghum researchers training their colleagues in other breeding programs and institutes, as well as many students in local universities.

A water testing device known as the Chameleon sensor has been developed as a tool to assist farmers in developing countries in determining how much water is in the soil as an aid to irrigation. The name 'Chameleon' was chosen because it changes colour to reflect its surroundings blue (wet), green (moist) and red (dry). Tests have been underway in Mozambique, Tanzania, Malawi and Zimbabwe. Farmers in Tanzania who are using it are already reporting that it has helped them cut down on irrigation and achieve higher yields.

The Eastern Cape agricultural lands in South Africa are predominantly grazing lands. But in recent times much land has been used for maize production. This practice, which includes repeated deep tillage, has led to erosion and a loss of soil structure, and ultimately abandonment of cropping. Low-value grasses can come to dominate in this situation and the veld does not return to its former productive state. ACIAR research is helping to stabilise the vegetation cover on these lands and bring them back into permanent grazing. The project has also sought to increase the value of the forage during this recovery period, with the introduction of suitable legumes. The challenge was to match legume species to the soil type and the relatively uncontrolled grazing pressures. Trials identified suitable species and showed that the potential impact of their incorporation could be massive. In one instance the legumes provided high-value stock feed during the traditional time of animal starvation, with controlled experiments showing a doubling of live-weight gain for sheep grazing the legumes relative to those on unimproved veld.

MIDDLE EAST AND NORTH AFRICA

Regional overview

The similarity of the farming environments of North Africa and southern Australia is apparent, given that large areas have virtually identical Mediterranean-type climates and rural livelihoods depend on wheat/barley or wheat/barley–sheep/goats-based farming systems. The Mediterranean drylands of the Middle East (including Iraq) and North Africa face many constraints similar to those in the southern or western Australian cereal belts.

The Australian science successes that have underpinned growth in crop–livestock productivity in Australian wheat–sheep farming systems are internationally recognised. Australian public- and private-sector scientists have been partnering with Middle East and North Africa researchers for more than three decades to pilot and adapt Australian best farming practice to the Middle East. In the process, Australian farmers have benefited from a deeper knowledge of the range of adaptation of Australian practices, which strengthens the resilience of Australian farming, and also from the importation of germplasm of leguminous crops and pastures from the region.

In recent years, advances in salinity management in irrigated systems have underlined the relevance of lessons from the Murray–Darling Basin to the irrigated systems of the Middle East and North Africa, including those of the Nile Delta. More recently and to a greater degree than in any other region, there is also considerable interest from Australian farmers in North African agriculture.

Within this context, all ACIAR projects have been funded by the AusAID (now DFAT) budget. However, recent revision of the DFAT–Australian Aid program's priorities has led to reduced allocations to the region. Therefore, an orderly phasing out of ACIAR-supported projects is underway.

Research achievements

A final meeting of stakeholders involved in regional projects was held in September/October 2014. Contact continues with the scientists undertaking conservation farming studies in Iraq. Successful trials are ongoing in farmers' fields, and the findings have been practical and useful for farmers to adopt.

IN THE NATIONAL INTEREST

Research that also benefits Australia.

Overview

ACIAR's primary role and mission are to help developing countries to reduce poverty and achieve sustainable development, through international agriculture research partnerships. Projects funded by the Centre address problems of interest and benefit to developing countries and Australia, through fields in which Australia, or international agricultural research centres, have comparative advantage. ACIAR has from the outset focused on supporting collaborative research where scientists from Australia and their developing-country counterparts work together on mutual problems in agriculture, forestry and fisheries. The intersection of mutual problems and Australia's comparative advantage does result in some projects delivering benefits both to partner countries and Australia. Many of these benefits relate to capacity building, creating opportunities for Australian scientists.

Independent analyses have shown that, as well as returns to partner countries from the research being very high, Australia's benefit from the research is also substantial.

Research achievements

The Cavendish banana, the most popular commercial variety in Australia, is under threat from a fungus, Tropical Race 4 of Panama disease (Foc-TR4). This new form of the disease has just about wiped out commercial Cavendish production in Malaysia and Indonesia, and an outbreak was detected early in 2015 in a north Queensland plantation. In the Philippines Australian researchers and industry partners

are evaluating and gaining experience in the use of groundcovers to manage Foc Race 1, which attacks Australia's Lady Finger bananas. It will also provide valuable data on how to deal with Foc-TR4. They have found that growing groundcovers between the banana plants can provide a favourable environment for a range of fungal antagonists to develop naturally. They also provide additional benefits, such as reducing soil erosion and surface water flow that can carry the fungus from plot to plot, as well as reducing the risk of farm workers carrying the disease in contaminated soil on their shoes.

ACIAR is supporting research in the Philippines that also has benefits in Australia for important fruit and vegetable industries, including the melon industry. The ACIAR Australian component is examining ways to ensure the most efficient washing and sanitation practices are conducted prior to shipping melons to markets. The scientists are examining the best ways to apply fungicides and how to optimize packing house processes to ensure long shelf life and safe melons for consumers. They found that the fungus *Fusarium* was a common potential cause of fruit rot, but the fungicides used had no efficacy against this fungus or others including strains of *Alternaria*, *Rhizopus*, *Penicillium*, *Aspergillus* and *Didymella*. In fact, fruit going through a chlorine dip followed by a fungicide had minimal reduction of these organisms. The most likely explanation of this is the netted surface of the rock melon and the lack of effective fungicide dips. They are now working closely with a major melon producer to trial a newly released fungicide for rockmelons.

Complementary studies have been ongoing to overcome nutritional limitations in the soybean/wheat cropping system used on Vertisol soils in the monsoonal environment of Madhya Pradesh India and on similar soils

in Australia. In the Australian component the initial aim was to reduce the potential adverse effects of excessive applications of feedlot manure (FLM), by determining the appropriate rate of FLM application to meet crop nutrient demand. The study benefited from the development and adoption of equipment capable of spreading manure at lower application rates. A second facet of the Australian work investigated the potential to manipulate nitrogen availability in horticultural crops using inputs of urban green waste with a high carbon:nitrogen ratio. The researchers found that waste application reduced the risk of the nitrogen leaching from the soil.

In a 15-month project leaf samples were collected from Solomon Islands, Samoa, Tonga, Kiribati, Torres Strait Islands and northern Queensland to analyse mineral, protein and carotenoid content and growing properties. Surveys conducted in all project countries to collect knowledge and opinions of leafy vegetables revealed that although certain leafy vegetables were popular in some countries there was a lack of widespread knowledge of their considerable health benefits. Fact sheets promoting the value of local leafy vegetables were well received and publicised the media in the participating countries. In the Torres Strait these were promoted by the *Lift for Life* nutrition/fitness study conducted by a Queensland Health community nutritionist, and a TAFE lecturer conducted a community horticulture demonstration project. Guidelines were developed for further research/promotion of the production and consumption of healthy local food crops in the Pacific and northern Australia.

In research to improve the pastures for livestock in the Western Cape region of South Africa the scientists have identified new grazing legumes that will be of significant benefit to Australian farmers. One in particular, *Lebeckia ambigua*, has proven well adapted to the deep and infertile sands of Western Australia (WA), which receive low and variable rainfall. Agronomic experiments in the wheat belt of WA are optimising the nitrogen-fixing rhizobia essential for this legume while simultaneously developing the first cultivars for commercialisation. Successful introduction of *L. ambigua* across WA and New South Wales (NSW) could be worth in excess of \$50 million per annum in the long term, particularly if the drying climate trends continue and farmers move towards permanent grazing enterprises on some soils.

The rise of private investment in Australian peanut R&D

Australia requires a competitive edge to maintain a viable peanut industry that will survive within global commodity markets. That edge currently takes the form of high-value, 'Hi Oleic' peanut varieties with a unique and highly sought after oil biochemistry. The industry's success, however, owes a great deal to the participation of Australian peanut breeders in ACIAR projects. Research to improve cropping outcomes for smallholder farmers over many years, particularly in India and Indonesia, became a research and development engagement that culminated in the introduction of important traits into both ACIAR's partner countries as well as certain Australian peanut varieties.

The genetic resources came to light through ACIAR's longstanding commitment to germplasm enhancement with partner countries in Asia. The biological traits of Australian peanuts that now provide the competitive advantage for food manufacturers are a high oleic acid content (such that the peanut oil resembles the profile of olive oil) and large kernels, which stay fresher longer. For growers, there are beneficial traits based around high yields, early maturity to avoid drought (which in turn reduces the risks of contamination from dangerous fungal toxins) and resistance to multiple diseases.

The resulting market success of the Australian varieties has encouraged private-sector investment in the Australian peanut-breeding program, with the majority of current costs now absorbed by just one private entity—the Peanut Company of Australia (PCA). PCA is partner in a joint breeding program with two public-sector entities – the Queensland Department of Agriculture and Fisheries, and the Grains Research and Development Corporation.

PCA's manager for breeding and innovation, Dr Graeme Wright, says that the scale of the investment reflects the value that PCA obtains from improved genetics. 'PCA's investment in R&D is all about innovation and trying to differentiate our product in the market,' he says. 'And that comes down largely to plant breeding and developing peanut varieties with traits that the market really wants.'



Peanut Farmer in Lombok, Indonesia. Source: Brad Collis

GLOBAL PROGRAM

ACIAR's key global research partner is the CGIAR, a global partnership that unites organisations engaged in research for a food-secure future. ACIAR is responsible for funding towards the work of CGIAR and some of the non-CGIAR international agricultural research centres (IARCs) on behalf of the Australian Government.

Some of the non-CGIAR partners include CABI, World Vegetable Center (AVRDC), the Asia Pacific Association of Agricultural Research Institutions (APAARI), and the Secretariat of the Pacific Community (SPC).

Highlights

- CIMMYT through SIMLESA is collaborating with the Bill and Melinda Gates Foundation to drive private and public seed company involvement that will help smallholder farmers of Eastern and Southern Africa access new maize varieties and improved varieties of legumes.
- WorldFish is working with organisations in Cambodia, Vietnam and Thailand, seeking to identify strategies that increase the welfare and livelihood value of fish.
- The World Vegetable Center (AVRDC) is leading a project to address major constraints to growing mungbean, to increase the productivity of this highly important crop for Asia and northern Australia.

Overview

International agricultural research for development will be critical for meeting the global food security challenges of the next decade, which include population growth and urbanisation, income and poverty dynamics, malnutrition, growing pressure on natural resources and climate change. ACIAR's funding of the IARCs will ensure appropriate priorities for applying science and technology are developed and applied and that the IARCs' unique role of delivering global public goods such as data and knowledge sharing will be actively addressing these challenges.

The CGIAR continues its multi-year reform process that was instigated in 2008. In the past year ACIAR actively participated in these reform activities through its membership on the Fund Council and its associated Resource Mobilisation Joint Resource Group – the Mid Term Review (MTR) Reference Group.

ACIAR participates in governance and assessment of the CGIAR Research Programs, including the development of a performance monitoring system under the Strategy and Results Framework (SRF). ACIAR also ensures the quality of Australia's contributions to CGIAR by leading a coordinated Australian engagement with CGIAR, primarily through the International Agricultural Research and Development Coordination Group. As well it represents the Pacific Donor Constituency on the CGIAR Fund Council, and participates in and supports activities of the Independent Science and Partnership Council (ISPC) and Independent Evaluation Arrangement (IEA).

ACIAR also seeks additional Australian partnerships to align with the CGIAR research programs to fill gaps and pursue new opportunities.

Achievements

ACIAR currently supports 34 multilateral projects. The contributions of a number of international centres to ACIAR projects are documented throughout the country reports. The IARC presence in countries such as Afghanistan, Iraq and Burma has overcome the hurdles of inaccessibility and provided ACIAR with an avenue to commission research to reach the poor in those countries.

Australia has invested substantially in the SIMLESA project to improve cereal and legume productivity and introduce conservation agriculture to a number of countries in Africa. Some of the achievements of the SIMLESA-I project, involving CIMMYT and ICRISAT, are outlined in the box below. As mentioned in the Eastern and Southern Africa report SIMLESA-2 is now underway.

Work supported by ACIAR through the World Agroforestry Centre (ICRAF) seeks to develop agroforestry to improve the livelihoods of smallfarmers in north-western Vietnam.

The Eastern Gangetic Plains pass through India, Bangladesh and Nepal. CIMMYT is the commissioned organisation of a project seeking to determine whether farm management practices based on the principles of conservation agriculture and the efficient use of water resources would provide a foundation for increasing smallholder crop productivity and resilience. The project has 22 partners from Bangladesh, India, Nepal and Australia and includes CGIAR centres IRRI, IWMI and IFPRI in the region.

In Asia WorldFish is working with organisations in Cambodia, Vietnam and Thailand to assess the relative contribution of fisheries to human welfare with a focus on poor and vulnerable social groups. The group is seeking to identify strategies that increase the welfare and livelihood value of fish. There has been scant research in this area and the project is first undertaking an extensive information-gathering exercise on which to base avenues of later research. The group has created a novel technology using digital tablets for data gathering in the field.

WorldFish is also involved in a project to improve community-based fisheries management (CBFM) in three Pacific island countries – Kiribati, Solomon Islands and Vanuatu. Scoping studies to establish a better picture of the status of fisheries stocks are either complete or in progress; in Vanuatu they will be completed after recovery of communities devastated by Cyclone Pam in early 2015.

The World Vegetable Center (AVRDC) is leading a project to address major constraints to mungbean productivity. Mungbean is one of the most important food legumes in Asia and the most important summer legume in northern Australia. AVRDC is working with the Australian mungbean breeding program and the work is co-funded by ACIAR and the Grains Research and Development Corporation. This activity is the first in what should be a more substantial co-funded project in the years to come.

ACIAR and the African private sector – working to improve farmer access to better maize and legumes

Maize occupies more farmland than any other staple crop in Africa (33 million hectares - 24 per cent of cropping area). Maize productivity across Sub-Saharan Africa (SSA) had stagnated, but CIMMYT and its partners through the SIMLESA projects are changing the situation across many African countries.

ACIAR has supported SIMLESA, and together with the DTMA projects supported by the Bill and Melinda Gates Foundation they are driving private and public seed company collaboration to help smallholder farmers of Eastern and Southern Africa (ESA) access new maize varieties; as well they are introducing improved varieties of legumes. These are vital sources of food security and underpin livelihoods of millions.

Between 2010 and 2014 SIMLESA embarked on developing sustainable maize-legume cropping systems in five countries of ESA, based around conservation agriculture (CA) – with the goal of reaching 650,000 households within 10 years. One objective was to increase the range of maize, legume and fodder/forage varieties available to smallholders, using SIMLESA's partnership strategy for scaling-up certified seed production with seed companies. The program includes:

- developing a 'seed road map' for each collaborating seed company;
- providing local seed companies with germplasm and technical backup for prime seed production;
- creating access to new maize and legume basic and pre-basic seed from the collaborating research centres (CIMMYT, ICRISAT and national agricultural research systems);



SIMLESA field farmers in Chimioi, Northern Mozambique. Source: John Dixon

- providing training opportunities in seed business management, supported by technical back-stopping with information and knowledge sharing and;
- ensuring financial support to popularise the new varieties through demonstrations, field days and media promotion.

So far 26 seed roadmaps have been developed and 33 'best-bet' varieties identified. More than 42 seed companies – mostly small-to-medium enterprises – are now involved in scaling up identified products.

The project scientists have developed and registered a number of drought-tolerant maize and legume varieties, which both governmental and private institutions in the project countries and beyond are now promoting. For example, SIMLESA Mozambique has worked with some seed companies to produce basic and certified seed. Seeds from beans, soybeans, cowpea and pigeon pea were produced in a collaboration involving the Mozambique Institute of Agricultural Research, ICRISAT Mozambique / Malawi and local seed producers.

AUSTRALIAN INTERNATIONAL FOOD SECURITY RESEARCH CENTRE (AIFSRC)

In its fourth full year, the AIFSRC has continued to achieve progress towards its mission of ‘accelerating adoption of agricultural innovations’ through a suite of research projects, capacity-building activities and alliances in Africa. It has successfully developed a monitoring and evaluation framework and evaluated many of its current projects through mid-term reviews.

- A framework to monitor and evaluate AIFSRC’s progress towards achieving the objectives described in the Centre’s strategy has been developed. Results from 2014 have been compiled and are available on the AIFSRC website.
- Two new projects were launched in the 14/15 year and three current projects had mid-term reviews.
- ACIAR commissioned an independent review into the appropriateness, effectiveness and efficiency of AIFSRC as a modality within ACIAR. The reviewers highlighted many of the key achievements of AIFSRC since its inception in 2011.

Highlights

- The CAD\$15 million joint research fund partnership between the AIFSRC and the IDRC—*Cultivate Africa’s Future* (CultiAF)—has approved five projects that began in 2014. Four additional projects have been approved and will commence shortly.
- The Africa Plant Biosecurity Network was launched with its first network meeting in Nairobi. Fifteen Senior Biosecurity Fellow and 30 Associate Fellows from 10 countries across Eastern and Southern Africa met to plan and implement activities under the Australia-Africa Plan Biosecurity Partnership (AAPBP) in 2015/16. The 15 senior fellows will work on specific plant pest and disease problems with Australian partner agencies during the latter half of 2015.
- Continued support for the Australia–Africa Universities Network (AAUN) has resulted in a second round of research partnerships established between African and Australian educational and research bodies under the Partnership Research Development Fund. First round research partnerships are also progressing well.

Overview

AIFSRC was established within ACIAR in October 2011. It has the specific objective of strengthening Australian aid efforts to improve global food security through facilitating delivery and adoption of agricultural innovations (technologies, policies and practices) to smallholder farmers.

While the AIFSRC was established to have an international focus, initial emphasis has been given to food security in Sub-Saharan Africa. ACIAR’s African office in Nairobi (established in 2012 by the AIFSRC) oversees progress of AIFSRC and related ACIAR projects. The AIFSRC engages with a broad range of national and international partners—from researchers through to delivery and extension workers, the public and private sectors, donors, community groups and civil society.

The strategic priorities of the AIFSRC—and its five focus programs (three for research and two for capacity building)—were developed in 2011–2012 in consultation with African, international and Australian stakeholders, and are aligned with and support the African Union's Comprehensive Africa Agriculture Development Programme (CAADP) framework. The AIFSRC's strategies are also informed by and support new agricultural research policies such as the Science Agenda for Agriculture in Africa, developed through the Forum for Agricultural Research in Africa (FARA). FARA is an apex organisation bringing together and forming coalitions of major stakeholders in agricultural research and development in Africa.

Along with delivering innovations to improve food security, AIFSRC research projects explore mechanisms that build a better understanding of the adoption processes within agriculture. These include socioeconomic research into farmer decision-making and risk management, better informing policy development, private-sector engagement and new business systems, gender-responsive agriculture, innovative access to information and knowledge, and increased individual and institutional capacity building.

Research achievements

In 2014–15, efforts were focused on consolidating the Centre's current portfolio of work and reviewing projects that commenced in 2012. The development of the AIFSRC Monitoring and Evaluation Framework has allowed the centre to assess how it is progressing against its objectives whilst mid-term project reviews have analysed the research achievements of specific projects against their project-level objectives.

Good progress has been made by the eight AIFSRC research projects on improving household food and nutrition status through diversifying agricultural systems, establishing sustainable small-scale irrigation systems to improve productivity, and understanding barriers to adoption of agricultural

technologies and innovations, with a focus on women and youth.

In Uganda, at the foothills of Mt Elgon, villagers are participating in an agroforestry project, 'Trees for food security', already active in Ethiopia and Rwanda. They are interested in the concept of using trees to improve soil fertility and to reduce soil erosion, which they say greatly affects the productivity of their agricultural crops. The aim of this project, led by the World Agroforestry Centre, is to encourage and support farmers to grow trees on farms. Previous research has found that crop yields can double by incorporating the right trees and management practices into agricultural systems. This project was reviewed in 2015 and a follow up project has also been developed.

Results from some of these projects are already being disseminated to decision makers through a range of mechanisms, including through policy briefs, workshops and conference side events.

In addition, AIFSRC continues to actively support capacity building in all its projects. The AAPBP held its first Africa Networking Workshop which was attended by 15 senior fellow and 30 associate fellows. These fellows, leaders in their field, will benefit from a range of capacity building initiatives as part of the AAPBP, including short-term placements in Australian plant pest and disease agencies scheduled for late 2015.

The AIFSRC also remains committed to supporting collaborations between academic institutions in Australia and Africa. By working in partnership, researchers from different universities can achieve more than the sum of work produced when operating individually. AIFSRC supports these collaborations through their partnership with the AAUN. AAUN facilitates links between academic institutions in Africa and Australia by hosting international fora and targeted workshops, as well as providing seed funding for research collaborations in several target areas, including food security.

BUILDING RESEARCH CAPACITY

Overview

Building capacity in our partner countries' agricultural research institutes by providing discipline-specific and broader training opportunities is one of ACIAR's key priorities. ACIAR has continued to maintain the number of its postgraduate awards (known as the John Allwright Fellowships), with co-funding from DFAT. These fellowships, along with the John Dillon Fellowships, come under the Australia Awards program. The Australia Awards not only develop skills and knowledge but also build enduring people-to-people links between Australia, our regional neighbours and the broader international community.

Specialised training activities provided through postgraduate and research management fellowships are the focus of ACIAR's training program. A small number of short courses that target specific cross-program issues are also included.

Research capacity of partner country institutions is enhanced through targeting individuals involved in ACIAR projects. These projects are managed by individual research programs, and Fellows receive on-the-job training and may visit Australia for a specific training course. Australian specialists also visit partner countries to present technical training programs.

The ACIAR training program includes the following:

- postgraduate training, which comprises John Allwright Fellowships for postgraduate study in Australia associated with specific ACIAR projects
- support for small in-country research projects, or travel to an international conference to present results of postgraduate research, for Fellowship returnees
- training on research management (John Dillon Memorial Fellowships)
- events funding: provision of financial assistance to organisations or individuals wishing to conduct or attend an event that directly benefits international agricultural research. The aim is to develop the knowledge, skills and capacity required to achieve the mandate of ACIAR and build productive partnerships to benefit the effectiveness of international agricultural research. ACIAR places a high priority on the dissemination and communication of knowledge gained from the financial assistance.

Postgraduate fellowships

John Allwright Fellowships for postgraduate training at Australian universities at the Masters or Doctoral level are awarded to partner-country scientists involved in ACIAR-supported collaborative research projects. ACIAR's research priorities are determined through regular consultation with partner countries. Alignment of postgraduate training with research ensures that the training needs of partner countries are met. Thus, postgraduate studies focus on areas that add value to the theme of the ACIAR project in which the awardee is engaged, but do not directly form part of the project. Fellows may be able to spend up to half their research

project period on fieldwork in their home country. This enables them to ensure that their postgraduate research work is relevant to the project and their home country's needs. It also allows them to maintain their professional and personal networks. The size of this fellowship scheme has increased significantly over recent years, in recognition of the capacity-building benefits provided to partner countries and the impact on regional relationships. During 2014–15 ACIAR supported 137 active fellowships at Australian universities.

Returnee small project awards

Grants up to \$10,000 are available for John Allwright Fellows in-country once they have completed their postgraduate studies and returned home to relevant employment. The grants provide for a postgraduate activity that continues the research done within an ACIAR project, or is related to it. These awards are primarily aimed at developing projects in the returnee's institution, and may catalyse longer-term support. Since 2000, over 90 of these awards have been presented with six being awarded in 2014–15.

John Dillon Memorial Fellowships

The John Dillon Fellowships provide an opportunity for outstanding mid-career agricultural scientists and economists to further develop their careers in Australia. The scholarships aim to develop the leadership skills of Fellows from ACIAR partner countries in agricultural research management, agricultural policy and/or extension technologies through exposure to Australian agriculture across a range of best practice organisations. Since the program's inception in 2002, ACIAR has awarded 104 Fellowships. A group of 10 Fellows (from Bangladesh, China, Indonesia,

Lao PDR, Papua New Guinea, Philippines, Samoa and Vietnam) visited Australia for a 5–6-week period in February–March 2015. The Minister for Foreign Affairs, the Hon Julie Bishop MP, presented each visiting Fellow with a plaque at Parliament House, Canberra. This was a highlight of the visit, and the Fellows also appreciated the networking opportunity and cooperation from all host organisations.

John Allwright and John Dillon Alumni Association

The Alumni Association of ACIAR maintains linkages with all people who have received support through the John Allwright or John Dillon Fellowship programs. Alumni stay involved with ACIAR through various activities, such as playing key roles in ACIAR's partner organisations and projects, or in delivering ACIAR-sponsored training courses and impact assessment activities in partner countries. All Alumni members receive copies of ACIAR technical publications and newsletters.

Australian Volunteers for International Development

During 2014–15, there were 11 Australian volunteers who were associated with ACIAR projects in the following countries: Indonesia, Kiribati, Laos, Papua New Guinea, Timor Leste, Tonga, Vanuatu and Vietnam. This includes three who were placed on specific strategic alliance projects.

During the year ACIAR and **Scope Global Pty Ltd** established a strategic alliance for collaboration focusing primarily on work through the Australian Government's Australian Volunteers for International Development (AVID) program.

The alliance complements the existing structure of the volunteer program and will build on the past experiences and strengths of each organisation, as well as our strong collaboration together through volunteering over many years. The innovative approaches at the core of this agreement will create opportunities for more strategic placements of volunteers in direct support of the Australian aid strategy and respond to recommendations for improvement included in the Office of Development Effectiveness (ODE) 2013 evaluation of the AVID program as well as the 2013 independent ACIAR review.

In May 2015, ACIAR and Scope Global mobilised our first three volunteers under our strategic alliance. Two volunteers, Luke Barron and Alex Basford, are working on the 'From Fishing Village to Aquarium' project with Mars Symbioscience in Indonesia. The volunteers will establish a network of sustainable fish production units, small enough to manage at home, to supply the global aquarium market with ornamental fish. This will provide economic opportunities to local communities, while reducing pressure on native stocks, ameliorating the devastating effects of cyanide fishing and allowing coral reef rehabilitation to take place.

Randal Toonen is in Kiribati on the 'Healthy Gardens in the Pacific' project. Randall is working with local communities and looking for opportunities to pilot agricultural innovations to improve the health of both soils and people in Kiribati. Through projects such as home and school gardens, and linked awareness-raising programs to promote the production and consumption of leafy vegetables, Randal and future volunteers on this project will have the opportunity to make a huge impact on health in Kiribati.

ACIAR also indirectly supports volunteers through our research projects. During 2014–15, there were 8 additional Australian volunteers who were associated with ACIAR projects in the following countries: Indonesia, Kiribati, Laos, Papua New Guinea, Timor Leste, Tonga, Vanuatu and Vietnam.

Crawford Fund training and master classes

Total funding to the Crawford Fund for 2014–15 included an Australian Government allocation (through ACIAR) of \$1,030,100 and \$34,193 from ACIAR for joint training activities. The Crawford Fund sponsored 13 activities in 2014–15 for scientists directly associated with ACIAR projects. These activities were attended by 155 people and had a total budget of \$101,080. ACIAR was also involved with the second Master Class in Vietnam on Agribusiness Research methods and in Communications in India for researchers from developing countries.

COMMUNICATING RESEARCH RESULTS

Overview

It is part of ACIAR's mandate to communicate the results from ACIAR's research programs to boost the awareness of the Centre's activities and the adoption of research outcomes. ACIAR's Communications and Stakeholder Engagement (C&SE) team leads ACIAR's efforts to communicate research results, with strong collaboration with ACIAR's Australian and in-country staff.

ACIAR employs a range of methods to communicate with its key stakeholders and the general public. ACIAR's website is the primary source of information on project activities and outcomes. The site supports an extensive online and print publishing program responsible for a scientific publication series, corporate publications and *Partners* magazine. Free digital downloads of all ACIAR publications and an online ordering system for print copies are available on the website.

Social media is used as a way to promote the activities of ACIAR and our partners, disseminate information and drive traffic to the ACIAR website, which is an important communications tool for ACIAR. Facebook, Twitter, ACIAR blogs and Youtube are used extensively to engage with the broad research for development, agricultural and science sectors nationally and internationally. Social media also acts as a way to connect with specific stakeholder groups and deliver content related to programs, partnerships and initiatives in ways that are innovative and accessible.

ACIAR's blog has become a rich source of stories and a place for a growing number of specialist staff and partners to publish content about project outcomes and program

successes. Youtube acts in a similar way to the blog, allowing short video stories often focused on specific subjects to be accessed and shared across social media platforms.

Stakeholder engagement plays a vital role in ACIAR's communications agenda. ACIAR is working with communications and engagement specialist Sefton and associates to help map our stakeholders, and to evaluate the organisation's engagement needs now and into the future.

The C&SE team values capacity building in all its forms. One of the roles undertaken by the C&SE team is to support our John Dillon Scholarship and the John Allright Fellows. C&SE contributed to the country officer workshop held in Thailand in early June 2015. The workshop involved country managers in the 'skills building' and planning around the communications needs in each country.

During the year ACIAR was actively involved in a number of conferences, market days and workshops. C&SE contribute to these events providing event coordination, communications materials, publicity and media, and logistical support.

Keep up to date

Want more information on the latest events, projects and happenings at ACIAR?

Visit our website <aciarc.gov.au>

Read our blog <aciarblog.blogspot.com.au>

Follow us <twitter.com/ACIARAustralia>

Watch our videos <www.youtube.com/user/ACIARprojects>

Subscribe to our RSS feeds. Get alerts on the latest news and publications as they're released.

MEASURING RESEARCH IMPACTS

Overview

The Impact Assessment Program measures the difference ACIAR's investment makes to research capabilities and the economic wellbeing of our target groups in our partner countries and Australia. The results are used to support the Centre's public accountability, to improve project development and implementation and to provide valuable input into setting priorities for future activities. These activities help improve the accuracy of the information used in assessing research impacts and the effectiveness of the methodology used to quantify investment returns.

The Impact Assessment program commissions three types of assessments on finished projects:

- economic evaluations, published in ACIAR's Impact Assessment Series (IAS), an in-depth analysis of the adoption and impact of research outputs in our partner countries and Australia. Quantitative estimates of the investment returns are provided, as well as a qualitative assessment of social and environmental impacts
- adoption studies of finished-project evaluation usually undertaken by the Australian project leader 3–4 years after the project's completion. These provide ACIAR, and our partner organisations, with a greater understanding of the pathways to change, and why adoption has or has not occurred

- 'impact pathway analysis' to provide an in-depth understanding of the contextual environment, the key stakeholders, pathway linkages, the changes that have occurred, and actions that could be undertaken within the project or program to increase the likelihood of the ultimate goals being reached.

The knowledge gained is also shared through ACIAR-funded and delivered training courses on research evaluation.

Achievements

In 2014–15, reports from the Impact Assessment Program ranged from a review of ACIAR's investment in crop-livestock projects in the Tibet Autonomous Region (TAR), People's Republic of China to investments in cocoa production in Indonesia and Papua New Guinea and an investigation of methods to better capture and evaluate capacity building in ACIAR projects. An Impact Assessment Series report, along with the Adoption studies of ACIAR project outputs for 2014 were published (see Appendix 5), with two more in press.

Impact assessments

ACIAR-funded crop–livestock projects, TAR, People's Republic of China

Since 2002, nine ACIAR projects have broadly targeted the crop–livestock zone in TAR, China, where the challenges of land degradation, access to water and poor agricultural practices result in low crop productivity and poor animal condition.

This impact assessment study has selected four of these projects, which were designed to improve outcomes for women and families who are smallholder farmers growing crops and raising cattle in the lower altitude prefectures of Shannan and Lhasa (3,500–3,700 metres) and the higher altitude Xigaze Prefecture (3,800–4,000 metres).

The study has highlighted some significant gains. For instance, relay sowing of vetch in winter wheat and barley crops can generate fodder without sacrificing food security—a gain for the crop–livestock zone at lower altitudes. In higher altitude areas farmers have intensified barley production and set aside arable land for oats and triticale to produce fodder. In both zones cereal haymaking has been augmented with more-nutritious species, and dairy cattle nutrition has improved through better preparation of fodder, provision of adequate water and the addition of mineral concentrates.

ACIAR partnered with the Tibet Academy of Agriculture and Animal Husbandry Sciences (TAAAS), the Tibet Agricultural Research Institute (TARI) and the Tibet Livestock Research Institute (TLRI) to deliver the crop–livestock projects. TARI and TLRI have further developed and extended initial outputs from ACIAR research using participatory approaches and micro-extension techniques. Capacity building among the scientists of its collaborating institutions is a hallmark of successful ACIAR research projects. Local scientists who learnt through their involvement in the projects are now leading the way in adoption and extension. Agricultural systems thinking is the new norm. The compelling communication of outputs by local scientists to the TAR Poverty Alleviation Office and the Central Government Finance Department have given these entities the confidence to invest in the project technologies, and this move is already having social and environmental benefits for the farmers. This study emphasises that capacity building will be the long-lasting legacy of this 12-year involvement.

In terms of economic impact, the study has calculated the significant economic benefits that the four ACIAR projects have delivered to these poor, largely subsistence communities in TAR. The total investment of \$A8.28 million (present value terms) from ACIAR and its research partners in the four IAS projects has been estimated to produce gross benefits of \$A125.01 million (present value terms), providing a net present value of \$A116.73 million and a benefit:cost ratio of 15.1:1 (over 30 years using a 5 per cent discount rate). The ACIAR investment has been successful. The most pleasing aspect of these findings is that the economic benefits created will flow mainly to women and families who are smallholder fodder and dairy producers.

Adoption of ACIAR project outputs 2014

The **adoption study report**, which summarises the adoption level of outputs from seven projects completed around 2009–10, examined projects in five individual partner countries including China, India, Pakistan, Papua New Guinea and Vietnam. All seven studies, across a diverse range of subjects, revealed medium to high levels of adoption of results.

New technologies or practical approaches were the major outputs for most of these projects. Gains identified include new varieties of plum, peach and nectarine tailored to specific conditions, and improved pest and disease control methods in temperate fruit. To directly benefit food security in partner countries projects reported lifts in yields of peanut with superior varieties in Papua New Guinea and improved wheat harvests in India (with spin-off benefits for Australian farmers) through better integrated management of animal manure and inorganic fertiliser. Similarly research to improve the productivity of meat sheep in India has made significant progress that should lead to optimal productivity from

specific genotypes. Finally, the adoption of raised bed technologies suited to the particular conditions of Pakistan and China has contributed benefits such as greater water use efficiency and better soil health, with consequent improvements in farmers' livelihoods.

The results from the adoption studies reported provide a number of lessons for ACIAR-funded projects. These include the importance of:

- integrated research programs that focus on the production system, value chains, manufacturers of inputs, socioeconomics and pathways of change
- nurturing collaborative partnerships between local organisations, such as research institutes and non-government organisations to effectively deliver adoptable outputs and disseminate knowledge to farmers
- private-sector engagement with research partners to help understand market forces, research priorities, current constraints and future opportunities for research
- recognition of the long timeframes required for adoption of technologies depending upon specific social-cultural factors. For example, in the case of a conservation agriculture project outputs in low-rainfall areas of China, adoption by farmers has been protracted as a result of farmers in these areas following strong cultural norms and because the use of plant residues for feed and fuel is prevalent.

Scoping study: Evaluation and targeting of formal and informal capacity building in ACIAR training and research programs

A scoping study was undertaken to investigate how capacity building within ACIAR's research projects is captured and assessed. Part of this study included a review of literature on the relationship between capacity building and impact from research for development projects with reference to research in agriculture, health and education. Three countries were considered for inclusion in the study: Timor Leste, Myanmar and Vietnam on the basis that ACIAR had a long and continuous presence (Timor Leste and Vietnam), a program of work that encompasses many research areas (Myanmar and Vietnam) and that among research donors, Australia (and ACIAR) is recognised as a significant investor (all three countries). Vietnam was selected on the basis that it ranked highly on all three criteria.

Formal training was documented and projects with significant capacity building components were identified from the Forestry and Fisheries programs in Vietnam, with a focus on two institutions: Research Institute for Aquaculture No 1 (RIA 1) and Forest Science Institute of Vietnam (FSIV)¹.

Informal training components of research projects were identified and a standard procedure developed to calculate the proportion of project expenditure that can be attributed to capacity building. The two institutions in Vietnam, RIA1 and FSIV are also appropriate institutions for further study based on continuous engagement, numerous projects, JAFs and observable change. It was observed that different methods may have to be applied to bilateral and multilateral projects. Based on an analysis of the Vietnamese Institutions and

the projects they have implemented, in-project investment in capacity building was in the range of 10 per cent to 40 per cent of total ACIAR investment in these projects.

Capacity building and research activities in projects are so interlinked that it is not possible to separate either their impacts or even their costs, in a theoretically sound and empirically tractable way. More subjective ways of assessing the impact of capacity building were applied in deriving our estimates above. The way in which capacity building influences the impact pathway is discussed with an objective of strengthening how the links between capacity building and its utilisation are identified and described as objectively as is possible. The approach was to build from existing methods for the attribution of research impact to capacity building as described by authors (Gordon and Chadwick 2007).

The way in which capacity building influences the impact pathway is discussed, with an objective of strengthening how the links between capacity building and its utilisation are identified and described as objectively as is possible. Our approach has been to build from existing methods for the attribution of research impact to capacity building as described by Gordon and Chadwick (2007).

Methodologies for assessing institutional change with respect to research for development were reviewed and a protocol was suggested for further investigation with a longer view to better understand the relationship between capacity building and impact.

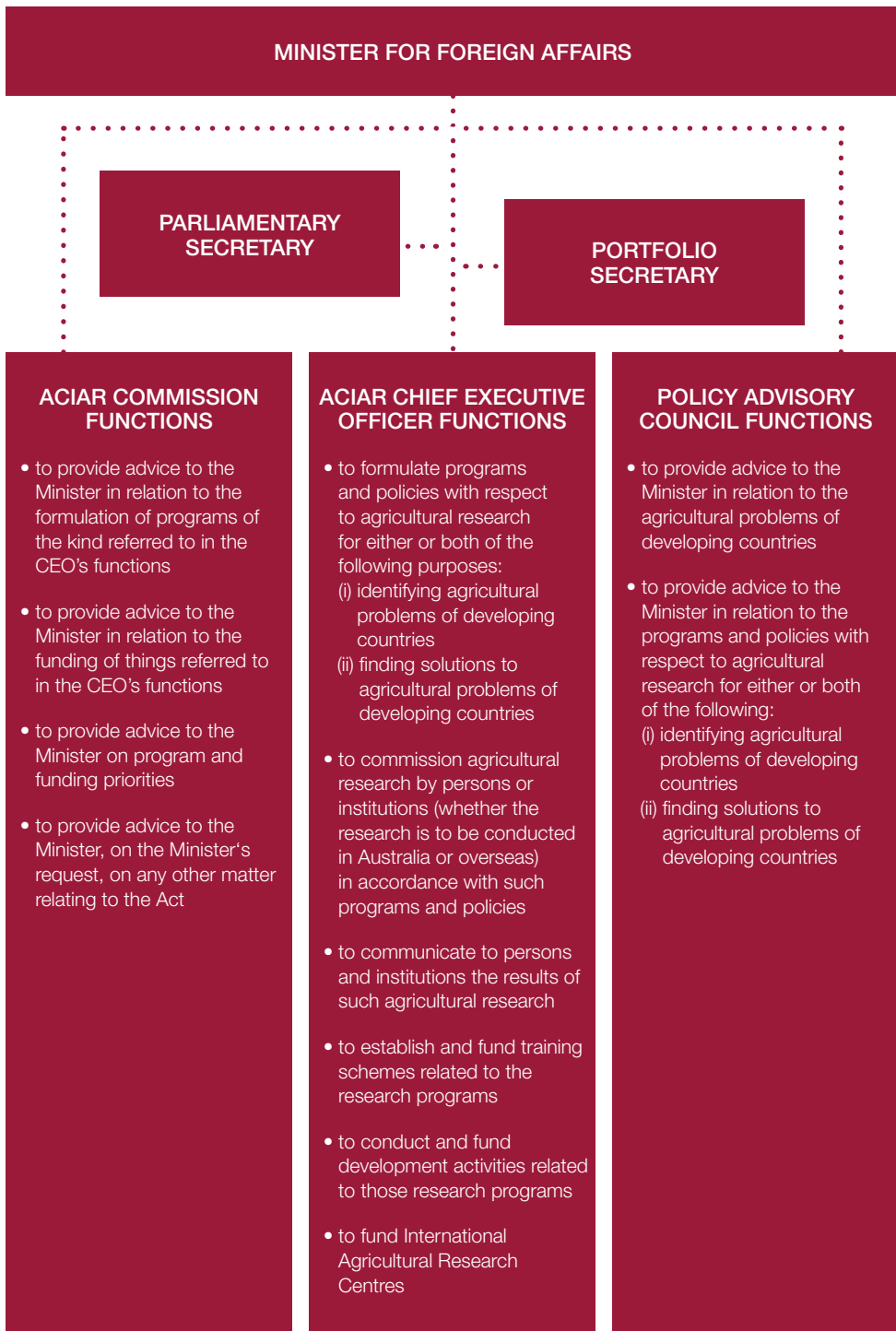
Capacity building in evaluation and impact assessment

Partner-country capacities to evaluate agricultural research initiatives were enhanced with the delivery of a workshop relating to the Pakistan Agriculture Sector Linkages Program (ASLP). The training workshop, titled Evaluation Training for Agricultural Research Projects: Designing and Implementing Projects to Make a Difference, was designed for project staff, and had a strong focus on evaluation within the project life cycle. The workshop helped increase the 18 participants' understanding of frameworks and processes for developing and implementing project evaluation within the ASLP and importantly for use in their wider professional work as researchers for development. Shorter training sessions were also provided to researchers in Tibet Autonomous Region, People's Republic of China and with groups of Australian project team members.



Gropado Mondol is 60 years old and stands in front of his onion crop in Sonaikuri village, Bangladesh. Source: Ashleigh Conor, ACIAR

CORPORATE GOVERNANCE



Chief Executive Officer

The office and role of the Chief Executive Officer (CEO) is established in Sections 4A and 5 of the *Australian Centre for International Agricultural Research Act 1982* (ACIAR Act). The CEO manages the affairs of the Centre and its staff, subject to, and in accordance with, any directions given by the Minister under Section 5. Specifically, the CEO's functions are to:

- a. formulate programs and policies with respect to agricultural research for either or both of the following purposes:
 - i. identifying agricultural problems of developing countries
 - ii. finding solutions to agricultural problems of developing countries
- b. commission agricultural research by persons or institutions (whether the research is to be conducted in Australia or overseas) in accordance with such programs and policies
- c. communicate to persons and institutions the results of such agricultural research
- d. establish and fund training schemes related to the research programs referred to above
- e. conduct and fund development activities related to those research programs
- f. fund international agricultural research centres.

The Governor-General appoints the CEO for a term of up to seven years and the appointment is subject to the determinations of the Remuneration Tribunal. The Tribunal has determined the CEO to be an officer in the Principal Executive Officer (PEO) structure, at PEO Band C. The Minister is the identified Employing Body for remuneration purposes.

The CEO holds responsibilities as Head of Agency as set out in the *Public Governance, Performance and Accountability Act 2013* and Part 9 of the *Public Service Act 1999* respectively. The CEO is not subject to direction by the Commission in relation to the performance of functions or exercise of powers under these Acts.

Dr Nick Austin was the CEO during the 2014–15 financial year. Dr Austin commenced a 5-year term on 31 July 2009, and was reappointed in 2014.

ACIAR's CEO is directly responsible to the Minister for managing the affairs of ACIAR in a way that provides proper use of the Commonwealth resources for which the CEO is responsible. The Agency Head is also responsible for managing the agency with direct accountability to the Australian Government.

CEO remuneration

The remuneration of the CEO is subject to the relevant determinations of the Remuneration Tribunal. These provisions enable the Minister to determine the total remuneration, superannuation salary and performance pay components of the remuneration package, within the parameters of Remuneration Tribunal Determination 2013/09.

The CEO's remuneration package at 30 June 2015 consisted of:

- base salary of \$242,819
- superannuation with an employer contribution of 10.25 per cent of base salary
- other allowances.

ACIAR Commission

The Commission for International Agricultural Research, established in Section 7 of the ACIAR Act provides strategic advice to the Minister on ACIAR's operations. The functions of the Commission, as set out at Section 9 of the ACIAR Act, are to provide advice to the Minister:

- in relation to the formulation of programs of the kind referred to in the CEO's functions
- in relation to the funding of things referred to in the CEO's functions

- on program and funding priorities
- on the Minister's request, on any other matter relating to the Act.

Commission composition

Under Section 8 of the ACIAR Act, the Commission consists of a Chair and six other Commissioners. Details on Members of the Commission follow.

Commission meetings

The Commission met five times during the 2014–15 financial year:

Meeting	Date	Location
27th meeting	15 August 2014	Canberra
28th meeting	2 September 2014	Canberra
29th meeting	2-3 December 2014	Canberra
30th meeting	6 March 2015	Canberra
31st meeting	12 May 2015	Port Moresby

Commission members as at 30 June 2015



Mr Don Heatley OAM Chair

Mr Heatley is a fifth generation north Queensland cattle farmer with two stations and 8,000 head of cattle on the lower Burdekin River. The family business has fine-tuned its production systems over the time of Mr Heatley's management to produce beef for highly specialised markets in Korea, Japan and the United States, giving him a strong understanding of international agribusiness value chains. Mr Heatley is a passionate and committed advocate for both promotion of Australian agribusiness interests overseas

and investing in the strengthening of domestic agribusinesses in developing countries. He has more than 30 years' experience promoting the Australian beef industry internationally, including through roles on state livestock councils, the Cattle Council of Australia and as Chair of Meat and Livestock Australia. Mr Heatley has taken a strong personal interest in provision of research and development support to domestic beef industries throughout Southeast Asia and the Middle East. He has travelled extensively throughout these regions representing the Australian beef industry with regional governments and industry.

Appointed: 25 July 2014 for 2 years
Meetings attended: 5



Mr John Cook Commissioner

Mr Cook has more than 20 years' experience in the food and agribusiness industries with Kellogg's, Burns Philp, Berri Limited, Australian Pork Limited and Golden Circle. He is a Principal Project Consultant with Business for Millennium Development, an independent Australian based not-for-profit organisation that encourages and facilitates inclusive business activities that contribute to the Millennium Development Goals. He has held a variety of senior management positions across Asia. Mr Cook has been a Member of the Agri-Food Council of Australia, a Trustee and Director of the Australian Food Foundation, an Executive Committee Member of the Grocery Manufacturers of Australia and a Councillor of the NSW Chamber of Manufacturers. He has been a Director of the Australian Food and Grocery Council and a Member of the Victorian Food Industry Consultation Group. From 2000-2003, Mr Cook undertook a three-year term as a non-executive director of the Melbourne Markets Authority, a role which led to his serving as the Executive Chairman of the food industry's e-commerce initiative Fresh Chain Limited.

Appointed: 25 July 2014 for 2 years
Meetings attended: 4



Ms Lucinda Corrigan Commissioner

Ms Corrigan is a Director of Rennylea, a leading beef genetics business, running 3,000 head of cattle across five properties in the Murray Valley of NSW. Rennylea supplies genetic products to commercial producers across Australia and to international markets. Ms Corrigan has skills and experience in research and development, genetics, natural resource management, communications, marketing and advocacy, and for 20 years has served as a non-executive director on agrifood industry bodies and innovation companies. During the last decade she has been a director of four

cooperative research centres (CRCs) and was Deputy Chairman of the Future Farm Industries CRC, retiring in December 2011. She is Chair of the advisory committee of the Graham Centre for Agricultural Innovation, a partnership between Charles Sturt University and NSW Department of Primary Industries, which provides multi-disciplinary and integrated research to increase the profitability of the grain and livestock industries. In the Holbrook community, she is convenor of the local beef group's activities. She is a Fellow of the Australian Institute of Company Directors and the Australian Rural Leadership Foundation. She has also received several awards: Agribusiness Leader for Women in Australian Agribusiness; NAB Agribusiness Primary Producer of the Year and the Helen Newton Turner Medal for contribution to Animal Breeding and Genetics.

Appointed: 25 July 2014 for 2 years
Meetings attended: 5



Dr Tony Gregson Commissioner

Dr Gregson is a grain grower from Victoria's Wimmera region with an extensive science and corporate research management background. He currently chairs Plant Health Australia and formerly chaired the Board of Trustees for Bioversity International, which provides scientific evidence of the role that on-farm and wild agricultural and forest biodiversity can play in a more nutritious, resilient, productive and adaptable food and agricultural system. He is an Adjunct Professor in Environmental Management at the University of Ballarat and a Fellow of the Australian Academy of Technological Sciences and Engineering, Chairman of the University of Melbourne, School of Botany Foundation and a director of Rural Industries Skills Training based in Hamilton, Victoria. He is a former chairman of two CRCs, a former inaugural member of the CSIRO and Grains Research and Development Corporation Boards, and a former member of the International Maize and

Wheat Improvement Centre, Australian Nuclear Science and Technology Organisation, and Rural Finance Corporation of Victoria Boards.

Appointed: 25 July 2014 for 2 years
Meetings attended: 5



Ms Catherine Marriott Commissioner

Catherine has worked in Agriculture her whole life and is continuing to make a valued contribution to the northern cattle industry, both here in Australia and also Asia. She uses her Rural Science Degree to help her understand the technical aspects of agriculture, whilst improving policy, research relevance and market access through her role as the EO for the Kimberley Cattleman's Association.

Throughout her career, she has developed skills in communication, project management, stakeholder engagement, corporate governance and community development. These skills have helped Catherine building international relationships through on the ground project delivery. She is passionate about living and learning and sharing her knowledge and experiences with others.

Catherine is a graduate of the Australian Rural Leadership Program, a Graduate of the Australian Institute of Company Directors and was the 2012 RIRDC Rural Women's Award Recipient and the National Runner-up.

As a board director on a number of International Federal Boards, Catherine is using her understanding of strategy, leadership, policy direction and business to create influence, not only here in Australian agriculture, but also agriculture globally.

Appointed: 25 July 2014 for 2 years
Meetings attended: 5



Dr Joanne Daly Commissioner

Dr Joanne Daly is a Fellow with CSIRO in the areas of agriculture and national research collections. Her immediate past role was as Group Executive, Agribusiness (2007–2010) on the CSIRO Executive. Her earlier career was as a senior researcher in agricultural sciences, particularly genetics and evolution. She has been on a range of advisory committees, and boards in Australia in agriculture, food, biosecurity and digital platforms. She has chaired GBIF, an international inter-governmental body in biodiversity informatics that aimed to make global biodiversity data freely available on-line. She is a Fellow of the Australian Academy of Technological Sciences and Engineering and was awarded the Public Service Medal in 2002 for her work on national research priorities.

Appointed: October 2009 for 3 years

Reappointed 29 October 2012 for 3 years.
Meetings attended: 4

Commission performance

Major milestones for the Commission during 2014–15 included:

- Endorsement of ACIAR's position paper on engagement with the private sector
- Input into the development of ACIAR's gender strategy
- Endorsement of ACIAR's Annual Operational Plan 2014–16
- Endorsement of ACIAR's Annual Strategy Refresh
- Input into the review of ACIAR's Food Security Centre.

Disclosure of interests

Commissioners are required to disclose to the Minister and to the Commission any direct or indirect pecuniary interest that may conflict with the proper performance of the Commissioners' functions. A Commissioner who has an interest in a matter being considered by the Commission must not be present during any deliberation by the Commission on the matter and must not take part in any decision of the Commission with respect to the matter. The disclosure and the nature of the interest are recorded in the Commission meeting minutes, which are available for consideration by the Centre's auditors.

Ministerial directions

Written directions may be given to the CEO by the Minister regarding the exercising of his powers or the performance of his functions. This includes directions with respect to the commissioning of particular research. In 2014–15 there were no directions given.

Commission costs

The direct cost of Commission operations during 2014–15 was \$128,740 including fees, travel and other meeting expenses. The CEO's salary and other management costs are not included. The comparative figure for 2013–14 for the Commission was \$61,605.

Fees for the Chair and Members of the Commission are set by the Remuneration Tribunal. The daily fees for the Chair and Members (other than the CEO) were \$922 and \$692 respectively as at 30 June 2015.

Policy Advisory Council

The Policy Advisory Council is established under Section 17 of the ACIAR Act and provides advice to the Minister for Foreign Affairs on strategic aspects of national and regional development. The Council's functions are to provide advice to the Minister regarding:

- agricultural problems of developing countries
- programs and policies with respect to agricultural research for either or both of the following purposes:
 - identifying agricultural problems of developing countries
 - finding solutions to agricultural problems of developing countries.

The Council's role utilises partner countries' stakeholder knowledge to provide a valuable overview for advising the Minister, the Commission and the Centre on matters including:

- national and regional development constraints
- opportunities for research and development collaboration
- national and regional research priorities, particularly those of ACIAR's partner countries
- the matching of Australian expertise (Australia's competitive advantage) with these priorities
- modes of operation for ACIAR
- sources of national and international expertise.

Council composition

The Council's membership is limited to 13, comprising a President, the Secretary of the Department of Foreign Affairs and Trade or his nominee, and no less than nine, nor more than 11 other members appointed by the Minister. Predominantly, members are appointed from stakeholder organisations in partner countries to bring a range of agricultural and development experience. Under the ACIAR Act the Minister is required to ensure that a substantial number of the Council members are residents of countries other than Australia, having regard for the knowledge of appointees concerning the agricultural problems of developing countries or their experience in organising or conducting agricultural research.

Council meeting

Each year the Council holds a meeting in Australia over several days to discuss areas related to its role and functions. During 2014–15 the Council met in Canberra on 1 September 2014. On Tuesday 2 September, the Council participated in a roundtable discussion with ACIAR's senior managers, followed by a joint meeting with the Commission and meeting with the Minister for Foreign Affairs, the Hon Julie Bishop MP. The program included meetings and field visits with Australian research providers and stakeholders in Western Australia during 3 – 5 September 2014.

At its meeting the council gave priority consideration to:

- the role of Australia's aid policy and performance framework
- Australia's economic diplomacy agenda
- ACIAR's strategic plan
- ACIAR's engagement with the private sector.

Council membership (as at 30 June 2015)

Member	Term of appointment
Professor Kym Anderson AC	President Appointed President 1 October 2014 – 30 September 2017
Mr Blair Exell Nominee of the Secretary, Department of Foreign Affairs and Trade Canberra AUSTRALIA	Ex-officio member
Dr Subanna Ayyappan Director General Indian Council of Agricultural Research Department of Agricultural Research and Education New Delhi INDIA	Appointed member 19 July 2010 – 18 July 2013 5 August 2013 – 4 August 2016
Sir Brown Bai Managing Director Tola Investments Limited Gordons PAPUA NEW GUINEA	Appointed member 7 March 2005 – 6 March 2008 15 May 2008 – 14 May 2011 22 August 2011 – 21 August 2014 22 August 2014 – 21 August 2017
Mr Xaypladeth Choulamany Director General Department of Agriculture Vientiane LAO PDR	Appointed member 22 August 2014 – 21 August 2017
Dr Leah Buendia Director, Policy Coordination and Monitoring Division Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development Los Baños THE PHILIPPINES	Appointed member 22 August 2014 – 21 August 2017
Dr Haryono Director General Indonesian Agency for Agricultural Research and Development Jakarta INDONESIA	Appointed member 4 September 2012 – 3 September 2015
Dr Jia Jingdun Director General China Rural Technology Development Centre Ministry of Science and Technology Beijing PEOPLE'S REPUBLIC OF CHINA	Appointed member 10 March 2003 – 9 March 2006 10 March 2006 – 9 March 2009 18 September 2009 – 17 September 2011 17 April 2013 – 16 April 2016

Member	Term of appointment
Dr Ouk Makara Director Cambodian Agricultural Research and Development Institute Phnom Penh CAMBODIA	Appointed member 17 April 2013 – 16 April 2016
Dr Nguyen Van Bo President Emeritus Vietnam Academy of Agricultural Sciences Hanoi VIETNAM	Appointed member 1 March 2004 – 28 February 2007 1 May 2007 – 30 April 2010 19 July 2010 – 18 July 2013 5 August 2013 – 4 August 2016
The Hon. Professor Ruth Oniang'o SS DSM Founder Rural Outreach Program Editor-In-Chief African Journal of Food, Agriculture, Nutrition and Development Nairobi KENYA	Appointed member 7 July 2010 – 6 July 2013 5 August 2013 – 4 August 2016
Dr Jimmie Rodgers Noumea NEW CALEDONIA	Appointed member 4 September 2012 – 3 September 2015
Dr Iftikhar Ahmad Chairman Pakistan Agricultural Research Council Islamabad PAKISTAN	Appointed member 22 August 2014 – 21 August 2017

Financial accountability and compliance

ACIAR, as a statutory authority, is subject to the policy guidelines determined by government from time to time regarding accountability, reporting, review and general operations. The agency is accountable through the Minister to Parliament. It is also subject to government financial and accounting policies and procedures. Staff members are employed under the *Public Service Act 1999*. Within these constraints, the Centre has the power to do all things it considers appropriate for the performance of its statutory functions.

ACIAR's authority derives from the *Australian Centre for International Agricultural Research Act 1982* (ACIAR Act). Financial powers and duties are also drawn from the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and subordinate Rules, and from the *Public Service Act 1999* in the case of staffing.

The Centre follows accounting practices in accordance with the PGPA Act, other related legislation, and recognised accounting standards. ACIAR's financial statements are presented in accrual accounting format in the 'Financial Statements' section of this report. The financial statements have been audited by the Australian National Audit Office.

Insurances

Primary corporate insurance for the Centre is provided through Comcover as the manager of the Commonwealth's insurable risks. Comcover's coverage includes general and products liability, professional indemnity, CEO's and officers' liability, property loss and damage, personal accident and official travel. The insurance premium for 2014–15 was \$28,891 (excluding GST). The premium paid for 2013–14 was \$24,043 (excluding GST).

Liability and professional indemnity insurances were not invoked in 2013–14.

Risk management and business continuity planning

The Audit Committee is responsible for monitoring for risk management and for business continuity planning.

Audit Committee

ACIAR's Audit Committee is established in accordance with Section 45 of the PGPA Act.

The committee's primary role is to provide independent assurance to the Chief Executive Officer on ACIAR's financial and performance reporting responsibilities, risk oversight and management, and system of internal control.

Four Audit Committee meetings were held in 2014–15. Audit Committee membership and attendance during the year were as follows:

Member		Meetings eligible to attend	Meetings attended
Ms Anthea Tinney	Chair/External Member (appointed 12 September 2013)	4	4
Mr Tony Bartlett	ACIAR, Research Program Manager, Forestry (appointed 14 September 2012)	4	4
Ms Joanna Hicks	ACIAR, Knowledge Manager (appointed 22 November 2013)	4	3
Mr Albert Blair	ACIAR, Chief Finance Officer (ex-officio, commenced 23 May, 2010)	4	4

Each committee meeting was supported by advisers from ACIAR external auditors (Australian National Audit Office), internal auditors (Ernst & Young) and relevant agency staff with secretariat support provided by the ACIAR finance team.

Internal audit

Internal audit forms an important part of ACIAR's governance framework, providing an integral contribution to governance, risk management and control. In 2014–15, internal audit activity consisted of reviews of ACIAR's risk management, procurement and key financial processes.

All recommendations arising from these reviews were either satisfactorily addressed during the year or were in the process of being addressed.

Countering fraud

ACIAR's fraud prevention, investigation, reporting and data collection procedures and processes meet our specific needs and comply with Commonwealth Fraud Control Guidelines.

ACIAR's fraud control plan is focused on raising awareness among staff, through fraud prevention training, fostering an ethical and professional working environment aligned with the APS Values and APS Code of Conduct, and maintaining strong internal control and audit processes that reduce fraud risks.

The Audit Committee is responsible for overseeing implementation of the fraud control plan. The plan is brought to the attention of new staff as part of ACIAR's induction process and is available electronically to all staff.

The CEO's Fraud Compliance Statement follows.



Australian Government
Australian Centre for
International Agricultural Research

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ACIAR House, 38 Thynne Street
Fleming Park, Brisbane ACT 2517
T (61 2) 6217 0500
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E aci@aci.gov.au
ABN 54 864 955 427

11 September 2015

Statement by the Chief Executive Officer: Certification of compliance with the Commonwealth Fraud Control Guidelines 2011

I, Nick Austin, certify that I am satisfied that for 2014-15, the Australian Centre for International Agricultural Research had in place:

- fraud risk assessments and a fraud control plan; and
- appropriate fraud prevention, detection, investigation, reporting and data collection procedures and processes

that met the specific needs of the agency and complied with the Commonwealth Fraud Control Guidelines 2011.

Nick Austin
Chief Executive Officer

ACIAR

Research that works for developing
countries and Australia

www.aciar.gov.au

Chief Finance Officer's review

ACIAR's operations are split between administered and departmental activities. Departmental activities involve the use of assets, liabilities, income and expenses controlled or incurred by ACIAR in its own right (costs of running the business). Administered activities involve the management or overseeing by ACIAR, on behalf of the Australian Government, of items controlled or incurred by the government (program delivery).

ACIAR's departmental and administered activities are segregated in the financial statements.

Departmental activity

The net operating result (cost of services) for 2014–15 was a deficit of \$0.240 million (2013–14: deficit \$0.338 million). The deficit arises due to the fact that funds appropriated for capital purposes are credited directly to reserves, whereas depreciation and amortisation and other asset write-downs of capital items are expensed. Excluding depreciation, amortisation and other asset write-downs, the net operating cost was zero (2013–14: zero).

Revenue was mainly a direct appropriation of \$9.802 million (2013–14: \$10.334 million) supplemented by other income of \$1.428 million (2013–14: \$0.240 million). Other income is mostly fees derived for the management of research monies received under separate agreements or records of understanding with external parties. The main components of departmental expenditure (\$11.470m; 2013–14: \$10.912 million) were staff costs \$7.587 million, operating expenses (e.g. property expenses, travel, IT, communications etc.) \$3.643 million, and depreciation and amortisation of \$0.240 million.

Administered activity

Total administered funds appropriated to ACIAR for 2014–15 was \$86.289 million (2013–14: \$83.720 million). The 2014–15 appropriated funds were fully utilised. ACIAR received an additional \$21.331 million (2013–14: \$31.489 million) under separate agreements or records of understanding with external parties.

Total program expenditure for 2014–15 was \$109.999 million (2013–14: \$107.242 million). This included \$23.811 million (2012–13: \$23.657 million) expenditure of monies received under separate agreements or records of understanding with external parties (mainly DFAT).

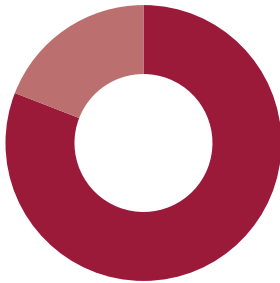
The following pie charts present a summary picture of total departmental and administered revenue and expenditure for 2014–15 compared with 2013–14. Administered revenue included in appropriation revenue is the non-lapsing portion of the total available administered appropriations as approved by government.

Accounting policies

ACIAR complies with relevant accounting standards and legislative reporting requirements.

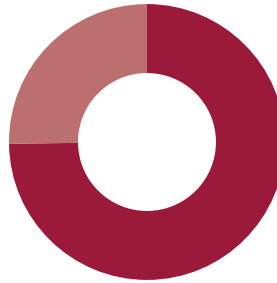
ACIAR revenue and expenditure

ACIAR revenue 2014–15



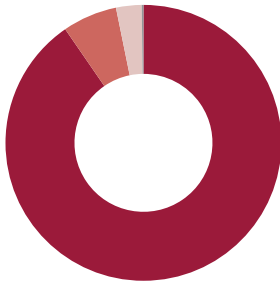
- Appropriation - 80.9%
- External funds - 19.1%

ACIAR revenue 2013–14



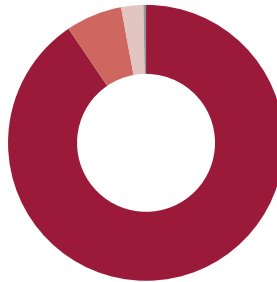
- Appropriation - 74.8%
- External funds - 25.2%

ACIAR expenditure 2014–15



- International development assistance - 90.4%
- Employees - 6.4%
- Suppliers - 3.0%
- Depreciation - 0.2%

ACIAR expenditure 2013–14



- International development assistance - 90.5%
- Employees - 6.6%
- Suppliers - 2.6%
- Depreciation - 0.3%



Carolina Mwaluko (pictured at right) works as a “community vaccinator” in her village in central Tanzania, administering a thermotolerant vaccine as an eye drop to chickens in exchange for a small fee from farmers. Vaccination programs against Newcastle disease, a key production constraint in many developing countries, allow chicken flocks to increase in size and households to benefit from the sale or consumption of poultry products. Since Carolina was trained in May 2014, local traders have noticed the greater availability of chickens for sale and the reduced risk of disease amongst birds in transit to regional markets. Sustainable Newcastle disease control programs are part of an integrated approach to increasing income and improving nutrition for households in Tanzania and Zambia. Source: Robyn Alders, University of Sydney

FINANCIAL STATEMENTS

Independent Auditor's Report



INDEPENDENT AUDITOR'S REPORT

To the Minister for Foreign Affairs

Report on the Annual Financial Statements

I have audited the accompanying annual financial statements of the Australian Centre for International Agricultural Research for the year ended 30 June 2015, which comprise:

- Statement by the Chief Executive and Chief Finance Officer;
- Statement of Comprehensive Income;
- Statement of Financial Position;
- Statement of Changes in Equity;
- Cash Flow Statement;
- Schedule of Commitments;
- Administered Schedule of Comprehensive Income;
- Administered Schedule of Assets and Liabilities;
- Administered Reconciliation Schedule;
- Administered Cash Flow Statement;
- Schedule of Administered Commitments; and
- Notes comprising a Summary of Significant Accounting Policies and other explanatory information.

Accountable Authority's Responsibility for the Financial Statements

The Chief Executive of the Australian Centre for International Agricultural Research is responsible under the *Public Governance, Performance and Accountability Act 2013* for the preparation and fair presentation of annual financial statements that comply with Australian Accounting Standards and the rules made under that Act. The Chief Executive is also responsible for such internal control as is necessary to enable the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on the financial statements based on my audit. I have conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. These auditing standards require that I comply with relevant ethical requirements relating to audit engagements and plan

and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the Accountable Authority of the entity, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Independence

In conducting my audit, I have followed the independence requirements of the Australian National Audit Office, which incorporate the requirements of the Australian accounting profession.

Opinion

In my opinion, the financial statements of the Australian Centre for International Agricultural Research:

- (a) comply with Australian Accounting Standards and the *Public Governance, Performance and Accountability (Financial Reporting) Rule 2015*; and
- (b) present fairly the financial position of the Australian Centre for International Agricultural Research as at 30 June 2015 and its financial performance and cash flows for the year then ended.

Australian National Audit Office



Jodi George
Senior Director

Delegate of the Auditor-General

Canberra

11 September 2015

Statement by the Chief Executive Officer and Chief Finance Officer

AUSTRALIAN CENTRE FOR INTERNATIONAL AGRICULTURAL RESEARCH

STATEMENT BY THE CHIEF EXECUTIVE OFFICER AND CHIEF FINANCE OFFICER

In our opinion, the attached financial statements for the year ended 30 June 2015 comply with subsection 42(2) of the *Public Governance, Performance and Accountability Act 2013* (PGPA Act), and are based on properly maintained financial records as per subsection 41(2) of the PGPA Act."

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Australian Centre for International Agricultural Research will be able to pay its debts as and when they fall due.

Signed 

Nick Austin
Chief Executive Officer

11 September 2015

Signed 

Albert Blair
Chief Finance Officer

11 September 2015

Statement of Comprehensive Income
for the period ended 30 June 2015

	Notes	2015 S'000	2014 S'000
NET COST OF SERVICES			
Expenses			
Employee benefits	4A	7,587	7,485
Supplier	4B	3,643	3,087
Depreciation and amortisation	4C	240	338
Losses from asset sales	4D	-	2
Total expenses		<u>11,470</u>	<u>10,912</u>
Own-Source Income			
Own-source revenue			
Sale of goods and rendering of services	5A	1,398	211
Other revenue	5B	30	29
Total own-source revenue		<u>1,428</u>	<u>240</u>
Net cost of services		<u>10,042</u>	<u>10,672</u>
Revenue from Government	5C	9,802	10,334
Deficit attributable to the Australian Government		<u>(240)</u>	<u>(338)</u>
OTHER COMPREHENSIVE INCOME			
Items not subject to subsequent reclassification to net cost of services			
Changes in asset revaluation surplus		(153)	43
Total comprehensive income		<u>(153)</u>	<u>43</u>
Total comprehensive loss attributable to the Australian Government		<u>(393)</u>	<u>(295)</u>

The above statement should be read in conjunction with the accompanying notes.

Statement of Financial Position
as at 30 June 2015

	Notes	2015 \$'000	2014 \$'000
ASSETS			
Financial Assets			
Cash and cash equivalents	7A	84	83
Trade and other receivables	7B	3,678	3,676
Total financial assets		<u>3,762</u>	<u>3,759</u>
Non-Financial Assets			
Land and buildings	8A,C	992	431
Property, plant and equipment	8B,C	300	440
Intangibles	8D,E	48	107
Other non-financial assets	8F	96	136
Total non-financial assets		<u>1,436</u>	<u>1,114</u>
Total assets		<u>5,198</u>	<u>4,873</u>
LIABILITIES			
Payables			
Suppliers	9A	364	332
Other payables	9B	754	322
Total payables		<u>1,118</u>	<u>654</u>
Provisions			
Employee provisions	10A	2,003	1,841
Total provisions		<u>2,003</u>	<u>1,841</u>
Total liabilities		<u>3,121</u>	<u>2,495</u>
Net assets		<u>2,077</u>	<u>2,378</u>
EQUITY			
Parent Entity Interest			
Contributed equity		1,578	1,486
Reserves		112	751
Retained surplus		387	141
Total equity		<u>2,077</u>	<u>2,378</u>

The above statement should be read in conjunction with the accompanying notes.

Statement of Changes in Equity
for the period ended 30 June 2015

	Retained earnings		Asset revaluation surplus		Contributed equity/capital		Total equity	
	2015	2014	2015	2014	2015	2014	2015	2014
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Opening balance								
Balance carried forward from previous period	141	479	751	708	1,486	1,231	2,378	2,418
Adjusted opening balance	141	479	751	708	1,486	1,231	2,378	2,418
Comprehensive income								
Deficit for the period	(240)	(338)	n/a	n/a	n/a	n/a	(240)	(338)
Other comprehensive income	-	-	(153)	43	-	-	(153)	43
Total comprehensive income	(240)	(338)	(153)	43	-	-	(393)	(295)
Transactions with owners								
Distributions to owners								
Returns of capital:								
Equity injection - Appropriation	-	-	-	-	(160)	-	(160)	-
Contributions by owners								
Departmental capital budget	-	-	-	-	249	254	249	254
Equity injection - Appropriation	-	-	-	-	3	1	3	1
Transfers between equity components	486	-	(486)	-	-	-	-	-
Total transactions with owners	486	-	(486)	-	92	255	92	255
Closing balance as at 30 June	387	141	112	751	1,578	1,486	2,077	2,378

The above statement should be read in conjunction with the accompanying notes.

Cash Flow Statement
for the period ended 30 June 2015

	Notes	2015 S'000	2014 S'000
OPERATING ACTIVITIES			
Cash received			
Appropriations		9,676	10,250
Sales of goods and rendering of services		1,405	211
Net GST received		248	221
Total cash received		<u>11,329</u>	<u>10,682</u>
Cash used			
Employees		7,388	7,471
Suppliers		3,754	3,169
Total cash used		<u>11,142</u>	<u>10,640</u>
Net cash from operating activities	11	<u>187</u>	<u>42</u>
INVESTING ACTIVITIES			
Cash received			
Proceeds from sales of property, plant and equipment		-	1
Total cash received		<u>-</u>	<u>1</u>
Cash used			
Purchase of property, plant and equipment		219	116
Total cash used		<u>219</u>	<u>116</u>
Net cash (used by) investing activities		<u>(219)</u>	<u>(115)</u>
FINANCING ACTIVITIES			
Cash received			
Contributed equity		33	94
Total cash received		<u>33</u>	<u>94</u>
Net cash from (used by) financing activities		<u>33</u>	<u>94</u>
Net increase increase in cash held		<u>1</u>	<u>21</u>
Cash and cash equivalents at the beginning of the reporting period		83	62
Cash and cash equivalents at the end of the reporting period	7A	<u>84</u>	<u>83</u>

The above statement should be read in conjunction with the accompanying notes.

Schedule of Commitments
as at 30 June 2015

	2015	2014
BY TYPE	\$'000	\$'000
Commitments receivable		
Net GST recoverable on commitments ¹	(640)	(516)
Total commitments receivable	<u>(640)</u>	<u>(516)</u>
Commitments payable		
Capital commitments		
Land and buildings ²	110	73
Other ³	34	22
Total capital commitments	<u>144</u>	<u>95</u>
Other commitments		
Operating leases ⁴	7,470	6,399
Other ⁵	629	116
Total other commitments	<u>8,099</u>	<u>6,515</u>
Total commitments payable	<u>8,243</u>	<u>6,610</u>
Net commitments by type	<u>7,603</u>	<u>6,094</u>
BY MATURITY		
Commitments receivable		
Net GST recoverable on commitments		
One year or less	(87)	(62)
From one to five years	(235)	(210)
Over five years	(318)	(244)
Total other commitments receivable	<u>(640)</u>	<u>(516)</u>
Total commitments receivable	<u>(640)</u>	<u>(516)</u>
Commitments payable		
Capital commitments		
One year or less	108	22
From one to five years	36	73
Total capital commitments	<u>144</u>	<u>95</u>
Operating lease commitments		
One year or less	779	833
From one to five years	2,831	2,875
Over five years	3,860	2,691
Total operating lease commitments	<u>7,470</u>	<u>6,399</u>
Other commitments		
One year or less	408	97
From one to five years	221	19
Total other commitments	<u>629</u>	<u>116</u>
Total commitments payable	<u>8,243</u>	<u>6,610</u>
Net commitments by maturity	<u>7,603</u>	<u>6,094</u>

Notes:

¹Commitments are GST inclusive where relevant.

²Land and building commitments are commitments relating to an overseas office fitout.

³Other capital commitments are commitments relating to the acquisition of a motor vehicle

⁴Operating leases are non-cancellable and relate to the lease of accommodation in Canberra and overseas.

⁵Other commitments include commitments relating to the purchase of IT and general office services.

The above schedule should be read in conjunction with the accompanying notes.

Administered Schedule of Comprehensive Income*for the period ended 30 June 2015*

	Notes	2015 \$'000	2014 \$'000
NET COST OF SERVICES			
Expenses			
International development assistance	16	<u>109,999</u>	<u>107,242</u>
Total expenses administered on behalf of Government		<u>109,999</u>	<u>107,242</u>
Income			
Revenue			
Non-taxation revenue			
External funds	17	<u>21,331</u>	<u>31,489</u>
Total non-taxation revenue		<u>21,331</u>	<u>31,489</u>
Total revenue		<u>21,331</u>	<u>31,489</u>
Net cost of services		<u>88,668</u>	<u>75,753</u>
(Deficit) after income tax		<u>(88,668)</u>	<u>(75,753)</u>
Total comprehensive (loss)		<u>(88,668)</u>	<u>(75,753)</u>

The above schedule should be read in conjunction with the accompanying notes.

Administered Schedule of Assets and Liabilities

as at 30 June 2015

	Notes	2015 \$'000	2014 \$'000
ASSETS			
Financial assets			
Cash and cash equivalents	18A	27,852	26,159
Trade and other receivables	18B	701	4,831
Total financial assets		28,553	30,990
Total assets administered on behalf of Government		28,553	30,990
LIABILITIES			
Payables			
Suppliers	19A	2,958	2,472
Other payables	19B	652	693
Total payables		3,610	3,165
Provisions			
Employee provisions	20	18	18
Total provisions		18	18
Total liabilities administered on behalf of Government		3,628	3,183
Net assets		24,925	27,807

The above schedule should be read in conjunction with the accompanying notes.

Administered Reconciliation Schedule		
	2015	2014
	\$'000	\$'000
Opening administered assets less administered liabilities as at 1 July	27,807	20,398
Surplus (deficit) items		
Plus: Administered income	21,331	31,489
Less: Administered expenses	(109,999)	(107,242)
Administered transfers to/from Australian Government		
Appropriation transfers from Official Public Account		
Annual appropriations for administered expenses	85,860	83,260
Appropriation transfers to Official Public Account		
Transfers to Official Public Account	(74)	(98)
Closing administered assets less administered liabilities as at 30 June	24,925	27,807

Administered Cash Flow Statement
for the period ended 30 June 2015

	Notes	2015 \$'000	2014 \$'000
OPERATING ACTIVITIES			
Cash received			
External funds		25,375	28,502
Net GST received		4,919	4,471
Total cash received		<u>30,294</u>	<u>32,973</u>
Cash used			
International development assistance		(114,347)	(111,355)
Total cash used		<u>(114,347)</u>	<u>(111,355)</u>
Net cash flows (used by) operating activities	21	<u>(84,053)</u>	<u>(78,382)</u>
Cash and cash equivalents at the beginning of the reporting period		26,159	21,177
Cash from Official Public Account for			
Appropriations		90,748	87,942
		<u>90,748</u>	<u>87,942</u>
Cash to Official Public Account for			
Appropriations		(5,002)	(4,578)
		<u>(5,002)</u>	<u>(4,578)</u>
Cash and cash equivalents at the end of the reporting period	18A	<u>27,852</u>	<u>26,159</u>

This schedule should be read in conjunction with the accompanying notes.

Schedule of Administered Commitments
as at 30 June 2015

	2015 \$'000	2014 \$'000
BY TYPE		
Commitments receivable		
Net GST recoverable on commitments ¹	(7,114)	(7,378)
Total commitments receivable	<u>(7,114)</u>	<u>(7,378)</u>
Commitments payable		
Other commitments		
International development assistance ²	115,335	135,061
Total other commitments	<u>115,335</u>	<u>135,061</u>
Total commitments payable	<u>115,335</u>	<u>135,061</u>
Net commitments by type	<u>108,221</u>	<u>127,683</u>
BY MATURITY		
Commitments receivable		
Other commitments receivable		
One year or less	(3,602)	(3,562)
From one to five years	(3,512)	(3,816)
Total other commitment receivable	<u>(7,114)</u>	<u>(7,378)</u>
Total commitments receivable	<u>(7,114)</u>	<u>(7,378)</u>
Commitments payable		
Other commitments		
One year or less	57,423	62,011
From one to five years	57,912	73,050
Total other commitments	<u>115,335</u>	<u>135,061</u>
Total commitments payable	<u>115,335</u>	<u>135,061</u>
Net commitments by maturity	<u>108,221</u>	<u>127,683</u>

Note:

¹ Commitments are GST inclusive where relevant.

² Other commitments include commitments related to international development assistance projects and contracts.

The above schedule should be read in conjunction with the accompanying notes.

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Note 1: Summary of Significant Accounting Policies

1.1 Objectives of ACIAR

The Australian Centre for International Agricultural Research (ACIAR) is an Australian Government controlled entity. ACIAR is a not-for-profit entity. The objective of ACIAR is to achieve more productive and sustainable agricultural systems, for the benefit of developing countries and Australia, through international agricultural research partnerships. Developing countries are the major beneficiaries but there are also spin-offs for Australia. To achieve this objective, ACIAR facilitates and supports bilateral and multilateral research and development activities in a broad range of agricultural areas, including crops, animals, fisheries, forestry, land and water resources management, post-harvest technology, and economic studies of agricultural and natural resource utilisation.

ACIAR is structured to meet one outcome:

Outcome 1: To achieve more productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research and training partnerships.

Although an increasing portion of ACIAR's revenue is from external sources, the continued existence of ACIAR in its present form and with its present programs is dependent on Government policy and on continuing funding by Parliament for ACIAR's administration and programs.

ACIAR activities contributing toward this outcome are classified as either departmental or administered. Departmental activities involve the use of assets, liabilities, income and expenses controlled or incurred by the entity in its own right. Administered activities involve the management or oversight by ACIAR, on behalf of the Government, of items controlled or incurred by the Government.

ACIAR conducts the following administered activity on behalf of the Government:

- International agriculture research and development.

1.2 Basis of Preparation of the Financial Statements

The financial statements are general purpose financial statements and are required by section 42 of the *Public Governance, Performance and Accountability Act 2013*.

The financial statements have been prepared in accordance with :

- a) Financial Reporting Rule (FRR) for reporting periods ending on or after 1 July 2014; and
- b) Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with the historical cost convention, except for certain assets and liabilities at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars and values are rounded to the nearest thousand dollars unless otherwise specified.

Unless an alternative treatment is specifically required by an accounting standard or the FRR, assets and liabilities are recognised in the Statement of Financial Position when and only when it is probable that future economic benefits will flow to ACIAR or a future sacrifice of economic benefits will be required and the amounts of the assets or liabilities can be reliably measured. However, assets and liabilities arising under executor contracts are not recognised unless required by an accounting standard. Liabilities and assets that are unrecognised are reported in the schedule of commitments or the contingencies note.

Unless alternative treatment is specifically required by an accounting standard, income and expenses are recognised in the Statement of Comprehensive Income when and only when the flow, consumption or loss of economic benefits has occurred and can be reliably measured.

The Australian Government continues to have regard to developments in case law, including the High Court's most recent decision on Commonwealth expenditure in *Williams v Commonwealth* [2014] HCA 23, as they contribute to the larger body of law relevant to the development of Commonwealth programs. In accordance with its general practice, the Government will continue to monitor and assess risk and decide on any appropriate actions to respond to risks of expenditure not being consistent with constitutional or other legal requirements.

1.3 Significant Accounting Judgements and Estimates

In the process of applying the accounting policies listed in this note, ACIAR has made the following judgement that has the most significant impact on the amounts recorded in the financial statements:

- Land and buildings and property, plant and equipment were revalued at 30 June 2014 to estimated fair value.

No other accounting assumptions or estimates have been identified that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next accounting period.

1.4 New Australian Accounting Standards

Adoption of New Australian Accounting Standard Requirements

The following standard was adopted this year:

Standard	Nature of change(s) in accounting policy and adjustment to financial statements
AASB 1055 Budgetary reporting	<p>AASB 1055 <i>Budgetary reporting</i> sets out budgetary disclosure requirements for the whole-of-government financial statements, each government's General Government Sector (GSS) financial statements and financial statements for each not-for-profit entity within the GGS.</p> <p>AASB 1055 requires disclosure of the Original Budget as well as explanations for major variances between the Original budget and the actual amounts disclosed in the financial statements.</p> <p>The Original Budget is the first budget presented to Parliament for the reporting period.</p> <p>Where budget information has not been presented on the same basis and classification as the financial statements, AASB 1055 requires budget information to be restated to be consistent with the financial statements.</p> <p>AASB 1055 requirements apply to both departmental and administered items.</p> <p>Major variance explanation disclosures are those relevant to the information needs of users when assessing performance and accountability.</p> <p>AASB 1055 does not require prior-year budget comparatives.</p>

The following standard has been adopted earlier than the application date as stated in the standard:

Standard	Nature of change(s) in accounting policy and adjustment to financial statements
AASB 13 Fair Value measurement	<p>The amendments change AASB 13 <i>Fair Value Measurement</i> and provide relief for not-for-profit public sector entities from making some previously-required disclosures about the fair value measurement of property, plant and equipment assets which are primarily held for internal or policy use, rather than to earn revenue. More specifically, the disclosure of quantitative information about the significant unobservable inputs used in fair value measurements and the sensitivity of certain fair value measurements to changes in unobservable inputs is no longer required.</p>

Future Australian Accounting Standard Requirements

New standards/revised standards/interpretations/amending standards that were issued by the Australian Accounting Standards Board prior to the sign-off date and are applicable to the future reporting period are not expected to have a financial impact on ACIAR.

1.5 Revenue

Revenue from the sale of goods is recognised when:

- a) the risks and rewards of ownership have been transferred to the buyer;
- b) ACIAR retains no managerial involvement or effective control over the goods;
- c) the revenue and transaction costs incurred can be reliably measured; and
- d) it is probable that the economic benefits associated with the transaction will flow to ACIAR.

Revenue from rendering of services is recognised by reference to the stage of completion of contracts at the reporting date. The revenue is recognised when:

- a) the amount of revenue, stage of completion and transaction costs incurred can be reliably measured; and
- b) the probable economic benefits associated with the transaction will flow to ACIAR.

The stage of completion of contracts at the reporting date is determined by reference to the proportion that costs incurred to date bear to the estimated total costs of the transaction.

Receivables for goods and services, which have 30 day terms, are recognised at the nominal amounts due less any impairment allowance account. Collectability of debts is reviewed at the end of reporting period. Allowances

Interest revenue is recognised using the effective interest method as set out in AASB 139 *Financial Instruments: Recognition and Measurement*.

Revenue from Government

Amounts appropriated for departmental appropriations for the year (adjusted for any formal additions and reductions) are recognised as Revenue from Government when the entity gains control of the appropriation, except for certain amounts that relate to activities that are reciprocal in nature, in which case revenue is recognised only when it has been earned. Appropriations receivable are recognised at their nominal amounts.

1.6 Gains

Resources Received Free of Charge

Resources received free of charge are recognised as gains when, and only when, a fair value can be reliably determined and the services would have been purchased if they had not been donated. Use of those resources is recognised as an expense.

Resources received free of charge are recorded as either revenue or gains depending on their nature.

Contributions of assets at no cost of acquisition or for nominal consideration are recognised as gains at their fair value when the asset qualifies for recognition, unless received from another Government entity as a consequence of a restructuring of administrative arrangements.

Sale of Assets

Gains from disposal of assets are recognised when control of the asset has passed to the buyer.

1.7 Transactions with the Government as Owner

Equity Injections

Amounts appropriated which are designated as 'equity injections' for a year (less any formal reductions) and Departmental Capital Budgets (DCBs) are recognised directly in contributed equity in that year.

1.8 Employee Benefits

Liabilities for 'short-term employee benefits' (as defined in AASB 119 *Employee Benefits*) and termination benefits due within twelve months of the end of reporting period are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

Other long-term employee benefits are measured as net total of the present value of the defined benefit obligation at the end of the reporting period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of ACIAR is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will be applied at the time the leave is taken, including ACIAR's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave has been determined by reference to the shorthand method. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Separation and Redundancy

Provision is made for separation and redundancy benefit payments. ACIAR recognises a provision for termination when it has developed a detailed formal plan for the terminations and has informed all employees of the structure and process related to terminations.

Superannuation

Staff of ACIAR are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS) the PSS accumulation plan (PSSap) or an approved superannuation scheme of their choice.

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap and all other approved superannuation schemes are defined contribution schemes.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported in the Department of Finance's administered schedules and notes.

For CSS, PSS and PSSap members, ACIAR makes employer contributions to the employees' superannuation scheme at rates determined by an actuary to be sufficient to meet the current cost to the Government. ACIAR accounts for the contributions as if they were contributions to defined contribution plans. For all other approved superannuation schemes, ACIAR, as employer, contributes a minimum of 9.25% of superannuable salaries.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the final fortnight of the year.

1.9 Leases

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased assets. An operating lease is a lease that is not a finance lease. In operating leases, the lessor effectively retains substantially all such risks and benefits.

ACIAR has no finance leases.

Operating lease payments are expensed on a straight-line basis which is representative of the pattern of benefits derived from the leased assets.

1.10 Fair Value Measurement

ACIAR deems transfers between levels of the fair value hierarchy to have occurred at the end of the reporting period.

Recurring and non-recurring Level 3 fair value measurements - valuation processes

ACIAR tests the procedures of the valuation model at least once every 12 months (with a formal revaluation undertaken once every three years). If a particular asset class experiences significant and volatile changes in fair value (i.e. where indicators suggest that the value of the class has changed materially since the previous reporting period), that class is subject to specific valuation in the reporting period, where practicable, regardless of the timing of the last specific valuation. ACIAR engaged an independent valuer to undertake a full revaluation at 30 June 2014 and confirms that the models developed comply with AASB 13.

Significant Level 3 inputs utilised by the entity are derived and evaluated as follows

Leasehold Improvements, Property, Plant and Equipment - Consumed economic benefit / Obsolescence of asset

Assets that do not transact with enough frequency or transparency to develop objective opinions of value from observable market evidence have been measured utilising the cost (Depreciated Replacement Cost or DRC) approach. Under the DRC approach the estimated cost to replace the asset is calculated and then adjusted to take into account its consumed economic benefit / asset obsolescence (accumulated depreciation). Consumed economic benefit / asset obsolescence has been determined based on professional judgement regarding physical, economic and external obsolescence factors relevant to the asset under consideration.

1.11 Cash

Cash is recognised at its nominal amount. Cash and cash equivalents includes:

- a) cash on hand;
- b) demand deposits in bank accounts with an original maturity of 3 months or less that are readily convertible to known amounts of cash and subject to insignificant risk of changes in value;
- c) cash held by outsiders; and
- d) cash in special accounts.

1.12 Financial Assets

ACIAR classifies its financial assets in the following categories:

- a) financial assets at fair value through profit or loss;
- b) held-to-maturity investments;
- c) available-for-sale financial assets; and
- d) loans and receivables.

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Financial assets are recognised and derecognised upon trade date.

Effective Interest Method

The effective interest method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest rate basis except for financial assets that are recognised at fair value through profit or loss.

Financial Assets at Fair Value Through Profit or Loss

Financial assets are classified as financial assets at fair value through profit or loss where the financial assets:

- a) have been acquired principally for the purpose of selling in the near future;
- b) are derivatives that are not designated and effective as a hedging instrument; or
- c) are parts of an identified portfolio of financial instruments that the entity manages together and has a recent actual pattern of short-term profit-taking.

Assets in this category are classified as current assets.

Financial assets at fair value through profit or loss are stated at fair value, with any resultant gain or loss recognised in profit or loss. The net gain or loss recognised in profit or loss incorporates any interest earned on the financial asset.

Loans and Receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

Impairment of Financial Assets

Financial assets are assessed for impairment at the end of each reporting period.

Financial assets held at amortised cost - if there is objective evidence that an impairment loss has been incurred for loans and receivables or held to maturity investments held at amortised cost, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the Statement of Comprehensive Income.

Available for sale financial assets - if there is objective evidence that an impairment loss on an available-for-sale financial asset has been incurred, the amount of the difference between its cost, less principal repayments and amortisation, and its current fair value, less any impairment loss previously recognised in expenses, is transferred from equity to the Statement of Comprehensive Income.

Financial assets held at cost - If there is objective evidence that an impairment loss has been incurred, the amount of the impairment loss is the difference between the carrying amount of the asset and the present value of the estimated future cash flows discounted at the current market rate for similar assets.

1.13 Financial Liabilities

Financial liabilities are classified as either financial liabilities 'at fair value through profit or loss' or other financial liabilities. Financial liabilities are recognised and derecognised upon 'trade date'.

Financial Liabilities at Fair Value Through Profit or Loss

Financial liabilities at fair value through profit or loss are initially measured at fair value. Subsequent fair value adjustments are recognised in profit or loss. The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability.

Other Financial Liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. These liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period.

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

1.14 Contingent Liabilities and Contingent Assets

Contingent liabilities and contingent assets are not recognised in the Statement of Financial Position but are reported in the notes. They may arise from uncertainty as to the existence of a liability or asset or represent an liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

1.15 Acquisition of Assets

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor's accounts immediately prior to the restructuring.

1.16 Property, Plant and Equipment

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the Statement of Financial Position, except for purchases costing less than \$2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

The initial cost of an asset includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located.

Revaluations

Following initial recognition at cost, property, plant and equipment assets are carried at fair value less subsequent accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Leasehold improvements, plant and equipment assets were revalued at 30 June 2014. The revaluation process was performed by an external professional valuation company.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised in the surplus/deficit. Revaluation decrements for a class of assets are recognised directly in the surplus/deficit except to the extent that they reverse a previous revaluation increment for that class.

Depreciation

Depreciable property, plant and equipment assets are written-off to their estimated residual values over their estimated useful lives to ACIAR using, in all cases, the straight-line method of depreciation.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation rates applying to each class of depreciable asset are based on the following useful lives:

	2015	2014
Leasehold improvements	Lower of useful life or lease term	Lower of useful life or lease term
Plant and equipment	3 to 10 years	3 to 10 years
Computer equipment	3 to 5 years	3 to 5 years

Impairment

All assets were assessed for impairment at 30 June 2015. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if ACIAR were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

Derecognition

An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

1.17 Intangibles

ACIAR's intangibles comprise software for internal use. These assets are carried at cost less accumulated amortisation and accumulated impairment losses.

Software is amortised on a straight-line basis over its anticipated useful life. The useful lives of the ACIAR's software are 3 to 10 years (2014: 3 to 10 years).

All software assets were assessed for indications of impairment as at 30 June 2015.

1.18 Taxation / Competitive Neutrality

ACIAR is exempt from all forms of taxation except Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST).

Revenues, expenses and assets are recognised net of GST except:

- a) where the amount of GST incurred is not recoverable from the Australian Taxation Office; and
- b) for receivables and payables.

1.19 Comparative Balances

Comparative figures have been adjusted to conform with changes in presentation to these financial statements where required.

Administered revenues, expenses, assets, liabilities and cash flows are disclosed in the administered schedules and related notes.

Except where otherwise stated below, administered items are accounted for on the same basis and using the same policies as for departmental items, including the application of Australian Accounting Standards.

Administered Cash Transfers to and from the Official Public Account

Revenue collected by ACIAR for use by the Government rather than ACIAR is administered revenue. Collections are transferred to the Official Public Account (OPA) maintained by the Department of Finance. Conversely, cash is drawn from the OPA to make payments under Parliamentary appropriation on behalf of Government. These transfers to and from the OPA are adjustments to the administered cash held by ACIAR on behalf of the Government and reported as such in the Administered Cash Flow Statement and in the Administered Reconciliation Schedule.

Revenue

All administered revenues are revenues relating to ordinary activities performed by ACIAR on behalf of the Australian Government. As such, administered appropriations are not revenues of the individual entity that oversees distribution or expenditure of the funds as directed.

Revenue consists of external funds received in support of ACIAR's outcome. External funds are recognised as revenue when ACIAR obtains control over those funds.

Loans and Receivables

Where loans and receivables are not subject to concessional treatment, they are carried at amortised cost using the effective interest method. Gains and losses due to impairment, derecognition and amortisation are recognised through profit or loss.

International development assistance

ACIAR administers international development assistance programs and projects on behalf of the Government.

International development assistance liabilities are recognised to the extent that:

- (i) the services required to be performed by the recipient have been performed, or
- (ii) the contract eligibility criteria have been satisfied, but payments due have not been made.

A commitment is recorded when the Government enters into an agreement to provide international development assistance but services have not been performed or criteria satisfied.

Note 2: Events After the Reporting Period**Departmental**

There have been no events or transactions after the reporting date which could significantly affect the ongoing structure and financial activities of ACIAR.

Administered

There have been no events or transactions after the reporting date which could significantly affect the ongoing structure and financial activities of ACIAR.

Note 3: Net Cash Appropriation Arrangements

	2015 S'000	2014 S'000
Total comprehensive (loss) income less depreciation/amortisation expenses previously funded through revenue appropriations¹	(153)	43
Plus: depreciation/amortisation expenses previously funded through revenue appropriation	<u>(240)</u>	<u>(338)</u>
Total comprehensive (loss) income - as per the Statement of Comprehensive Income	<u>(393)</u>	<u>(295)</u>

1. From 2010-11, the Government introduced net cash appropriation arrangements, where revenue appropriations for depreciation/amortisation expenses ceased. Entities now receive a separate capital budget provided through equity appropriations. Capital budgets are to be appropriated in the period when cash payment for capital expenditure is required.

Note 4: Expenses

	2015	2014
	S'000	S'000
Note 4A: Employee Benefits		
Wages and salaries	5,646	5,695
Superannuation:		
Defined contribution plans	555	497
Defined benefit plans	334	439
Leave and other entitlements	793	769
Separation and redundancies	259	85
Total employee benefits	7,587	7,485
Note 4B: Supplier		
Goods and services supplied or rendered		
Contractors, consultants and service providers	1,017	486
Travel	461	527
IT Services	458	489
Property services (excluding rent)	246	242
Workforce capability	144	195
Publications & promotion	113	95
Other	453	338
Total goods and services supplied or rendered	2,892	2,372
Goods supplied in connection with		
External parties	376	291
Total goods supplied	376	291
Services rendered in connection with		
Related parties	128	191
External parties	2,388	1,890
Total services rendered	2,516	2,081
Total goods and services supplied or rendered	2,892	2,372
Other supplier		
External parties		
Minimum lease payments	661	640
Workers compensation expenses	90	75
Total other supplier	751	715
Total supplier	3,643	3,087
Note 4C: Depreciation and Amortisation		
Depreciation		
Property, plant and equipment	141	183
Land and buildings	39	88
Total depreciation	180	271
Amortisation		
Intangibles	60	67
Total amortisation	60	67
Total depreciation and amortisation	240	338
Note 4D: Losses from Asset Sales		
Land and buildings		
Proceeds from sale	-	-
Carrying value of assets sold	-	2
Property, plant and equipment		
Proceeds from sale	-	(1)
Carrying value of assets sold	-	1
Total losses from asset sales	-	2

Note 5: Income

	2015	2014
Own-Source Revenue	\$'000	\$'000

Note 5A: Sale of Goods and Rendering of Services**Sale of goods in connection with**

External parties	17	10
Total sale of goods	17	10

Rendering of services in connection with

Related parties	1,381	201
Total rendering of services	1,381	201
Total sale of goods and rendering of services	1,398	211

Note 5B: Other Revenue

Resources received free of charge ¹	30	29
Total other revenue	30	29

Note 5C: Revenue from Government**Appropriations**

Departmental appropriation	9,802	10,334
Total revenue from Government	9,802	10,334

¹ KPMG was engaged by the ANAO in 2014/15 to provide financial statement audit services to ACIAR. No other services were provided by the ANAO or performed directly by KPMG during the reporting period.

Note 6: Fair Value Measurements

The following tables provide an analysis of assets and liabilities that are measured at fair value. The different levels of the fair value hierarchy are defined below.

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at measurement date.
 Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
 Level 3: Unobservable inputs for the asset or liability.

Note 6A: Fair Value Measurements, Valuation Techniques and Inputs Used

	Fair value measurements at the end of the reporting			For Levels 2 and 3 fair value measurements	
	2015 S'000	2014 S'000	Category (Level 1, 2 or 3)	Valuation technique(s) ²	Inputs used
Non-financial assets³					
Land and Buildings	1	12	Level 2	Market approach	Adjusted market transactions
Land and Buildings	818	249	Level 3	Depreciated replacement cost (DRC)	Replacement cost new (price per square metre) and consumed economic benefit / obsolescence of asset
Property, plant and equipment	105	172	Level 2	Market approach	Adjusted market transactions
Property, plant and equipment	195	268	Level 3	Depreciated replacement cost (DRC)	Replacement cost new and consumed economic benefit / obsolescence of asset
Total non-financial assets	1,119	701			

1. ACIAR did not measure any non-financial assets at fair value on a non-recurring basis as at 30 June 2015.
2. There were no changes in valuation technique from the previous reporting period.
3. Fair value measurements - highest and best use differs from current use for non-financial assets (NFAs)
 ACIAR's assets are held for operational purposes and not held for the purposes of deriving a profit. The current use of all NFAs is considered their highest and best use.

Note 6B: Level 1 and Level 2 Transfers for Recurring Fair Value Measurements

There have been no transfers between levels of the hierarchy during the year. ACIAR's policy for determining when transfers between levels are deemed to have occurred can be found in Note 1.

Note 6C: Reconciliation for Recurring Level 3 Fair Value Measurements

Recurring Level 3 fair value measurements - reconciliation for assets

	Non-Financial assets					
	Land and Buildings		Property, plant and equipment			Total
	2015	2014	2015	2014	2015	2014
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
As at 1 July	249	198	268	181	517	379
Total gains/(losses) recognised in total comprehensive income ¹	(177)	28	(73)	25	(250)	53
Purchases	746	23	0	63	746	86
Sales	0	0	0	(1)	0	(1)
Transfers into/out of Level 3 ²	0	0	0	0	0	0
Total as at 30 June	818	249	195	268	1,013	517

1. These gains/(losses) are presented in the Statement of Comprehensive Income under depreciation, amortisation and changes in revaluation surplus.

2. There have been no transfers between fair value hierarchy levels during the year.

ACIAR's policy for determining when transfers between levels are deemed to have occurred can be found in Note 1.

Note 7: Financial Assets

	2015	2014
	\$'000	\$'000
Note 7A: Cash and Cash Equivalents		
Cash on hand or on deposit	84	83
Total cash and cash equivalents	<u>84</u>	<u>83</u>
Note 7B: Trade and Other Receivables		
Good and services receivable in connection with		
Related parties	-	7
Total receivables for goods and services	<u>-</u>	<u>7</u>
Appropriations receivable		
Existing programs	3,622	3,624
Total appropriations receivable	<u>3,622</u>	<u>3,624</u>
Other receivables		
GST receivable from the Australian Taxation Office	56	45
Total other receivables	<u>56</u>	<u>45</u>
Total trade and other receivables (gross)	<u>3,678</u>	<u>3,676</u>
Total trade and other receivables (net)	<u>3,678</u>	<u>3,676</u>
Receivables are expected to be recovered in		
No more than 12 months	3,678	3,676
Total trade and other receivables (net)	<u>3,678</u>	<u>3,676</u>
Receivables are aged as follows		
Not overdue	3,678	3,669
Overdue by		
0 to 30 days	-	-
31 to 60 days	-	-
61 to 90 days	-	7
More than 90 days	-	-
Total trade and other receivables (net)	<u>3,678</u>	<u>3,676</u>

Credit terms for goods and services were within 30 days (2014: 30 days)

Note 8: Non-Financial Assets

	2015	2014
	\$'000	\$'000
Note 8A: Land and Buildings		
Leasehold improvements		
Work in progress	173	170
Fair value	840	261
Accumulated depreciation	(21)	-
Total leasehold improvements	992	431
Total land and buildings	992	431

No indicators of impairment were found for land and buildings.
No land or buildings were expected to be sold or disposed of within the next 12 months.

Note 8B: Property, Plant and Equipment

Property, plant and equipment		
Fair value	439	440
Accumulated depreciation	(139)	-
Total other property, plant and equipment	300	440

No indicators of impairment were found for property, plant and equipment.
No property, plant or equipment is expected to be sold or disposed of within the next 12 months.

Revaluation of non-financial assets

Non-financial assets were revalued as at 30 June 2014 by an independent qualified valuer from Australian Valuation Solutions Pty Ltd in accordance with the revaluation policy stated at Note 1. The results of the revaluation was reported in last year's financial statements.

Note 8C: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment 2015

	Land and buildings \$'000	Property, plant & equipment \$'000	Total \$'000
As at 1 July 2014			
Gross book value	431	440	871
Accumulated depreciation and impairment	-	-	-
Total as at 1 July 2014	431	440	871
Additions			
By purchase	748	7	755
Depreciation expense	(39)	(141)	(180)
Disposals			
Asset cost	(166)	(8)	(174)
Accumulated depreciation	18	2	20
Total as at 30 June 2015	992	300	1,292
Net book value as of 30 June 2015 represented by			
Gross book value	1,013	439	1,452
Accumulated depreciation and impairment	(21)	(139)	(160)
Total as at 30 June 2015	992	300	1,292

Note 8C: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment 2014

	Land and buildings \$'000	Property, plant & equipment \$'000	Total \$'000
As at 1 July 2014			
Gross book value	647	788	1,435
Accumulated depreciation and impairment	(185)	(248)	(433)
Net book value 1 July 2013	462	540	1,002
Additions			
By purchase	23	77	101
Revaluations and impairments recognised in other comprehensive income	37	6	43
Depreciation expense	(88)	(183)	(271)
Disposals			
Asset cost	(2)	(26)	(28)
Accumulated depreciation	1	25	26
Other	(2)	-	(2)
Net book value 30 June 2014	431	440	871
Net book value as of 30 June 2014 represented by			
Gross book value	431	440	871
Accumulated depreciation and impairment	-	-	-
Net book value 30 June 2013	431	440	871

	2015	2014
Note 8D: Intangibles	\$'000	\$'000
Computer software		
Purchased	638	637
Accumulated amortisation	(590)	(530)
Total computer software	48	107
Total intangibles	48	107

No indicators of impairment were found for intangible assets.

No intangibles are expected to be sold or disposed of within the next 12 months.

Note 8E: Reconciliation of the Opening and Closing Balances of Intangibles 2015

	Computer software purchased \$'000
As at 1 July 2014	
Gross book value	637
Accumulated amortisation and impairment	(530)
Total as at 1 July 2014	107
Additions	
By purchase	-
Amortisation	(60)
Other	1
Total as at 30 June 2015	48
Net book value as of 30 June 2015 represented by	
Gross book value	638
Accumulated amortisation and impairment	(590)
Total as at 30 June 2015	48

Note 8E: Reconciliation of the Opening and Closing Balances of Intangibles 2014

	Computer software purchased \$'000
As at 1 July 2013	
Gross book value	637
Accumulated amortisation and impairment	(463)
Net book value 1 July 2013	174
Additions	
By purchase	-
Amortisation	(67)
Other	-
Net book value 30 June 2014	(67)
Net book value as of 30 June 2014 represented by	
Gross book value	637
Accumulated amortisation and impairment	(530)
Net book value 30 June 2014	107

Note 8F: Other Non-Financial Assets

Prepayments	<u>96</u>	<u>136</u>
Total other non-financial assets	<u>96</u>	<u>136</u>
Total other non-financial assets expected to be recovered		
No more than 12 months	<u>96</u>	<u>136</u>
Total other non-financial assets	<u>96</u>	<u>136</u>

No indicators of impairment were found for other non-financial assets.

Note 9: Payables

	2015	2014
	\$'000	\$'000
Note 9A: Suppliers		
Trade creditors and accruals	364	332
Total suppliers	364	332
Suppliers expected to be settled		
No more than 12 months	364	332
Total suppliers	364	332
Suppliers in connection with		
Related entities	15	45
External parties	349	287
Total suppliers	364	332
Settlement was usually made within 30 days.		
Note 9B: Other Payables		
Wages and salaries	274	269
Superannuation	27	24
Rent payable	51	29
Lease Incentive	396	-
Other	6	-
Total other payables	754	322
Other payables expected to be settled		
No more than 12 months	754	322
Total other payables	754	322

Note 10: Provisions

	2015	2014
	\$'000	\$'000
Note 10A: Employee Provisions		
Leave	1,745	1,642
Other	258	199
Total employee provisions	2,003	1,841
Employee provisions expected to be settled		
No more than 12 months	547	434
More than 12 months	1,456	1,407
Total employee provisions	2,003	1,841

Note 11: Cash Flow Reconciliation

	2015	2014
	\$'000	\$'000
Reconciliation of cash and cash equivalents as per statement of financial position to cash flow statement		
Cash and cash equivalents as per		
Cash flow statement	84	83
Statement of financial position	<u>84</u>	<u>83</u>
Discrepancy	<u>-</u>	<u>-</u>
Reconciliation of net cost of services to net cash from operating activities		
Net cost of services	(10,042)	(10,672)
Revenue from Government	9,802	10,334
Adjustments for non-cash items		
Depreciation / amortisation	240	338
Loss on disposal of assets	-	2
Movements in assets / liabilities		
Assets		
Decrease / (increase) in net receivables	56	(85)
Decrease / (increase) in prepayments	40	(67)
Liabilities		
Increase / (decrease) in employee provisions	162	(11)
(Decrease) / increase in supplier payables	(108)	171
Increase in other payables	<u>37</u>	<u>32</u>
Net cash from operating activities	<u>187</u>	<u>42</u>

Note 12: Contingent Assets and Liabilities

Quantifiable Contingencies

At 30 June 2015, ACIAR had no quantifiable contingencies (2014: \$Nil).

Unquantifiable Contingencies

At 30 June 2015, ACIAR had no unquantifiable contingencies (2014: \$Nil).

Significant Remote Contingencies

At 30 June 2015, ACIAR had no significant remote contingencies (2014: \$Nil).

Note 13: Senior Management Personnel Remuneration

	2015	2014
	\$	\$
Short-term employee benefits		
Salary	561,270	560,610
Performance bonuses	4,000	4,000
Allowances	110,666	103,165
Total short-term employee benefits	<u>675,936</u>	<u>667,775</u>
Post-employment benefits		
Superannuation	75,729	73,749
Total post-employment benefits	<u>75,729</u>	<u>73,749</u>
Other long-term employee benefits		
Annual leave	42,486	44,899
Long-service leave	13,270	13,432
Total other long-term employee benefits	<u>55,756</u>	<u>58,331</u>
Total senior executive remuneration expenses	<u>807,421</u>	<u>799,855</u>

The total number of senior management personnel that are included in the above table is 3 (2014: 3).

Note 14: Financial Instruments

	2015	2014
	\$'000	\$'000
Note 14A: Categories of Financial Instruments		
Financial Assets		
Cash and cash equivalents	84	83
Loans and receivables		
Trade and other receivables	-	7
Total financial assets	<u>84</u>	<u>90</u>
Financial Liabilities		
Financial Liabilities measured at amortised cost		
Trade creditors	364	332
Other	51	29
Total financial liabilities	<u>415</u>	<u>361</u>

Note 14B: Credit Risk

ACIAR is exposed to minimal credit risk as loans and receivables are trade and other receivables. The maximum exposure to credit risk is the risk that arises from potential default of a debtor. This amount is equal to the total amount of trade and other receivables (2015: \$nil and 2014: \$7,472). ACIAR has assessed the risk of the default on payment and believes all amounts will be paid in full. No amounts have been allocated to an impairment allowance account.

ACIAR manages its credit risk by undertaking background and credit checks prior to allowing a debtor relationship. In addition, ACIAR has policies and procedures that guide employees debt recovery techniques that are to be applied.

ACIAR holds no collateral to mitigate against credit risk.

Credit quality of financial instruments not past due or individually determined as impaired

	Not past due nor impaired	Not past due nor impaired	Past due or impaired	Past due or impaired
	2015	2014	2015	2014
	\$'000	\$'000	\$'000	\$'000
Trade and other receivables	-	-	-	7
Total	<u>-</u>	<u>-</u>	<u>-</u>	<u>7</u>

There were no financial assets past due but not impaired in 2015 (2014 : \$7k - 61 to 90 days overdue)

No assets have been individually assessed as impaired.

Note 14C: Liquidity Risk

ACIAR's financial liabilities are payables. The exposure to liquidity risk is based on the notion that ACIAR will encounter difficulty in meeting its obligations associated with financial liabilities.

There is low risk as ACIAR is appropriated funding from the Australian Government and manages its budgeted funds to ensure it has adequate funds to meet payments as they fall due. In addition, ACIAR has policies in place to ensure timely payments are made when due and has no past experience of default.

Maturities for non-derivative financial liabilities 2015

	On demand \$'000	within 1 year \$'000	1 to 2 years \$'000	2 to 5 years \$'000	Total \$'000
Trade creditors	-	364	-	-	364
Other payables	-	51	-	-	51
Total	-	415	-	-	415

Maturities for non-derivative financial liabilities 2014

	On demand \$'000	within 1 year \$'000	1 to 2 years \$'000	2 to 5 years \$'000	Total \$'000
Trade creditors	-	332	-	-	332
Other payables	-	29	-	-	29
Total	-	361	-	-	361

ACIAR has no derivative financial liabilities in either 2015 or 2014.

Note 14D: Market Risk

ACIAR holds basic departmental financial instruments that do not expose it to currency, interest rate or other price risk. Credit terms for both receivables and payables are normally 30 days net.

Note 15: Financial Assets Reconciliation

		2015	2014
		\$'000	\$'000
Financial assets	Notes		
Total financial assets as per balance sheet		3,762	3,759
Less: non-financial instrument components			
Appropriations receivable	7B	3,622	3,624
GST receivable from the Australian Taxation Office	7B	56	45
Total non-financial instrument components		<u>84</u>	<u>90</u>
Total financial assets as per financial instruments note		<u>84</u>	<u>90</u>

Note 16: Administered - Expenses

	2015	2014
	\$'000	\$'000
Note 16: International Development Assistance		
Research program	81,343	77,277
Multilateral program	19,810	21,913
Education and training	8,231	7,278
Communicating research results	615	774
Total international development assistance	109,999	107,242
International Development Assistance is made up of		
Employee benefits	224	368
Supplier expenses	109,775	106,874
Total	109,999	107,242

Note 17: Administered - Income

	2015	2014
	\$'000	\$'000
Revenue		
Non-Taxation Revenue		
Note 17A: External Funds		
External funds in connection with		
Related parties	21,331	31,489
Total external funds	<u>21,331</u>	<u>31,489</u>

Note 18: Administered - Financial Assets

	2015	2014
	\$'000	\$'000
Note 18A: Cash and Cash Equivalents		
Special Account	27,851	26,159
Cash on hand or on deposit	1	-
Total cash and cash equivalents	27,852	26,159
Note 18B: Trade and Other Receivables		
External funds receivables in connection with		
Related parties	-	4,046
External parties	2	-
Total external funds receivables	2	4,046
Other receivables		
GST receivable from Australian Taxation Office	699	785
Total other receivables	699	785
Total trade and other receivables	701	4,831
Trade and other receivables are expected to be recovered		
No more than 12 months	701	4,831
Total trade and other receivables	701	4,831
Trade and other receivables aged as follows		
Not overdue	699	4,831
Overdue by		
0 to 30 days	-	-
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	2	-
Total trade and other receivables	701	4,831

No indicators of impairment were found for trade and other receivables.

Trade and other receivables credit terms were within 30 days (2014 : 30 days).

Note 19: Administered - Payables

	2015	2014
	\$'000	\$'000
Note 19A: Suppliers		
Trade creditors and accruals	2,958	2,472
Total suppliers	<u>2,958</u>	<u>2,472</u>
Suppliers expected to be settled		
No more than 12 months	2,958	2,472
Total suppliers	<u>2,958</u>	<u>2,472</u>
Suppliers in connection with		
Related entities	175	175
External parties	2,783	2,297
Total suppliers	<u>2,958</u>	<u>2,472</u>
Settlement was usually made within 30 days.		
Note 19B: Other Payables		
GST payable to OPA	638	678
Salaries and wages	13	14
Superannuation	1	1
Total other payables	<u>652</u>	<u>693</u>
Other payables expected to be settled		
No more than 12 months	652	693
Total other payables	<u>652</u>	<u>693</u>

Note 20: Administered - Provisions

	2015	2014
	\$'000	\$'000
Note 20A: Employee Provisions		
Leave	18	18
Total employee provisions	18	18
Employee provisions are expected to be settled		
No more than 12 months	13	13
More than 12 months	5	5
Total employee provisions	18	18

Note 21: Administered - Cash Flow Reconciliation

	2015	2014
	\$'000	\$'000
Reconciliation of cash and cash equivalents as per administered schedule of assets and liabilities to administered cash flow statement		
Cash and cash equivalents as per		
Schedule of administered cash flows	27,852	26,159
Schedule of administered assets and liabilities	27,852	26,159
Discrepancy	<u>-</u>	<u>-</u>
Reconciliation of net cost of services to net cash (used by) operating activities		
Net cost of services	(88,668)	(75,753)
Movements in assets / liabilities		
Assets		
Decrease / (Increase) in net receivables	4,129	(3,179)
Decrease in prepayments	-	15
Liabilities		
Increase in employee provisions	-	6
Increase in supplier payables	487	522
(Decrease) / Increase in other payables	(1)	7
Net cash from / (used by) operating activities	<u>(84,053)</u>	<u>(78,382)</u>

Note 22: Administered - Contingent Assets and Liabilities

Quantifiable Contingencies

At 30 June 2015, ACIAR had no quantifiable contingencies (2014: \$Nil).

Unquantifiable Contingencies

At 30 June 2015, ACIAR had no unquantifiable contingencies (2014: \$Nil).

Significant Remote Contingencies

At 30 June 2015, ACIAR had no significant remote contingencies (2014: \$Nil).

Note 23: Administered - Financial Instruments

	2015	2014
	\$'000	\$'000
Note 23A: Categories of Financial Instruments		
Financial Assets		
Cash	27,852	26,159
Loans and receivables		
Trade and other receivables	2	4,046
Total loans and receivables	2	4,046
Total financial assets	27,854	30,205
Financial Liabilities		
Other liabilities		
Trade creditors	2,958	2,472
Total financial liabilities	2,958	2,472

The carrying amounts of financial assets and financial liabilities are a reasonable approximation of fair value.

There was no income or expense related to financial assets or liabilities (2014: \$ nil).

Note 23B: Credit Risk

ACIAR is exposed to minimal credit risk as loans and receivables are external funds receivable. The maximum exposure to credit risk is the risk that arises from potential default of a debtor. This amount is equal to the total amount of external funds receivable (2015: \$1,935 and 2014: \$4,045,829).

ACIAR manages its credit risk by undertaking background and credit checks prior to allowing a debtor relationship. In addition, ACIAR has policies and procedures that guide employees debt recovery techniques that are to be applied.

ACIAR holds no collateral to mitigate against credit risk.

Credit quality of financial instruments not past due or individually determined as impaired

	Not Past Due Nor Impaired	Not Past Due Nor Impaired	Past due or impaired	Past due or impaired
	2015	2014	0	2014
	\$'000	\$'000	\$'000	\$'000
Loans and receivables				
Trade and other receivables	2	641	-	3,405
Total	2	641	-	3,405

Aging of financial assets that were past due but not impaired in 2015.

	0 to 30 days	31 to 60 days	61 to 90 days	Total
	\$'000	\$'000	\$'000	\$'000
Trade and other receivables	-	-	2	2
Total	-	-	2	2

One debtor has been outstanding beyond the normal credit terms, but is not considered impaired as payment has been received subsequent to reporting date.

No assets have been individually assessed as impaired.

Note 23C: Liquidity Risk

ACIAR's financial liabilities are payables. The exposure to liquidity risk is based on the notion that ACIAR will encounter difficulty in meeting its obligation associated with financial liabilities.

There is low risk as ACIAR is appropriated funding from the Australian Government and manages its budgeted funds to ensure it has adequate funds to meet payments as they fall due. In addition, ACIAR has policies in place to ensure timely payments are made when due and has no past experience of default.

Maturities for non-derivative financial liabilities 2015

	On demand \$'000	within 1 year \$'000	1 to 2 years \$'000	2 to 5 years \$'000	> 5 years \$'000	Total \$'000
Other liabilities						
Trade creditors	-	2,958	-	-	-	2,958
Total	-	2,958	-	-	-	2,958

Maturities for non-derivative financial liabilities 2014

	On demand \$'000	within 1 year \$'000	1 to 2 years \$'000	2 to 5 years \$'000	> 5 years \$'000	Total \$'000
Other liabilities						
Trade creditors	-	2,472	-	-	-	2,472
Total	-	2,472	-	-	-	2,472

ACIAR has no derivative financial liabilities in both the current and prior year.

Note 23D: Market Risk

ACIAR holds basic administered financial instruments that do not expose it to currency, interest rate or other price risk. Credit terms for both receivables and payables are normally 30 days net.

Note 24: Administered Financial Assets Reconciliation

		2015	2014
		\$'000	\$'000
Financial assets	Notes		
Total financial assets as per schedule of administered assets and liabilities		28,553	30,990
Less: non-financial instrument components			
GST receivable from the Australian Taxation Office	18B	699	785
Total non-financial instrument components		<u>27,854</u>	<u>30,205</u>
Total financial assets as per financial instruments note		27,854	30,205

Note 25: Appropriations

Note 25A: Annual Appropriations (Recoverable GST exclusive)

Annual Appropriations for 2015	Appropriation Act		PGPA Act					
	Annual Appropriation ¹	AFM ²	Section 74	Section 75	Total appropriation	Appropriation applied in 2015 (current and prior years)	Variance ³	Section 51 determination
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
DEPARTMENTAL								
Ordinary annual services	10,051	-	1,398	-	11,449	11,102	347	-
Other services	-	-	-	-	-	-	-	-
Equity	3	-	-	-	3	4	(1)	-
Total departmental	10,054	-	1,398	-	11,452	11,106	346	-
ADMINISTERED								
Ordinary annual services	86,289	-	-	n/a	86,289	85,859	430	-
Administered items	-	-	-	n/a	-	-	-	-
Total administered	86,289	-	-	n/a	86,289	85,859	430	-

Notes:

- In 2014-15, there were no appropriations which have been quarantined.
- In 2014-15, there were no requests to draw down from the Advance to the Finance Minister (AFM).
- In 2014-15, the variances are not considered material.

	2014 Appropriations							Appropriation applied in 2014 (current and prior years) \$'000	Variance \$'000
	Appropriation Act		FMA Act			Total appropriation \$'000			
	Annual Appropriation \$'000	Appropriations reduced ¹ \$'000	AFM ² \$'000	Section 30 \$'000	Section 31 \$'000		Section 32 \$'000		
DEPARTMENTAL									
Ordinary annual services	10,588	-	-	-	212	-	10,800	10,541	259
Other services	1	-	-	-	-	-	1	-	1
Equity									
Total departmental	10,589	-	-	-	212	-	10,801	10,541	260
ADMINISTERED									
Ordinary annual services	83,720	-	-	-	n/a	-	83,720	83,260	460
Administered items	83,720	-	-	-	n/a	-	83,720	83,260	460
Total administered	83,720	-	-	-	n/a	-	83,720	83,260	460

Notes:

1. Appropriations reduced under Appropriation Acts (Nos. 1,3&5) 2013-14; sections 10, 11, and 12 and under Appropriation Acts (Nos. 2,4&6) 2013-14; sections 12, 13, and 14. Departmental appropriations do not lapse at financial year-end. However, the responsible Minister may decide that part or all of a departmental appropriation is not required and request the Finance Minister to reduce that appropriation. The reduction in the appropriation is effected by the Finance Minister's determination and is disallowable by Parliament. The Finance Minister determined no reduction in departmental appropriation in 2013-14.

As with departmental appropriations, the responsible Minister may decide that part or all of an administered appropriation is not required and request that the Finance Minister reduce that appropriation. For administered appropriations reduced under section 11 of Appropriation Acts (Nos. 1,3&5) 2013-14 and section 12 of Appropriation Acts (Nos. 2,4&6) 2013-14, the appropriation is taken to be reduced to the required amount specified in Table D of this note once the annual report is tabled in Parliament. All administered appropriations may be adjusted by a Finance Minister's determination, which is disallowable by Parliament. The Finance Minister determined no reduction in administered appropriation in 2013-14.

2. Advance to the Finance Minister (AFM) - Appropriation Acts (Nos. 1,3&5) 2013-14; section 13 and Appropriation Acts (Nos. 2,4&6) 2013-14 section 15.

Note 25B: Departmental and Administered Capital Budgets (Recoverable GST exclusive)

2015 Capital Budget Appropriations	Appropriation Act ¹		Total Capital Budget Appropriations	Capital Budget Appropriations applied in 2015 (current and prior years)		
	Annual Capital Budget	PGFA Act Section 75		Payments for non-financial assets ²	Payments for other purposes	Total Payments
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
DEPARTMENTAL						
Ordinary annual services - Departmental Capital Budget ¹	249	-	249	215	215	34
Total departmental	249	-	249	215	215	34
ADMINISTERED						
Ordinary annual services - Administered Capital Budget ¹	-	-	-	-	-	-
Total administered	-	-	-	-	-	-

Note:

1. Departmental and Administered Capital Budgets are appropriated through Appropriation Acts (No. 1,2,3). They form part of ordinary annual services, and are not separately identified in the Appropriation Acts. For more information on ordinary annual services appropriations, please see Table A: Annual appropriations.
2. Payments made on non-financial assets include purchases of assets, expenditure on assets which has been capitalised, costs incurred to make good an asset to its original condition, and the capital repayment component of finance leases.
3. The variance is not considered material.

	2014 Capital Budget Appropriations		Total Capital Budget Appropriations	Capital Budget Appropriations applied in 2014 (current and prior years)		
	Appropriation Act Annual Capital Budget	FWFA Act Section 32 reduced		Payments for non-financial assets ¹	Payments for other purposes	Total payments
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
DEPARTMENTAL						
Ordinary annual services - Departmental Capital Budget ¹	254	-	254	116	116	138
ADMINISTERED						
Ordinary annual services - Administered Capital Budget	-	-	-	-	-	-

Note:

1. Departmental and Administered Capital Budgets are appropriated through Appropriation Acts (No. 1,2,3). They form part of ordinary annual services, and are not separately identified in the Appropriation Acts. For more information on ordinary annual services appropriations, please see Table A: Annual appropriations.
2. Appropriations reduced under Appropriation Acts (No. 1,2,3) 2013-14: sections 10, 11, 12 and 15 or via a determination by the Finance Minister.
3. Payments made on non-financial assets include purchases of assets, expenditure on assets which has been capitalised, costs incurred to make good an asset to its original condition, and the capital repayment component of finance leases.

Note 25C: Unspent Annual Appropriations ('Recoverable GST exclusive')

Authority	2015 \$'000	2014 \$'000
DEPARTMENTAL		
Appropriation Act (No 4) 2011-12 Non Operating - Equity Injection	-	160
Appropriation Act (No 1) 2013-14	-	3,278
Appropriation Act (No 1) 2013-14 Capital Budget (DCB) Non Operating	-	185
Appropriation Act (No 4) 2013-14 Non Operating - Equity Injection	-	1
Appropriation Act (No 1) 2014-15	3,403	-
Appropriation Act (No 1) 2014-15 Capital Budget (DCB) Non Operating	219	-
Total	3,622	3,624
ADMINISTERED		
Appropriation Act (No 1) 2011-12	-	63
Appropriation Act (No 1) 2012-13	32	32
Appropriation Act (No 1) 2013-14	32	1,789
Appropriation Act (No 1) 2014-15	2,187	-
Total	2,251	1,884

Note 26: Special Accounts

Note 26: Special Accounts (Recoverable GST exclusive)

	ACIAR Special Account ¹	
	2015	2014
	\$'000	\$'000
Balance brought forward from previous period	26,159	21,177
Increases		
Other receipts	26,755	28,502
Total increases	<u>26,755</u>	<u>28,502</u>
Available for payments	<u>52,914</u>	<u>49,679</u>
Decreases		
Administered		
Payments made to suppliers	(25,063)	(23,520)
Total administered	<u>(25,063)</u>	<u>(23,520)</u>
Total decreases	<u>(25,063)</u>	<u>(23,520)</u>
Total balance carried to the next period	<u>27,851</u>	<u>26,159</u>

1. Appropriation: *Public Governance, Performance and Accountability Act 2013* section 80

Establishing Instrument: *Australian Centre for International Agricultural Research Act 1982* section 33

Purpose: For crediting amounts received from time to time to cover the discharge of costs.

Note 27: Reporting of Outcomes**Note 27A: Net Cost of Outcome Delivery**

	Outcome 1		Total	
	2015	2014	2015	2014
	\$'000	\$'000	\$'000	\$'000
Departmental				
Expenses	11,470	10,912	11,470	10,912
Own-source income	1,428	240	1,428	240
Administered				
Expenses	109,999	107,242	109,999	107,242
Own-source income	21,331	31,489	21,331	31,489
Net cost of outcome delivery	(98,710)	(86,425)	(98,710)	(86,425)

ACIAR has only one outcome : To achieve more productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research and training partnerships.

Note 27B: Major Classes of Departmental Expense, Income, Assets and Liabilities by Outcome

Expenses, income, assets and liabilities included on the Statement of Comprehensive Income and the Statement of Financial Position all relate to Outcome 1 as described in Note 1.1.

Note 27C: Major Classes of Administered Expenses, Income, Assets and Liabilities by Outcome

Expenses, income, assets and liabilities included on the Administered Schedule of Comprehensive Income and the Administered Schedule of Assets and Liabilities all relate to Outcome 1 as described in Note 1.1.

Note 28: Budgetary Reports and Explanations of Major Variances

The following tables provide a comparison of the original budget as presented in the 2014-15 Portfolio Budget Statements (PBS) to the 2014-15 final outcome as presented in accordance with Australian Accounting Standards for the entity. The Budget is not audited.

Variances are considered to be 'major' based on the following criteria:

- the variance between budget and actual is greater than 10%; and
- The variance between budget and actual is greater than 2% of the relevant category (Income, Expenses and Equity totals); or
- an item below this threshold but is considered important for the reader's understanding or is relevant to an assessment of the discharge of accountability and to an analysis of performance of an entity.

Where a budget has not been provided for in the PBS, for example non-cash items such as asset revaluations, foreign exchange and sale of asset adjustments, these items will be denoted by "n/b". Unless the variance is considered to be 'major' no explanation has been provided.

Note 28A: Departmental Budgetary Reports

Statement of Comprehensive Income for the period ended 30 June 2015

	Actual	Budget estimate	
	2015 \$'000	Original ¹ 2015 \$'000	Variance ² 2015 \$'000
NET COST OF SERVICES			
Expenses			
Employee benefits	7,587	8,163	(576)
Suppliers	3,643	3,360	283
Depreciation and amortisation	240	253	(13)
Total expenses	11,470	11,776	(306)
Own-Source Income			
Own-source revenue			
Sale of goods and rendering of services	1,398	1,697	(299)
Other revenue	30	24	6
Total own-source revenue	1,428	1,721	(293)
Net cost of services	10,042	10,055	(13)
Revenue from Government	9,802	9,802	-
Surplus/(Deficit) attributable to the Australian Government	(240)	(253)	13
OTHER COMPREHENSIVE INCOME			
Items not subject to subsequent reclassification to net cost of services			
Changes in asset revaluation surplus	(153)	n/b	(153)
Total other comprehensive income	(153)	n/b	(153)
Total comprehensive income/(loss) attributable to the Australian Government	(393)	(253)	(140)

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS)).

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below.

Statement of Financial Position
as at 30 June 2015

	Actual	Budget estimate	
	2015	Original ¹	Variance ²
	\$'000	2015	2015
		\$'000	\$'000
ASSETS			
Financial assets			
Cash and cash equivalents	84	62	22
Trade and other receivables	3,678	3,480	198
Total financial assets	3,762	3,542	220
Non-financial assets			
Land and buildings	992	318	674
Property, plant and equipment	300	688	(388)
Intangibles	48	170	(122)
Other non-financial assets	96	69	27
Total non-financial assets	1,436	1,245	191
Total assets	5,198	4,787	411
LIABILITIES			
Payables			
Suppliers	364	190	174
Other payables	754	86	668
Total payables	1,118	276	842
Provisions			
Employee provisions	2,003	2,093	(90)
Total provisions	2,003	2,093	(90)
Total liabilities	3,121	2,369	752
Net assets	2,077	2,418	(341)
EQUITY			
Parent entity interest			
Contributed equity	1,578	1,738	(160)
Reserves	112	708	(596)
Retained surplus/(accumulated deficit)	387	(28)	415
Total equity	2,077	2,418	(341)

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS)).

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below.

Statement of Changes in Equity
for the period ended 30 June 2015

	Retained earnings			Asset revaluation			Contributed equity/capital			Total equity		
	Actual	Budget estimate	Variance ²	Actual	Budget estimate	Variance ²	Actual	Budget estimate	Variance ²	Actual	Budget estimate	Variance ²
	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Opening balance												
Balance carried forward from previous period	141	225	(84)	751	708	43	1,486	1,486	-	2,378	2,419	(41)
Adjustment for changes in accounting policies	-	-	-	-	-	-	-	-	-	-	-	-
Adjusted opening balance	141	225	(84)	751	708	43	1,486	1,486	-	2,378	2,419	(41)
Comprehensive income												
Deficit for the period	(240)	(253)	13	n/a	n/a	n/a	n/a	n/a	n/a	(240)	(253)	13
Other comprehensive income	-	-	-	(153)	n/b	(153)	-	-	-	(153)	n/b	(153)
Total comprehensive income	(240)	(253)	13	(153)	-	(153)	-	-	-	(393)	(253)	(140)
Transactions with owners												
Distributions to owners	-	-	-	-	-	-	(160)	n/b	(160)	(160)	n/b	(160)
Returns of capital	-	-	-	-	-	-	-	-	-	-	-	-
Contributions by owners	-	-	-	-	-	-	249	249	-	249	249	-
Departmental capital budget	-	-	-	-	-	-	3	3	-	3	3	-
Equity injection - Appropriations	486	n/b	486	(486)	n/b	(486)	-	-	-	-	n/b	-
Transfers between equity components	486	-	486	(486)	-	(486)	92	252	(160)	92	252	(160)
Total transactions with owners	387	(28)	415	112	708	(596)	1,578	1,738	(160)	2,077	2,418	(341)
Closing balance attributable to Australian Government												

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS)).

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below.

Cash Flow Statement
for the period ended 30 June 2015

	Actual	Budget estimate	
		Original ¹	Variance ²
	2015	2015	2015
	\$'000	\$'000	\$'000
OPERATING ACTIVITIES			
Cash received			
Appropriations	9,676	9,802	(126)
Sale of goods and rendering of services	1,405	1,697	(292)
Net GST received	248	20	228
Total cash received	11,329	11,519	(190)
Cash used			
Employees	7,388	8,078	(690)
Suppliers	3,754	3,441	313
Total cash used	11,142	11,519	(377)
Net cash from operating activities	187	-	187
INVESTING ACTIVITIES			
Cash used			
Purchase of property, plant and equipment	219	252	(33)
Total cash used	219	252	(33)
Net cash (used by) investing activities	(219)	(252)	33
FINANCING ACTIVITIES			
Cash received			
Contributed equity	33	252	(219)
Total cash received	33	252	(219)
Net cash from financing activities	33	252	(219)
Net increase in cash held	1	-	1
Cash and cash equivalents at the beginning of the reporting period	83	62	21
Cash and cash equivalents at the end of the reporting period	84	62	22

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS)).

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below.

Note 28B: Departmental Major Budget Variances for 2015

Explanations of major variances	Affected line items (and statement)
<p>Employees A number of reasons account for the underspend including savings from implemented productivity measures, a delay in enterprise agreement negotiations resulting in no pay increases during the financial year and delays in filling certain vacant positions.</p>	<p><i>Employee benefits expense (Statement of Comprehensive Income), Employee provisions (Statement of Financial Position), Operating cash used - employees (Cash Flow Statement)</i></p>
<p>Suppliers expenses The variation is due mainly to additional IT security costs and initial development work on a new business system neither of which were initially budgeted. Variations in payables are timing differences due to late receipt of supplier invoices.</p>	<p><i>Suppliers expense (Statement of Comprehensive Income), Suppliers payable (Statement of Financial Position), Operating cash used - suppliers (Cash Flow Statement)</i></p>
<p>Own-source revenue Utilisation of available management fees accompanying external funding is less than budgeted due to employee and supplier expenses being less than budgeted. In line with funding agreements, unutilised external funding is retained in the administered special account for future programme use.</p>	<p><i>Sale of goods and rendering of services (Statement of Comprehensive Income), Trade and other receivables (Statement of Financial Position), Operating cash received - Sale of goods and services (Cash Flow Statement)</i></p>
<p>Non-financial assets In the 2014-15 Portfolio Budget Statement fit-out costs are included in property, plant and equipment while they are included under land and buildings in the financial statements. The net increase in total non-financial assets is primarily attributable to the refurbishment of ACIAR's Canberra office, significantly funded by a lease incentive provided by the landlord post development of the 2014-15 Portfolio Budget Statement. Planned expenditure on intangibles (IT assets) was deferred pending the outcome of the new business system project referred to above.</p>	<p><i>Trade & other receivables, Non-financial assets and Other payables (Statement of Financial Position), Financing cash received - Contributed Equity (Cash Flow Statement)</i></p>
<p>Net GST received Net GST received underestimated in the Portfolio Budget Statements.</p>	<p><i>Net GST received, Cash Used - Suppliers (Cash Flow Statement)</i></p>

Note 28C: Administered Budgetary Reports**Administered Schedule of Comprehensive Income**
for the period ended 30 June 2015

	Actual Budget estimate		Variance ²
	2015	Original ¹	
	\$'000	\$'000	\$'000
NET COST OF SERVICES			
Expenses			
International development assistance	109,999	112,524	(2,525)
Total expenses administered on behalf of Government	109,999	112,524	(2,525)
Revenue			
Non-taxation revenue			
External funds	21,331	26,235	(4,904)
Total non-taxation revenue	21,331	26,235	(4,904)
Total revenue	21,331	26,235	(4,904)
Net cost of services	88,668	86,289	2,379
Total comprehensive (loss)	(88,668)	(86,289)	(2,379)

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS)).

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below.

Administered Schedule of Assets and Liabilities
as at 30 June 2015

	Actual Budget estimate		Variance ¹
	2015	Original ² 2015	
	\$'000	\$'000	\$'000
ASSETS			
Financial assets			
Cash and cash equivalents	27,852	21,177	6,675
Taxation receivables	701	1,652	(951)
Total financial assets	28,553	22,829	5,724
Non-financial assets			
Other non-financial assets	-	15	(15)
Total non-financial assets	-	15	(15)
Total assets administered on behalf of Government	28,553	22,844	5,709
LIABILITIES			
Payables			
Suppliers	2,958	2,044	914
Other payables	652	487	165
Total payables	3,610	2,531	1,079
Provisions			
Employee provisions	18	18	-
Total provisions	18	18	-
Total liabilities administered on behalf of Government	3,628	2,549	1,079
Net Assets	24,925	20,295	4,630

1. The agency's original budgeted financial statements which were first presented to parliament in respect of the reporting period (2014-15 Portfolio Budget Statements (PBS))

2. Between the actual and original budgeted amounts for 2015. Explanations of major variances are provided further below

Note 28D: Administered Major Budget Variances for 2015

Explanations of major variances	Affected line items (and schedule)
External Funds ACIAR receives funding from DFAT and other external parties to fund international agricultural research aid programmes. Funding cuts to Australia's aid programme resulted in a reduction in DFAT's funding of ACIAR's research programmes.	<i>International development assistance expenses, External funds (Administered Schedule of Comprehensive Income).</i>
Cash and cash equivalents, and Suppliers Increase due to earlier than anticipated receipt of funds from external parties and reduction in total expenditure due to delays in external funders confirming funding for a number of activities.	<i>International development assistance expenses (Administered Schedule of Comprehensive Income), Cash and cash equivalents, Trade and other receivables, Suppliers (Administered Schedule of Assets and Liabilities)</i>



Litamat Benua, mother of four is a proud female farmer from Bremway village on Malakula Island, Vanuatu. Source: Ashleigh Conor, ACIAR

TRACKING PERFORMANCE

Tracking performance against the 2014–15 Portfolio Budget Statement

Vision

The Australian Centre for International Agricultural Research (ACIAR) looks to a world where poverty has been reduced and the livelihoods of many improved through more-productive and sustainable agriculture emerging from collaborative international research.

Mission

To achieve more-productive and sustainable agricultural systems, for the benefit of developing countries and Australia, through international agricultural research partnerships.

Outcome

ACIAR has a single outcome:

To achieve more-productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research and training partnerships.

Under this outcome ACIAR has the single administered program of international agricultural research for development for more-productive and sustainable agriculture, as outlined in the 2014–15 Portfolio Budget Statement. The Administered program is delivered through a number of initiatives aligning closely with the Australian aid policy.

To achieve this outcome ACIAR worked to:

- concentrate efforts in developing countries of Asia and the Pacific, while also engaging in high-payoff partnerships in other regions in support of Australia's foreign policy objectives;

- work through bilateral (at least 70 per cent) and multilateral (up to 30 per cent) modalities;
- generate new technologies, new knowledge, greater capability and better decision-making from our research partnerships;
- focus research on four areas: crops; livestock and fisheries; natural resources and forestry; and socioeconomics and policy;
- develop a stronger focus on developing market opportunities for smallholder farmers;
- implement cross-disciplinary and interdisciplinary research approaches;
- tackle gender inequality, in the design, delivery and impacts of projects;
- maintain our core mandate of producing excellent research, and work through others to achieve up-scaling and broader development;
- deepen our existing partnerships and explore new and more diverse partnerships, with greater emphasis on the private sector and non-government organisations, and new, innovative partnerships with emerging economies; and
- move towards more-strategic institutional partnerships, and a more programmatic approach in delivery.

Administered program

Program objective	Deliverables	Key Performance Indicators: Indicator/performance
To achieve more productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research and training partnerships	Increased availability of and access to meat, fish, milk, grains, fruits and vegetables	New technologies that enhance agricultural productivity, food sufficiency, diversification and health and nutrition
	Reduced postharvest losses	New knowledge that improves agricultural productivity and management systems and enhances market opportunities.
	Improved nutritional quality and diversity of diets	Greater capability for scientific excellence, agricultural innovation and agribusiness development among researchers, research institutions, policy makers and development partners
	Increased productivity, quality and market access for smallholder agriculture, aquaculture and forestry products	Better decision-making within research and policy institutions to support agricultural innovation and agribusiness development
	Greater resilience and diversity of production systems	
	Strengthened plant and animal biosecurity	

Program Objective	Deliverables	Key Performance Indicators: Indicator/performance
Sound administration that underpins ACIAR's collaborative, international project partnerships, and requires liaison with a diverse range of research providers and government instrumentalities and other stakeholders	Departmental costs are maintained within agreed budget parameters	Departmental costs are maintained within agreed budget parameters. Achieved— Departmental costs were within agreed budget parameters.

For detailed reporting against administered program key performance indicators, also refer to the following section in this report: *Tracking performance against the 2014–15 Annual Operational Plan*.

Departmental program

ACIAR has the single departmental program of Portfolio management: Sound administration that underpins ACIAR's collaborative, international project partnerships, and requires liaison with a diverse range of research providers and government instrumentalities and other stakeholders.

Tracking performance against the 2014–15 Annual Operational Plan

ACIAR's 2014–15 Annual Operational Plan (AOP) outlines research priorities, providing a window into the Centre's operations and research directions within the context and strategies of the broader Australian aid program.

ACIAR measures its progress in each country through a series of key performance indicators (KPIs). These assist in the development of more focused programs in each country and also reflect the drive to refine and target programs more strongly to deliver research applicable to partner-country needs.

ACIAR also measures its progress across corporate program areas through a series of KPIs. These assist in the refinement of corporate programs, which are designed to complement the Centre's research program.

Key performance indicators in each country and corporate program area

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Pacific		
Papua New Guinea		
Agreement reached on appropriate policy and operational responses to enhance value-added markets for balsa trees grown by farmers	Achieved	Agreement reached with PNG Forest Authority at forest policy workshop on need to finalise the revised Balsa Code of Practice prepared by the project.
Social, economic and environmental constraints to industry development by smallholder farmers identified and documented with case studies on crop, fisheries and gender research	Achieved	A SWOT analysis and strategic plan for inland aquaculture development have been completed and signed off by the National Fisheries Authority.
Adoption of new integrated production technologies in crops and fisheries projects demonstrated	Achieved	Production technology for sea cucumbers has been considerably enhanced in the last 12 months, as a result of bringing in expertise from FIS project in Vietnam and Philippines. Similarly, there have been improvements in hatchery production of freshwater prawns and production of tilapia.
Research options designed and initiated to reduce gaps in agricultural productivity and achieve diversified systems for crop, fisheries and poultry producers	Achieved	Three new projects have been activated in inland aquaculture, mariculture and pearls (the last mentioned with a strong focus on livelihood development).
Risk management strategies, management programs or awareness programs relating to exotic pests, disease or weed incursion developed for at least two crop, livestock or across-commodity initiatives	Not achieved	Not achievable as insufficient invasive pests, diseases and weeds

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Partnerships established to commence a program of sweetpotato system research targeting sustainable production, diversification, value-chain development, value-addition and processing	Achieved	Partners have reached consensus on design for 'economic development' project for commercialisation of the sweetpotato sector, including production, post-harvest handling and processing of sweetpotato for improved income at community level.
Indicators for assessing the environmental sustainability of oil palm production systems identified and being used by industry	Achieved	Proceedings prepared.
Pacific island countries		
New or adapted integrated production technologies leading to increased productivity, enhanced nutrition, decreased water use, or better management of pests and diseases, commercially adopted in at least two crop production systems	Achieved	Improved production technologies are leading to higher productivity in commercial taro production and in tomatoes (and other high-value vegetables) in Fiji, Solomon Islands and Samoa.
A report developed and circulated on processing options for wood products from young whitewood trees grown by farmers in Vanuatu	Achieved	A report covering the major possibilities for use of young whitewood trees, including as roundwood, as structural timber and clear wood has been prepared.
New protocols and processing systems developed for Canarium nuts in Solomon Islands and Vanuatu	Achieved	New protocols for drying canarium kernels to 10 per cent MC have been developed and solar drying systems have been by villagers in Vanuatu.
Agreed collaborative research developed and commenced to meet key challenges of environmental sustainability and natural resource use in the crop and forestry sectors	Achieved	A new project (FST/2014/067) on reforestation and value added processing across four Pacific countries has been developed.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
At least five postgraduate thesis studies developed in collaboration with USP and active ACIAR Pacific region projects	Achieved	Three Fijian fisheries students are currently completing PhDs at James Cook University, covering research on pearl genetics, pearl husbandry, and nutritional composition and processing of sea cucumbers. Five from SMCN/2009/003 and during 2014/15, four students were studying for MSc in Fisheries/ Aquaculture, five for MSc in Agriculture, and three for PhD in agriculture, in association with ACIAR projects.
The capacity of two regional institutions (SPC and USP) strengthened in using value-chain analysis to identify entry points for improving the competitiveness of Pacific commodity supply chains	Achieved	USP research groups have increased their value-chain skills and knowledge as a direct result of their involvement in the fisheries aspects (seaweeds, pearls, mother-of-pearl, tilapia) of PARDI. Researchers from USP, FNU and Government partners have worked with University of Adelaide to analyse value chain for high-value vegetables in Fiji. This has developed a better picture of the current situation and entry points for major supermarkets, a selection of hotels and resorts, and a survey of 1,000 households in the two main towns of Suva and Nandi.
Farmers and farmer networks in PICs supplying higher-value products or obtaining better returns through improved quality, certification, branding, participatory guarantee schemes or other value-chain interventions, for at least two new markets or commodities	Achieved	Farmers have been selling increased quantities of canarium to local processors in Vanuatu who market value added products in domestic markets. Registered farmers in Ovalau (Fiji) have been selling kava at higher prices for local processing and export (mainly to USA) while PGS farmers in Sigatoka (also Fiji) have been selling tomatoes at guaranteed and sustained higher prices to the local hotel industry.
Seaweed and pearl production contributing to economic development of participating communities	Partly achieved	Economic contribution of both commodities has been improved in the last 12 months, due to several factors including research outcomes and more focussed government involvement in the industries which has come about as part of uptake of the outcomes of ACIAR research.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
East Asia		
Burma		
A new multidisciplinary program established to improve productivity in the crop, fisheries and livestock sectors	Achieved	The fisheries component of the Burma work has progressed with several positive outcomes, as detailed in the mid-term review of the project.
A regional research program created to assess and control major livestock biosecurity risks in the Mekong Delta	Partly achieved	Burma not in Mekong Delta.
Cambodia		
Early uptake demonstrated by fisheries-dependent communities in Laos and Cambodia of reservoir management procedures that enhance fisheries production and community livelihoods	Achieved	Considerable government and Fisheries Administration support in Cambodia for the culture based fisheries development. This resulted in a government request for further work, which was endorsed via extension of the current project in Cambodia.
Integrated livestock and crop-based farming systems in north-western Cambodia assessed as part of a continuous and longer term research activity	Achieved	The project on integrating livestock within crop-based farming systems in north-western Cambodia is progressing well.
Rice direct-seeding methods demonstrated and farmer extension material developed	Achieved	The demonstrations have developed a high level of confidence amongst farmers, Government and NGOs. As such direct seeding of rice has been incorporated into the PADDEE program over three provinces and taken up by IDE with their Farm Business Advisors.
A regional research program created to assess and control major livestock biosecurity risks in the Mekong region	Achieved	

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Strategies for reducing losses of mangoes developed through new postharvest and production technologies	Achieved	Strategies have been developed and are under field evaluation.
Out-of-season production opportunities identified for Cambodian vegetables	Achieved	
Capacity in animal disease management and control improved	Partly achieved	The project had only recently commenced.
A series of policy briefs developed to assist authorities with management of disease spread via livestock movement	Achieved	
Methods to improve rice irrigation water use efficiency demonstrated and quantified	Achieved	Several demonstrations held, rice water use in Cambodia measured for the first time. Laser levelling promoted and institutionalised in Ministry of water Resources and Meteorology - laser levelling will be undertaken on 20–40 per cent of all Irrigation areas built or refurbished. Three private sector laser levelling providers established.
China		
Recommendations to overcome mineral deficiencies in dairy cattle developed for Tibet Autonomous Region	Achieved	Recommendations were made resulting in the development of commercial mineral blocks, which are being tested with farmers.
Recommendations developed for Tibet Autonomous Region on integrated crop–forage systems for provision of better feed quality and quantity throughout the year	Achieved	These recommendations have formed the basis of a new project to commence in 2015 and include an integrated approach to crop–livestock–human health and nutrition.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
A regional research program created to assess and control major livestock biosecurity risks in the Mekong region	Achieved	
A new research partnership designed for climate policy on a regional basis	Achieved	
Indonesia		
Recommendations on biosecurity training and producer incentives for the small commercial poultry sector provided to government and industry bodies	Achieved	
Workshops conducted in at least two provinces to inform farmers of practices to improve the productivity of acacia plantations	Achieved	Workshops/field days were conducted in South Sumatra (60 farmers) and Gunung Kidul (10 farmer group leaders).
Options identified for improving value chains for timber and non-timber forest products from agroforestry systems in Yogyakarta, East Nusa Tenggara and West Nusa Tenggara provinces	Achieved	Options for improving timber value chains have been identified in Gunungkidul and Sumbawa. In West Nusa Tenggara options for improving the kemiri oil value chain have been identified.
Feeding recommendations developed for management of Bali heifers in villages in Indonesia	Achieved	
New farm systems demonstrating the potential of forage tree legumes to bring degraded land into agricultural production developed and demonstrated in eastern Indonesia	Achieved	

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Options developed for new trilateral agricultural research collaboration between Indonesia, Timor-Leste and Australia	Achieved	Seeds of Life has established contacts with ILETRI in Malang (East Java) and with IAARD in Marros (South Sulawesi). MAF will obtain germplasm and collaborate with these institutes on Soybean germplasm, as well as other species.
Area-wide fruit management strategies adopted by commercial growers and smallholders in Java	Achieved	
Exporters using disinfestation treatments based on R&D project outputs for commercial shipments of mango and mangosteen	Partly achieved	China has suspended import of mangosteen.
Protocols for the management of cocoa vascular pod streak adopted by commercial growers and smallholders	Achieved	
New disease-resistant seaweed strains and smallholder value-adding opportunities for seaweed fertiliser and other by-products in eastern Indonesia identified	Partly achieved	New more efficient and profitable methods for sea farming gracilaria have been developed with Indonesian government and private sector partners. About 250 families now grow gracilaria, producing 250 tonnes of seaweed a month, with a value of around \$A 2.4M pa to farmers. A new, more productive strain of Kappaphycus has been developed, using a field selection method. Hundreds of kgs of new seed was grown and distributed to farmers in four regions. The seaweed fertiliser work that was done with Mars showed that liquid extracts of seaweed have little value in boosting performance of rice and cocoa production. The selection of disease resistant strains in the Philippines was showing promising results until the super typhoon devastated trial sites. ACIAR resources have helped farmers after the typhoon.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Guidelines published for value-upgrading and livelihood improvement in specialty coffee chains in eastern Indonesia	Achieved	Guidelines reported and published.
Agribusiness development options for at least five agricultural value chains in eastern Indonesia published in both English and Indonesian	Achieved	Agribusiness development options for at least five agricultural value chains in eastern Indonesia published in both English and Indonesian.
Production and financial data developed for farming species other than shrimps in brackish-water ponds	Achieved	Data available for salt-tolerant tilapia and the marine algae <i>Caulerpa</i> (sea grapes). Both species are now being profitably grown by many farmers in Aceh and southern Indonesia.
Techniques for capturing juvenile lobsters and cage culture of marketable-sized lobsters exchanged between Indonesia and Vietnam	Achieved	Very successful exchange - farmers from Indonesia travelling to Vietnam. This has resulted in on-going commercial arrangements.
Evidence-based policy options outlining assessed future economic scenarios and agricultural market chain developments provided to Indonesian policy advisers	Achieved	A workshop was held with senior Indonesian policy makers and researchers on market-led, value chain approaches to agribusiness R&D. The workshop shared the lessons, implications and opportunities from recent market-led, value chain approaches to pro-poor agribusiness research and development. A stronger market-value chain focus for research and development is being implemented in the Indonesian Government research agencies.
Lao PDR		
New fish-passage technology introduced in the Lower Mekong Basin	Achieved	The technology for fish passage past barriers has been adopted by the Lao Irrigation Department and the World Bank in Lao - 10 new fishways are currently being funded by the two organisations, and we anticipate the uptake momentum will continue.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Recommended best practice for gluing and joining processes for plantation timbers used in furniture manufacture in Lao PDR documented	Achieved	Following comprehensive testing on teak and eucalypt timber, a report on use of different adhesives and quality control procedures has been prepared (and translated to Lao) for the gluing operators in furniture companies.
Field clone banks established for at least 100 elite teak clones in the Luang Prabang area	Achieved	Over 200 grafted elite teak clones have been planted on UAFReC sites near Luang Prabang.
Strategies for improving provincial-level extension commenced	Achieved	
Capacity for integration of rice, water, forage and socioeconomic research increased	Achieved	
Cost analysis completed of risks to human health in pig production systems	Achieved	
Integrated program for ACIAR-supported research on livestock health and production planned and documented	Achieved	
A regional research program created to assess and control major livestock biosecurity risks in the Mekong region	Achieved	
The groundwater resource for agriculture and best use of the water for crop production assessed	Partly achieved	The groundwater resource in Laos has been quantified for the first time. The knowledge created is being fed into new groundwater policy e.g. policy brief Groundwater governance challenges and ways forward in Lao PDR.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Rice direct-seeding techniques demonstrated and farmer extension material developed	Achieved	The 143 field trials and results were so good that the Provincial administration of Savannakhet is planning the acquisition of up to 1000 direct seeders to be distributed amongst farmers in Savannakhet over the next five years (LWR/2012/110).
Capacity and awareness of integrated systems research methods in the national agricultural research system increased	Achieved	
Philippines		
Lung-lesion scoring method adopted by commercial abattoirs in two regions in Mindanao for routine inspection and disease surveillance	Achieved	
ICM strategies adopted commercially by mango, durian/jackfruit and papaya growers in the southern Philippines	Achieved	ICM options for these fruit systems are being developed and evaluated.
Best-bet IPM trials established for solanaceous, brassica and leafy vegetable crops in the southern Philippines	Achieved	Trials have been established for pest and disease management on these crops at several sites in Southern Philippines.
Characterisation achieved of constraints, opportunities and community linkages in target fruit and vegetable value chains in five study locations in the southern Philippines	Partly achieved	Market and community analyses have identified situation, constraints and opportunities in four locations. Value chain analyses will be completed and further recommendations provided by December 2015.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
A research partnership commenced aimed at enhancing smallholder net income, livelihoods and community wellbeing in smallholder value chains for selected fruits and vegetables in the southern Philippines	Achieved	Research partnerships between Australian and Philippines research institutions have been established and strengthened, including strong engagement and collaboration with the private sector.
At least five new communities engaged in sea-ranching of sea cucumbers based on previous collaborative research	Achieved	Expansion of sea ranching trials across the Philippines has seen new engagements with five communities formalised (Anda in Luzon, Concepcion in western Visayas, Milawaliw in eastern Visayas, Tubajon and Laguindingan in Mindanao). Formal agreements providing access rights and tenure for communities over ranching areas have been negotiated with local authorities in three sites (Anda in Luzon, Concepcion in western Visayas, Tubajon in Mindanao). Releases of hatchery reared juveniles have been conducted at four sites (Imbo, Maliwaliw, Concepcion and Tubajon), while one community (Anda) is now actively involved in contract production of juveniles to support project activities.
Trilateral collaborative research commenced to develop potential of giant grouper mariculture in the Philippines, Vietnam and Australia	Achieved	Giant grouper research is functioning well, with good exchange of information between Australia, Philippines and Vietnam (and to an extent, with Taiwan as well). Students from both Vietnam and Philippines are studying at the project leader's university (USC).
Thailand		
A collaborative research program created to assess and control major livestock biosecurity risks in the Mekong region	Achieved	
Capacity developed for trade and market access through establishing remote microscopy equipment for routine use in national plant biosecurity centres in Cambodia, Laos and Thailand	Partly achieved	The capacity for routine use has been well developed in Thailand but less so in Laos and Cambodia.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Timor-Leste		
Design provided for an integrated project to enhance smallholder pig systems in Timor-Leste and eastern Indonesia	Partly achieved	Delays in obtaining letters of support prevented complete achievement.
Consultations undertaken to design a plan for the transition of Seeds of Life III to a program fully managed and supported by MAF by the end of 2016	Achieved	MAF is now taking charge of the Research Component and the Source Seed and Quality Control component. Steering Committee of July 2015 will approve the transition plan.
Certified seed production system implemented with production targets of 25 tonnes (t) of maize and rice seed and 13 t of peanut seed; contract growers producing commercial seeds: 150 t of maize, 50 t of rice and 10 t of peanut	Achieved	Achieved as per Seeds of Life reports.
Seed research results extended to operationalise 1,200 community seed production groups	Achieved	Achieved as per Seeds of Life reports.
New trilateral cooperation developed between Timor-Leste, Indonesia and Australia for future agricultural research	Achieved	Seeds of Life has established contacts with ILETRI in Malang (East Java) and with IAARD in Marros (South Sulawesi). MAF will obtain germplasm and collaborate with these institutes on Soybean germplasm, as well as other species.
Recommendations developed from on-station trials on the forage varieties most suitable for on-farm evaluation	Achieved	
Vietnam		
Links between improved productivity and market access and smallholder livelihoods assessed through field testing three projects		Three new projects (Moc Chau vegetables, Lao Cai vegetables, and NW temperate fruit) have research in place that will evaluate the links between productivity, market access and livelihoods.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Enhanced knowledge of improved agroforestry practices through demonstration trials for each of the 10 agroforestry systems relevant to the Provinces of Dien Bien, Son La and Yen Bai	Achieved	Trials established and monitored for 10 agroforestry systems in the three provinces, with seven having sufficient replications for scientific analysis and the other three only having demonstration value.
Optimal processing methods for veneer production from plantation acacia and eucalypt logs documented for distribution to industry participants	Achieved	A manual on manufacturing of veneer based products was completed and disseminated along with a log grading manual and veneer grading standard.
A regional research program created to assess and control major livestock biosecurity risks in the Mekong region	Achieved	
Research partnerships initiated to improve smallholder incomes in the north-western highlands region, through identification of improved market information, market access and value-chain competitiveness for high-value fruits and vegetables	Achieved	Four projects have developed new partnerships, including with research institutions in China to understand cross-border trade and export markets, links to other ACIAR project teams in Cambodia (tropical fruit), collaboration with NGOs for outreach and scaling up (e.g. Helvetas, Centre for Rural Economy Development and World Vision).
Value chain analysis of at least two beef market chains in three provinces in central Vietnam completed and results extended to government and industry partners, leading to development of stronger integration with markets for beef cattle producers	Achieved	

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Uptake of the results of fish nutritional research by commercial feed manufacturers	Achieved	The on-going “AquaFeeds Forum”, which was initiated by the fish nutrition project, under feed company funding has demonstrated the uptake and enduring impact of the nutritional research work.
Development and application of scientific and policy options for assessing climate limitations and variability	Achieved	
South and West Asia		
Afghanistan		
Research priorities identified for the improvement and dissemination of forage options for small ruminants	Achieved	
Higher-yielding disease-resistant maize and wheat varieties released	Achieved	Two durum wheat and three maize varieties released.
Capacity building of national scientists in community-based watershed management achieved through completed training courses and lessons learnt from project partnerships	Achieved	In close consultation with MAIL- ARIA- DAIL, the project identified the training needs such as watershed development and water harvesting, soil health for 170 staff. Further training has been planned in India to take advantage of the partnerships and knowledge developed by ACIAR projects there.
Watershed development using a mix of perennial trees and forage crops expanded to a further two catchments	Achieved	Five watersheds are now in various stages of watershed development. All have had community consultation and works (contours, planting) has been conducted in two
Use of saltbush for catchment rehabilitation and grazing demonstrated in Baghlan province	Achieved	At the Saiyad site a women’s group (~250) have raised 10,000 – 12,000 atriplex for further plantation at the watershed sites.
Improved crop varieties demonstrated in six provinces	Achieved	Four hubs are operating and conducting demonstrations in farmer’s fields (four provinces). For the other provinces, only the research stations are providing the demonstrations.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Bangladesh		
Capacity of national agronomists to manage legumes between cereal crops improved through training and knowledge transfer in project partnerships	Achieved	Agronomists from Pulses Research Centre (Ishurdy and Gazipur) managing the trials and demonstration of pulses (green peas) after T. aman rice. Benefits of line sowing of mungbean established.
Adoption of minimum-till practices based on two-wheel tractor systems increased through development of private industry supply chain	Partly achieved	More than 1,800 farmers have been involved in demonstrations/field days. In the Rabi season planting, about 1,000 farmers hired six service providers for fully commercial planting services on 134 ha of mustard, wheat, maize, chickpea, unpuddled rice and lentil. However, the private sector supply chain is not fully established due to difficulties with manufacturing and the number of service providers is at a pilot level.
First regional conference in conservation agriculture in Bangladesh organised and managed	Achieved	
Initial testing of research priorities for climate-resilient farming systems intensification in eastern Nepal, India and Bangladesh	Achieved	A very successful conference was held with >120 participants from Asia and Africa. The proceedings are available on the web.
Bhutan		
Disease-free planting material commercially produced and distributed to citrus growers	Partly achieved	Disease-free planting material is available to commercial growers but is currently still produced by public sector actors.
India		
Priority research and scaling-out challenges assessed for intensification and diversification of sustainable and resilient farming systems in eastern India, Bangladesh and Nepal	Achieved	Achieved through Sustainable, Resilient Farming System Intensification (SRFSI).

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Australia–India collaborative research into policies and market options for greenhouse gas mitigation progressed	Achieved	
Use of molecular markers fully integrated into three wheat breeding programs in India	Achieved	Achieved as evidenced by presentations at the annual science meeting.
Genetic mapping of deep-root and soil-shading wheat lines undertaken for use in developing improved breeding material	Achieved	Appropriate populations to map deep root traits have been built. Mapping work progressing according to plan.
Analysis completed of impacts of vegetable crop development on smallholders' livelihoods (especially women) in the East India Plateau	Partly achieved	The data has been collected from on-farm, farmer-managed experiments comparing various vegetable crop options with traditional land use, typically transplanted rice. The data collected includes: Inputs (fertiliser, irrigation, labour), Yield, and Income. A series of case studies have been completed but a more complete analysis is yet to be done.
Community perceptions of groundwater and its management in Gujarat and Rajasthan assessed	Achieved	Key informant interviews were conducted with over 70 participants in the two watersheds to understand indigenous groundwater knowledge and its role in future sustainability of groundwater use.
Field trials with irrigation from groundwater in the Eastern Gangetic Plain established	Partly achieved	Six target villages appropriate to trial interventions in Nepal/India and six sites in NW Bangladesh have been selected to demonstrate improved social and technical interventions for improved dry season irrigated production. The field trials will start in the next Rabi (dry season).

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Nepal		
Testing of research options initiated for intensification and diversification of sustainable and resilient farming systems in eastern Nepal, and India and Bangladesh	Achieved	Achieved - through SRFSI.
New research commenced on supplementing irrigation with small-scale water supplies	Achieved	Project commenced on 1/9/14. Two villages in Saptari selected and field trials about to commence.
Drivers of farming systems adaptation, farmers' existing agroforestry practices, and perceptions of limitations to their livelihoods across six agroecological settings in the Middle Hills region documented and published	Achieved	An article on factors of adaptation and future of agroforestry in Nepal from qualitative surveys undertaken in 2014 prepared for submission to Agroforestry Systems.
Pakistan		
Disease-free planting material of citrus and mangoes commercialised for use in horticultural production systems	Achieved	Disease-free planting material of both crops commercially available.
Successful shipments of mangoes to two export markets using technologies developed through the ASLP	Achieved	Mangoes shipped to EU markets, using extended shelf life technologies deployed through ASLP.
Sources of potential heat tolerance identified in local and introduced lines of tomato, okra and cucumber used in commercial breeding programs	Partly achieved	Sources of heat tolerance have been identified but are currently not being used in commercial breeding programs.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Increased knowledge and assessment of policies affecting Pakistani agriculture developed and documented for policy decision-makers	Achieved	
Capacity of lead farmers, researchers and extension staff in the horticulture and dairy sectors increased, through short-course irrigation-management training conducted in Pakistan	Achieved	
Forage seed systems further developed through village-based seed enterprises	Achieved	
Eastern and Southern Africa		
Sub-Saharan Africa		
Scaling out of SIMLESA research knowledge to five countries in the region documented and acknowledged	Achieved	Achieved through SIMLESA with active Ips and private sector linkages.
Crop–livestock systems in Zimbabwe researched to enable increased integration and productivity levels	Achieved	Achieved through SIMLESA with active Ips and private sector linkages.
Value-chain constraints to the engagement of smallholders in the Botswana beef industry identified	Achieved	
Dry environments characterised and crop production modelled by Ethiopian sorghum breeding program	Achieved	Achieved by the joint teams of UQ and EIAR (Ethiopia).

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Delivery and dissemination of research findings on appropriate tree species and management options to be used in scaling up of evergreen agroforestry systems in Ethiopia and Rwanda	Achieved	Primarily delivered through seedling production and farmer training at two Rural Resource Centres in each of Ethiopia and Rwanda as well as via a large number of participatory research trials with farmers in each country.
Knowledge of practices of farming systems intensification enhanced through joint research with national R&D agencies national	Partly achieved	Achieved through contracts, training workshops and diagnostic surveys.
Middle East and North Africa		
Iraq		
Substantial adoption of conservation agriculture in target areas achieved and measured	Achieved	Substantial adoption of conservation agriculture in target areas achieved and measured.
Algeria, Morocco, Tunisia (Maghreb)		
Knowledge of practices of farming systems intensification enhanced through joint research with national R&D agencies	Achieved	Good results from regional platform research.
Use of conservation agriculture techniques validated and adapted to smallholder circumstances	Achieved	Achieved and capacity built.
Egypt		
Knowledge of practices of farming systems intensification enhanced through joint research with national R&D agencies	Partly achieved	Achieved through contracts, training workshops and diagnostic surveys.
Trials for improved water management and soil salinity management established in the Nile Delta	Achieved	Four cropping seasons of trials have so far been completed. Trials include - managing salinity with soil amendments (manure, gypsum, ammonia injection), trialling controlled drainage from subsurface drains, trialling combined subsurface drains plus mole drains.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Australian International Food Security Research Centre		
Greater access to agricultural innovations by female and male smallholder farmers	Achieved	The AIFSRC project 'Farm mechanisation and conservation agriculture for sustainable intensification (FACASI)' aims to identify appropriate small-scale machines to improve farming practices. The project teams have identified the most promising technologies and imported these into Tanzania, Kenya, Ethiopia and Zimbabwe. These are now being tested by farmers and potential business models investigated are being investigated.
Enabling policies and mechanisms to support smallholders' access to markets	Achieved	The project 'Improving Income and Nutrition in Eastern and Southern Africa by Enhancing Vegetable-based Farming and Food Systems' is working with female and youth farmers in Tanzania, Ethiopia and Malawi to identify markets and value chains to improve income and nutrition for peri-urban small holders. Private sector partners have been identified for linkages and financial services and consultants have conducted training for the smallholders.
Increased access to high-quality nutritious food and reduced postharvest loss	Achieved	A CAD\$ 15 million competitive research fund, co-funded by IDRC and AIFSRC, has been established. The fund, named CultiAf, currently supports five active projects that are led by African research institutes. A further four projects are in development. All of the five active projects increase access to high-quality nutritious foods or reduce post-harvest loss.
Stronger institutional capacity available to achieve food security in the long term	Achieved	The Australia-Africa Plant Biosecurity Partnership project commenced with a high level plant biosecurity prioritisation workshop in October 2014. The partnership aims to enhance the ability of east African biosecurity agencies to more effectively control plant pests and diseases through developing the capacity of individuals and institutions. AIFSRC has contracted a consortium led by Plant Biosecurity CRC and supported by CSIRO, the Crawford Fund and CABI Africa to manage this project. The first Africa Networking workshop was held in Nairobi in August 2015 and was attended by 45 fellows from East African countries. Fifteen senior fellows will participate in short-term placements in Australian institutions in late 2015.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
A strong, active financial and research relationship with IDRC maintained, with CultiAF supporting quality applied research by African national research institute	Achieved	A CAD\$ 15 million competitive research fund, co-funded by IDRC and AIFSRC has been established. The fund, named CultiAf, currently supports five active projects that are led by African research institutes. A further four projects are in development.
Research partnership activated with Syngenta Foundation for Sustainable Agriculture and the Crawford Fund, to understand and learn from global best practices in plant variety design and encourage market-led approaches to plant breeding	Achieved	This research partnership has been realised through a joint initiative, 'Demand led plant variety design for emerging markets in Africa'. The project is in its early stages and aims to enable smallholder farmers to better participate in local and regional markets, by increasing the availability and adoption of high performing plant varieties that meet market demands.
Strengthened research partnerships established between African and Australian educational and research bodies and other African networks of educational institutions through the Australia–Africa Universities Network	Achieved	AIFSRC has continued its engagement with the AAUN through providing financial support for seed project funding and the annual Australia Africa conference at the Crawford School of Public Policy. Seven projects relating to food security that encourage collaboration between African and Australian universities were funded in 2013–14 year. AIFSRC committed additional funding in the 2014–15 year to continue to support the successful projects.
Capacity of African national and regional plant biosecurity agencies being enhanced to manage and implement plant pest and disease surveillance and control systems	Achieved	The Australia-Africa Plant Biosecurity Partnership project commenced with a high level plant biosecurity prioritisation workshop in October 2014. The partnership aims to enhance the ability of east African biosecurity agencies to more effectively control plant pests and diseases through developing the capacity of individuals and institutions. AIFSRC have contracted a consortium led by Plant Biosecurity CRC and supported by CSIRO, the Crawford Fund and CABI Africa to manage this project. The first Africa Networking workshop was held in Nairobi in August 2015 and was attended by 45 fellows from East African countries. Fifteen senior fellows will participate in short-term placements in Australian institutions in late 2015.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
Commercial models identified for testing of delivery of two-wheel tractor services to smallholders in four countries of eastern and southern Africa	Achieved	A preliminary study report of the available tractors was completed for Kenya in 2013. Country level inventory reports have been produced for Tanzania, Kenya and Ethiopia. For Zimbabwe, an inventory of two-wheel tractor powered conservation agriculture implements and equipment has been completed. Apart from the two-wheel tractors which are already on the market, there are no commercial outlets in Zimbabwe for conservation agriculture equipment and trailers.
Role of gender assessed in smallholder decisions to adopt sustainable intensification farming systems	Achieved	Two policy briefs, two peer reviewed journal papers and three discussion papers that relate to this topic have been published as a part of AIFSRC's project 'Identifying Socioeconomic Constraints to and Incentives for Faster Technology Adoption'.
Delivery and dissemination of research findings on appropriate tree species and management options to be used in scaling up of evergreen agroforestry systems in Ethiopia and Rwanda	Achieved	The 'Trees for Food project' has developed protocols for tracking participatory trials and is conducting them in Ethiopia and Rwanda. Data is being collected and continually analysed to determine the effectiveness of these technologies and understanding farmers' perceptions to scaling up options for appropriate tree species.
Capacity Building: Education and Training		
At least 15 students to have successfully completed postgraduate awards in 2014–15	Achieved	Twenty one students successfully completed their studies during 2014–15.
Size and management of the John Allwright Fellowship program effectively maintained and at least 20 new students to have commenced in 2014–15	Achieved	There were 137 students active over the 2014–15 year including 22 new starters.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
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Continuation of high-quality applicants for in-depth research-management training in Australia (John Dillon Fellows), such that over 40 applications are received and at least 8 Fellowships are awarded	Achieved	Ten John Dillon Fellows were awarded in 2014–15.
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Research Program Impact Assessment

At least five reports published in the Impact Assessment Series	Partly achieved	Tibet Livestock and Cocoa currently with editor; Private sector, Adopt and Aflatoxin drafts completed (IAS 88, 89, 90).
Annual project leader Adoption Studies report completed	Achieved	<i>Adoption of ACIAR project outputs 2014</i> published, included seven project studies involving five different partner countries.
Partner-country and project team capacities to evaluate agricultural research initiatives strengthened	Achieved	
Regular monitoring of ACIAR's contributions to Australia's ODA priorities, including economic diplomacy and aid for trade objectives	Achieved	

Communicating Research Results

12–16 new publications on ACIAR-funded outputs, outcomes and impacts available through new channels and platforms	Partly Achieved	All available project reports on ACIAR website, project and program outcomes available through scientific publications, <i>Partners</i> magazine and fact sheets, promoted through social media highlight ACIAR's vision and purpose.
Three issues of <i>Partners in Research for Development</i> magazine published	Achieved	Three <i>Partners</i> editions published.
A high-level narrative developed and used to engage and influence key stakeholder groups	Partly achieved	All available project reports on ACIAR website, project and program outcomes available through scientific publications, <i>Partners</i> magazine and fact sheets, promoted through social media.

Key Performance Indicators for 2014–15	Achieved / Partly achieved / Not achieved	Comment
ACIAR visible in six key events, supported by a range of materials, publications and media releases	Achieved	Event guidelines developed and implemented.
Corporate Programs		
Departmental and administered costs maintained within agreed budget parameters	Achieved	Departmental and administered costs maintained within budget parameters.
All legislative, reporting and information requirements and requests are met in an efficient and timely manner	Achieved	All legislative and reporting requirements and requests for policy advice and information met in an efficient and timely manner.
IT systems meet the business needs of ACIAR, and the Australian Government, in an efficient and effective manner	Partly achieved	The majority of ACIAR's corporate knowledge and information is readily accessible by all staff via our internal systems and knowledge-sharing processes. New systems and processes are in the process of being developed to further improve access.

REPORTING AGAINST OTHER STATUTORY REQUIREMENTS

Purchasing and tendering compliance

Purchasing

ACIAR complies with the Commonwealth Procurement Rules (CPRs) and the objectives of Commonwealth procurement. Value for money is applied as the core principle in the procurement process, consistent with Section 4 (4.4) of the CPRs. ACIAR's Accountable Authority Instructions include details on delegations, the commitment of public moneys, management of risk and dealing with public property. These instructions have been developed in accordance with the CPRs.

The majority of ACIAR's procurement activity (by expenditure) is exempt from Division 2 of the CPRs, predominantly exemption 6: procurement of research and development services, but not the procurement of inputs to research and development undertaken by the agency.

Agreements executed under exemption 6 include contracts for the conduct of research projects by Australian universities and research organisations with the collaboration of other governments and international agencies. In relation to research project activities, ACIAR:

- publishes an Annual Operational Plan that includes areas of priority for research developed in consultation with partner countries

- disseminates this to research providers, both within and outside Australia, inviting suitable experts to submit ideas and develop these in consultation with ACIAR's Research Program Managers.

Competitive tendering

ACIAR conducted no open approaches to market for purchase (over \$80,000) during 2014–15. Six responses were reported on AusTender where ACIAR had engaged whole of government arrangements for travel, IT services and other services.

No contracts were let in excess of \$10,000 that were exempted from publication in AusTender due to freedom of information exemptions.

Purchasing activities are subject to the provisions of the Accountable Authority Instruction (AAI 3 Procurement Process) relating to procurement. In accordance with the Commonwealth Procurement Rules, ACIAR publishes an Annual Procurement Plan on the AusTender website <www.tenders.gov.au>.

Consultants and contracts

ACIAR engages consultants where it lacks specialist expertise or when independent research, review or assessment is required. Consultants are typically engaged to investigate or diagnose a defined issue or problem; carry out defined reviews or evaluations; or provide independent advice, information or creative solutions to assist in ACIAR's decision making.

Prior to engaging consultants, ACIAR takes into account the skills and resources required for the task, the skills available internally, and the cost-effectiveness of engaging external expertise. The decision to engage a consultant is made in accordance with the PGPA Act and related Rules including the Commonwealth Procurement Rules and relevant internal policies.

ACIAR's reporting against the Senate Order of 20 June 2001 requiring departments and agencies to list contracts entered into with a value of more than \$100,000, that were still to be concluded or had been concluded during the previous 12 months, is available on the ACIAR website and is reported separately from that outlined below.

During 2014–15 eight consultancy contracts were entered into.

In addition to contracts in excess of \$100,000 reported under the Senate Order referred to above, ACIAR entered into an additional 170 contracts and agreements to acquire services mainly related to research program support and services. These contracts totalled \$5,035,175 in 2014–15 (2013–14: \$4,964,662). All contracts over \$10,000 are reported on the AusTender website <www.tenders.gov.au>.

Discretionary grants

ACIAR did not issue any discretionary grants during 2014–15 or have any ongoing grants from previous years.

Advertising and market research

ACIAR did not enter into contracts with any advertising agencies, market researchers or polling organisations. ACIAR is also a sponsor of the annual Crawford Fund Conference. No other advertisements or agreements with media advertising organisations were entered into. No direct marketing of information to the public was undertaken and ACIAR has no contracts for any such activities. The Centre maintains mailing lists of project personnel and those requesting selected material.

Management of human resources

ACIAR employed 69 employees as at 30 June 2015. Of these, 51 are employed under the *Public Service Act 1999* and are located in Canberra and 18 are attached to overseas missions and embassies. ACIAR has two male SES Band 1 employees.

ACIAR's CEO is not included in these statistics as he is Principal Executive Officer (PEO) Band C.

Snapshot of ACIAR staff as at 30 June 2015

Staff employed under the PS Act	51* (49.4 FTE)
Median length of APS service	3 years
Median age	47
Females as % of total	54%
NESB staff as % of total	11%
Part-time staff as % of total	16%
Non-ongoing staff as % of total	41%
Employee turnover for 2014–15	25%

*excludes CEO and two inoperative employees

ACIAR four-year perspective

Staff employed under the *Public Service Act 1999*

	2011–2012	2012–2013	2013–2014	2014–2015
Staff at 30 June	55	53	51	51
Staff (FTE)	51.6	49.47	48.5	49.4
Female (%)	61.8%	63%	61%	54%
Base salaries	\$4,752,020	\$5,482,427	\$5,772,821	\$5,584,196
Cessations	9	8	14	13
Staff turnover	16.6%	15%	27%	25%
Part-time	20%	21%	20%	16%
Non-ongoing	38%	30%	39%	41%
Learning and development activity	\$71,614	\$79,978	\$95,540	\$66,656

Overseas staff

	2011–2012	2012–2013	2013–2014	2014–2015
Staff (FTE)	16.25	19.3	18.13	17.8
Base salaries	\$581,998	\$650,847	\$707,292	\$734,355
Learning and development activities	\$8,478	\$2,072	\$2,113	\$1,325

Performance management

The ACIAR performance management scheme encourages high achievement by improving individual performance through development, evaluation and planning to meet individual and ACIAR needs.

The scheme operates on a three-point rating scale and employees who are rated as 'meets expectations' or 'exceeds expectations' in the annual performance assessment receive an increment, providing they are not already on top of a salary range. In the cycle concluded in June 2015 there were 43 completed assessments, with 43 rated as 'meets expectations' or higher. Of these, seven were advanced one salary point.

Organisation bonuses

A bonus of \$2,000 is granted to employees rated as 'meets expectations' or higher in the performance cycle, who have worked for ACIAR for at least 9 months and who were still employed by ACIAR on 30 June 2015, in recognition of ACIAR's achievements against the 2014–15 Annual Operational Plan. Part-time employees received a pro-rata payment based on hours worked. Forty three employees received the performance bonus with payments totalling \$79,340.

Learning and development

ACIAR spent \$66,656 on training and development for its Canberra-based employees in 2014–15. This expenditure does not include attendance of Research Program Managers at professional conferences and seminars in Australia and overseas. ACIAR also offers generous assistance for formal study and in 2014–15 two employees received study assistance.

Enterprise Agreement

The ACIAR Enterprise Agreement 2011–2014 came into effect on 29 June 2011. The agreement expired on 30 June 2014 and the agency is seeking to renew the agreement and engage with staff in accordance with the APS Bargaining Framework.

Social inclusion strategy

The Australian Government's Social Inclusion Statement, *A Stronger, Fairer Australia*, sets out the Government's plan for achieving greater social inclusion and seeks to ensure that all Australians have the capabilities, opportunities, responsibilities and resources to learn, work, connect with others and have a say.

ACIAR fosters an environment of inclusiveness through several program areas such as supporting workplace diversity, workplace health and safety, learning and development and adherence to mechanisms such as the *Commonwealth Disability Strategy and the Carer Recognition Act 2010*.

Carer Recognition Act compliance

ACIAR's responsibility under the *Carer Recognition Act 2010* ensures its employees have an awareness and understanding of the Statement for Australia's Carers, by providing access to information about self-identification as a carer through our staff intranet.

Human resources policies are developed having due regard to the Statement for Australia's Carers, and workplace arrangements ensure flexibility for carers. ACIAR also collects statistics on the incidence of employees who are carers. In 2014–15 no staff members were identified as formal carers.

Workplace diversity

A culture of professional behaviour is promoted by ACIAR and we encourage relationships based on respect and appreciation of each other's differences. Achieving an appropriate balance of work, family and cultural responsibilities is encouraged and supported through ACIAR's Workplace Diversity Program, as is the importance of all employees.

ACIAR continued support for and participation in APS-wide initiatives to promote workplace diversity. We promote Indigenous training and development opportunities and encourage people with disabilities to apply for ACIAR employment opportunities.

Commonwealth Disability Strategy (CDS)

ACIAR continues to adhere to the principles embodied in the Commonwealth Disability Strategy framework and is committed to ensuring that all people seeking employment have fair access to employment opportunities.

As at 30 June 2015, no staff had identified as having a disability.

Work health and safety

A healthy lifestyle is actively encouraged and promoted by ACIAR, through providing access to annual health assessments, subsidies for healthy lifestyle initiatives, annual influenza injections and pre-travel assessments for overseas travellers by the Travel Doctor.

Access to an Employee Assistance Program is also provided. This program provides free professional counselling and career-planning services to ACIAR employees and their families. The service also includes wellbeing seminars, mediation and conflict resolution services, and assistance to line managers.

Ergonomic assessments for new employees and employees who experience discomfort at their workstation are carried out by a qualified workplace assessor. Modifications are made to work practices and work areas as required, resulting in less work-related physical ailments and increased productivity.

In 2014–15, there were no accidents or dangerous occurrences giving rise to the issue of any formal notices or directions under the *Work Health and Safety Act 2011*.

ACIAR employed 68 employees as at 30 June 2015. Of these, 50 are employed under the *Public Service Act 1999* and are located in Canberra and 18 are at overseas missions and embassies. ACIAR has two male SES Band 1 employees.

ACIAR's CEO is not included in these statistics as he is Principal Executive Officer (PEO) Band C.

Compliance with Freedom of Information / Information Publishing Scheme

Subject to the *Freedom of Information Act 1982* (FOI Act), ACIAR and other Australian Government agencies are required to publish information to the public as part of the Information Publication Scheme (IPS). This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. A plan showing what information ACIAR publishes in accordance with the IPS requirements is available on the website at <aci.ar.gov.au/IPS>

Ecologically sustainable development and environmental performance

This report comprises the Centre's report on its ecologically sustainable development and environmental performance, provided in accordance with Section 516A of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Project-related environmental impacts

ACIAR's project development guidelines include triggers to ensure that any projects developed that may result in significant environmental impacts follow the requirements under the EPBC Act. When partner organisations (proponents) are developing projects, the commissioned (lead) agency must consider all relevant obligations under the EPBC Act.

Should any potential significant environmental impacts be identified by ACIAR or project proponents, obligation rests with both ACIAR and the proponents to ensure that all relevant EPBC obligations have been appropriately considered. Reference to the EPBC Administrative Guidelines on Significance (EPBC Guidelines) is included in project development processes. If a proposal may have significant environmental impact, the Research Program Manager (RPM) and project proponent must use a risk-assessment and management-based approach to assess the potential risks and may have informal consultation with the EPBC Referrals Unit of the Department of

Environment. ACIAR requires the proponent to submit a letter indicating that it agrees with the findings of the risk assessment. Under the EPBC Guidelines, the ACIAR CEO is required to decide whether or not with the proposed risk-management approaches there is still a significant risk of environmental impact sufficient to warrant a formal referral of the matter to the Department of Environment.

For any project for which potential significant environmental risks were identified during the project development phase, ACIAR includes a standard condition that the commissioned organisation must annually report to ACIAR on its implementation of the stated environmental risk-management procedures and/or any special conditions imposed by the relevant Minister in the event that the project had been formally referred to the Department of Environment.

During project development, ACIAR also considers whether or not a project has any relevance to other international arrangements to which Australia is a signatory. This includes obligations under international arrangements to which Australia is a signatory, specifically for the use of biological resources, being met and properly documented. Letters of approval relating to the use of experimental animals and/or genetically modified organisms must be provided, along with five letters confirming compliance with regulations relating to germplasm transfer, quarantine requirements, biosafety etc.

How the outcomes of the organisation contribute to ecologically sustainable development (ESD)

ACIAR's governing legislation outlines the mandate and functions of the Centre under Section 5, including the formulation of policies to deliver against this mandate. Agricultural research is linked explicitly with sustainability. The link is maintained and implemented in the key planning document—the Annual Operational Plan (AOP). At the operational level project development, evaluation and monitoring deliver on this mandate.

Effect of the organisation's activities on the environment

Projects often have strong environmental benefits. These are spread throughout the Centre's mandated region of operations, in developing countries of the Indo-Pacific. ACIAR projects address problems in developing countries that may also yield results applicable to environmental management in Australia. Such benefits are either a secondary objective or are the result of research having application within Australian settings.

- Agricultural Systems Management and Agricultural Development Policy—mitigation and adaptation against climate change; policy and institutional frameworks and their impacts on water management

- Crop Improvement and Management—introducing crop management practices in concert with higher-yielding varieties in farming systems; deploying alternative cropping methods; developing control and management strategies for weeds and pests threatening crop species; collection and conservation of unique crop and legume germplasm
- Fisheries—management of cross-country fisheries resources, sustainable management of marine species, including inshore fisheries; and research to develop and implement sustainable aquaculture technologies to minimise wild capture and harvest in ACIAR's mandate region
- Forestry—enhancements of breeding technologies for Australian species, such as eucalypts and acacias, widely used for forestry plantations in Australia and parts of Asia; improving disease- and pest-surveillance methodologies and management; germplasm utilisation and management
- Land and Water Resources—developing water allocation and management strategies; investigating new approaches to managing and alleviating the affects of salinity and soil acidification; assessing land suitability, crop diversification and constraints; minimising pollutants in waterways; developing and promoting new cropping systems for conservation agriculture.

Measures being taken by the organisation to minimise the impact of its activities on the environment

ACIAR's size and resourcing have resulted in the choice to adopt an informal system for managing environmental impacts, built upon the EMS framework circulated to government departments and agencies. The framework has been used to ensure that environmental performance within ACIAR's Canberra premises is as effective as possible.

ACIAR is the sole building tenant, responsible for the management of all infrastructure and implementation of policies to deliver sound environmental management at its Canberra premises. Like all government agencies and departments, daily operations generate waste and consume electricity, water and materials.

Resource	Usage	
	2013–14	2014–15
Energy (kilowatt hours)	229,672	230,574
Water (kilolitres)	408	492

Mechanisms for reviewing and increasing the effectiveness of these measures

Formal reporting guidelines on environmental management and associated activities are used for an internal review of environment management processes. These include:

- National Government waste reduction and purchasing guidelines (2004)
- Environmental Purchasing Guide (2004)
- Environmental Purchasing Checklist (2004)
- Energy Use in Commonwealth Operations (annual publication)
- ANAO Green Office Procurement Survey.

APPENDIXES

APPENDIX 1: BASIS OF AUTHORITY

ACIAR's governing legislation is the *Australian Centre for International Agricultural Research Act 1982* (the Act), proclaimed on 3 June 1982 as Act No. 9 of 1982. The Act was described as 'an Act to encourage research for the purpose of identifying, or finding solutions to, agricultural problems of developing countries'.

The Act was amended in 2007, coming into effect from 1 July 2007. The principal purpose of the amendments introduced in the *Australian Centre for International Agricultural Amendment Act 2007* (the Amendment Act), was to change the governance arrangements of ACIAR. This replaced the Board of Management with an executive management structure involving a Chief Executive Officer (CEO) and a seven-member Commission. The functions of the CEO are set out at Section 5 of the legislation, below.

5. Functions of the CEO

1. The functions of the CEO are:

- a. to formulate programs and policies with respect to agricultural research for either or both of the following purposes:
 - i. identifying agricultural problems of developing countries
 - ii. finding solutions to agricultural problems of developing countries
- b. to commission agricultural research by persons or institutions (whether the research is to be conducted in Australia or overseas) in accordance with such programs and policies

- c. to communicate to persons and institutions the results of such agricultural research
 - d. to establish and fund training schemes related to the research programs referred to in paragraph (a)
 - e. to conduct and fund development activities related to those research programs
 - f. to fund international agricultural research centres.
2. The CEO must, in performing his or her functions with respect to agricultural research, have regard to the need for persons or institutions in developing countries to share in that research.
 3. Nothing in this section authorises, or permits, the CEO to carry out research on behalf of the Commonwealth.
 4. The CEO must, in performing his or her functions, comply with any directions given to the CEO under section 5A.

5A Power of Minister to give directions

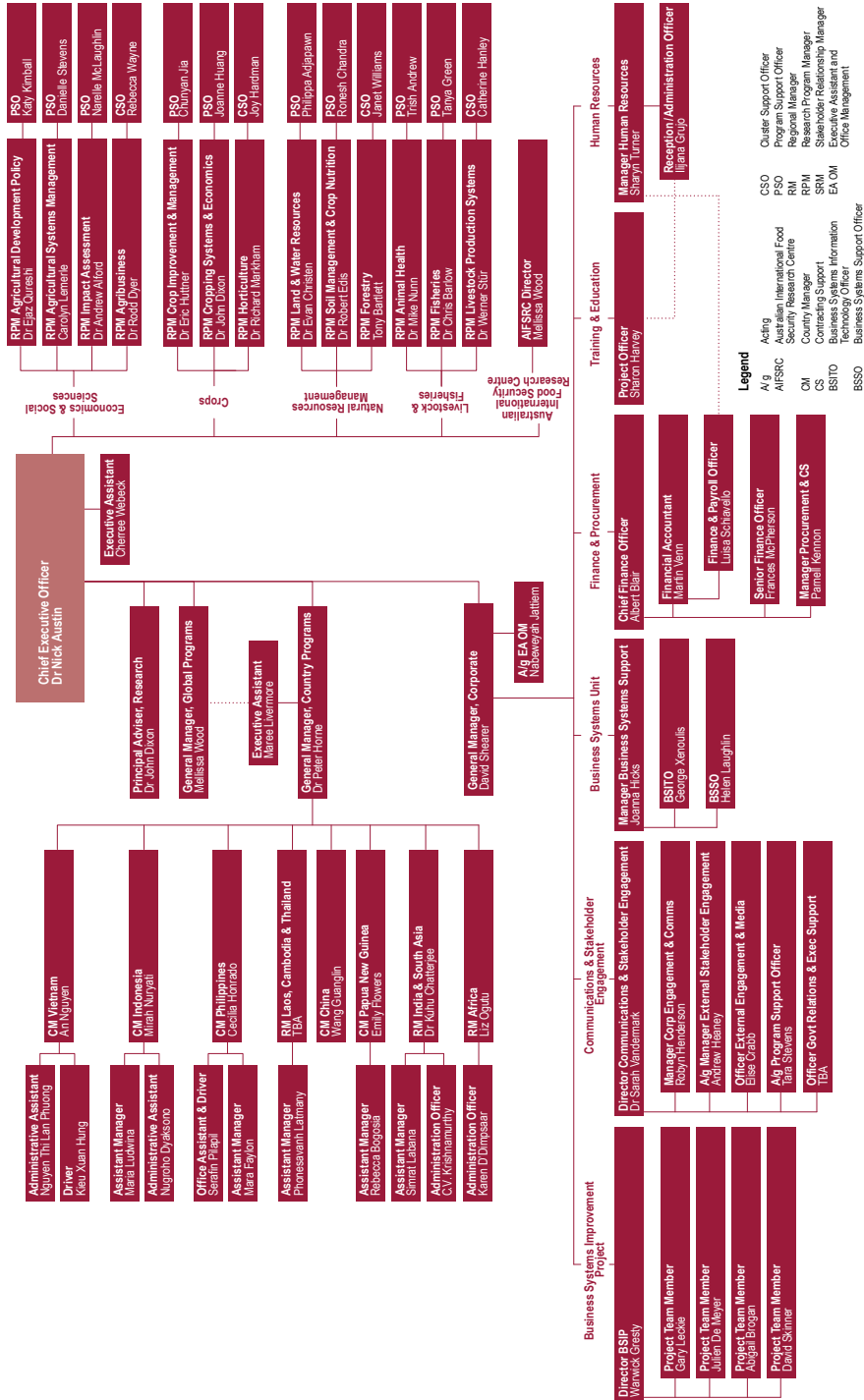
1. The Minister may, by writing, give directions to the CEO with respect to the performance of the CEO's functions under this Act (including in relation to the appropriate strategic direction the CEO should take in performing his or her functions).

Note: A direction under this section is included in the annual report: see section 39.

2. A direction given under subsection (1) is not a legislative instrument.

APPENDIX 2: ORGANISATION STRUCTURE

As at 30 June 2015



APPENDIX 3: CORPORATE PLANNING AND RESOURCES

Corporate planning

Each financial year ACIAR publishes a formal Annual Operational Plan (AOP) to guide external stakeholders through the priority areas for research in partner countries. The AOP identifies key research programs in each country, creating a two-way management matrix against which funds are allocated. Reporting against the AOP is covered in the section Tracking Performance against the 2014–15 Annual Operational Plan.

Financial performance

In 2014–15 ACIAR's direct expenditure on international development assistance represented 90.4 per cent of total expenditure (2013–14: 90.5 per cent).

Price of departmental outcomes

Outcome 1 — To achieve more-productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research and training partnerships.

	Actual expenses		Budget*	
	2014–15		2014–15	
	\$'m		\$'m	
Administered expenses				
ordinary annual services	86.188		86.289	
special account	23.811		24.780	
Total administered expenses	109.999		111.069	
Departmental expenses	11.470		11.771	
Total for outcome 1	121.469		122.840	

* ACIAR Annual Operational Plan 2014–15

APPENDIX 4: ACTIVE RESEARCH PROJECTS 2014–15

Bilateral research projects

Listed projects may be active in more than one country. Some projects have components in countries not formally listed

as ACIAR partners in the 'Year in review' section. In these projects, results are being extended beyond partner countries to those countries that would benefit from the work through project networks.

Project ID	Title	Project Type	Status
Afghanistan			
AH/2012/021	Forage options for smallholder livestock in water-scarce environments of Afghanistan	Restricted Grant (Large)	Active 01/01/2014
LWR/2008/047	Integrated catchment management and capacity building for improving livelihoods in Afghanistan	Restricted Grant (Large)	Active 01/07/2012
CIM/2011/026	Sustainable wheat and maize production in Afghanistan	Restricted Grant (Large)	Active 01/10/2012
Algeria			
CSE/2011/025	Adapting conservation agriculture for rapid adoption by smallholder farmers in northern Africa	Restricted Grant (Large)	Active 22/06/2012
Bangladesh			
LWR/2015/019	An exploration of opportunities to utilise urban organic waste for the livelihood improvement of rural and urban communities in Bangladesh and India	Small R&D Activity	Active 01/06/2015

Project ID	Title	Project Type	Status
ADP/2015/032	Climatic stress, structural change and farm and non-farm enterprise uptake by farmers in India and Bangladesh	Small R&D Activity	Active 16/06/2015
LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao PDR, Bangladesh and India	Project	Active 01/04/2010
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014
LWR/2012/079	Improving dry season agriculture for marginal and tenant farmers in the Eastern Gangetic Plains through conjunctive use of pond and groundwater resources	Project	Active 01/09/2014
CIM/2009/038	Introduction of short duration pulses into rice-based cropping systems in western Bangladesh	Project	Active 01/01/2011
CIM/2015/008	Multiplication and distribution of mungbean mini-core germplasm	Small R&D Activity	Active 01/04/2015
LWR/2010/080	Overcoming agronomic and mechanisation constraints to development and adoption of conservation agriculture in diversified rice-based cropping in Bangladesh	Project	Active 01/06/2012
CSE/2011/077	Sustainable and resilient farming systems intensification in the Eastern Gangetic Plains (SRFSI)	Restricted Grant (Large)	Active 12/05/2014

Project ID	Title	Project Type	Status
CSE/2015/012	Using ICTs to enhance adoption of new agricultural technologies and innovations	Small R&D Activity	Active 15/06/2015
CIM/2014/023	Improving mungbean breeding and production	Restricted Grant (Small)	Concluded 30/12/2014
Bhutan			
HORT/2010/089	Adapting integrated crop management technologies to commercial citrus enterprises in Bhutan and Australia	Project	Active 01/04/2012
Botswana			
LPS/2010/010	Competitive smallholder livestock in Botswana	Restricted Grant (Large)	Active 01/09/2012
Burma			
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
AGB/2015/030	Developing a sustainable business model for upscaling the Agribusiness master class	Small R&D Activity	Active 20/06/2015
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
SMCN/2011/046	Diversification and intensification of rice-based systems in lower Burma	Restricted Grant (Large)	Active 20/09/2012
CIM/2014/023	Improving mungbean breeding and production	Restricted Grant (Small)	Concluded 30/12/2014
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014

Project ID	Title	Project Type	Status
AH/2011/054	Improving livelihoods of small-scale livestock producers in the central dry zone through research on animal production and health in Burma	Project	Active 27/06/2013
FIS/2011/052	Improving research and development of Burmas' inland and coastal fisheries	Restricted Grant (Large)	Active 01/09/2012
SMCN/2011/047	Increasing productivity of legume-based farming systems in the central dry zone of Burma	Project	Active 12/12/2013
AGB/2012/056	Innovative business opportunities for profitable and sustainable cassava value chains in Southeast Asia	Restricted Grant (Small)	Active 01/12/2013
CIM/2015/008	Multiplication and distribution of mungbean mini-core germplasm	Small R&D Activity	Active 01/04/2015
ASEM/2011/043	Strengthening institutional capacity, extension services and rural livelihoods in the Central Dry Zone and Ayeyarwaddy Delta regions of Burma	Project	Active 01/01/2013
SMCN/2014/050	Towards a multidisciplinary program for improving rural livelihoods through integrated management of the Inle Lake catchment, Myanmar	Small R&D Activity	Active 23/10/2015
Burundi			
FSC/2012/014	Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa	Restricted Grant (Large)	Active 01/06/2012

Project ID	Title	Project Type	Status
Cambodia			
AGB/2012/057	A strategic approach to pro-poor market and consumer research in China and Mekong	Small R&D Activity	Active 01/02/2014
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
FIS/2010/058	Assessing economic and welfare values of fish in the Lower Mekong Basin	Restricted Grant (Large)	Active 01/12/2011
FST/2012/091	Biological control of galling insect pests of eucalypt plantations in the Mekong region	Project	Active 01/02/2014
HORT/2012/003	Building a resilient mango industry in Cambodia and Australia through improved production and supply chain practices	Project	Active 01/09/2013
FIS/2011/013	Culture-based fisheries development in Lao PDR and Cambodia	Project	Active 01/03/2012
LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao PDR, Bangladesh and India	Project	Active 01/04/2010
AH/2010/046	Domestic and international market development for high-value cattle and beef in South-East Cambodia	Project	Active 01/03/2012
HORT/2010/069	Enabling improved plant biosecurity practices in Cambodia, Lao PDR and Thailand	Project	Active 01/09/2013
LWR/2009/046	Improved irrigation water management to increase rice productivity in Cambodia	Project	Active 01/01/2011

Project ID	Title	Project Type	Status
CSE/2009/037	Improved rice establishment and productivity in Cambodia and Australia	Project	Active 01/04/2010
CSE/2009/005	Improved rice germplasm for Cambodia and Australia	Restricted Grant (Large)	Active 01/04/2010
ASEM/2012/081	Improving market engagement, postharvest management and productivity of the Cambodian and Lao PDR vegetable industries	Project	Active 01/08/2014
SMCN/2012/071	Improving water and nutrient management to enable double cropping in the rice growing lowlands of Lao PDR and Cambodia	Project	Active 01/12/2014
ASEM/2010/049	Market-focused integrated crop and livestock enterprises for north-western Cambodia	Project	Active 01/01/2012
CSE/2012/077	Mechanization and value adding for diversification of lowland cropping systems in Lao PDR and Cambodia	Project	Active 20/06/2014
CIM/2014/027	Optimisation of the single drop genomics assay to detect food pathogens	Small R&D Activity	Active 15/06/2014
LWR/2014/029	Pilot testing of the Chameleon sensor	Small R&D Activity	Active 01/06/2014
LWR/2012/110	Regional co-learning in simple mechanised tools for rice planting	Small R&D Activity	Active 01/04/2013
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
SMCN/2014/014	Sustainable management practices for profitable crop livestock systems for Thailand, Cambodia and Lao PDR	Small R&D Activity	Active 17/06/2014
AGB/2014/020	Value chain analysis of the Cambodian mango industry	Small R&D Activity	Active 08/06/2014

Project ID	Title	Project Type	Status
AH/2011/014	Village-based biosecurity for livestock disease risk management in Cambodia	Project	Active 01/06/2015
ASEM/2009/023	Developing agricultural policies for rice-based farming systems in Lao PDR and Cambodia	Project	Concluded 30/06/2015
ASEM/2012/070	Better understanding constraints to smallholder adoption of agricultural technologies from the perspective of knowledge providers in Cambodia	Small R&D Activity	Concluded 31/07/2014
ASEM/2012/070	Better understanding constraints to smallholder adoption of agricultural technologies from the perspective of knowledge providers in Cambodia	Small R&D Activity	Concluded 30/04/2015
CIM/2014/027	Optimisation of the single drop genomics assay to detect food pathogens	Small R&D Activity	Concluded 31/05/2105
China			
AGB/2012/057	A strategic approach to pro-poor market and consumer research in China and Mekong	Small R&D Activity	Active 01/02/2014
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
ADP/2011/039	Assessing farmer responses to climate change - adjustment policy options	Project	Active 01/07/2014
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
LPS/2014/098	Scoping study to support the design of a project on developing integrated dairy-crop enterprises in Tibet - China	Small R&D Activity	Active 01/05/2015
LPS/2008/048	Sustainable livestock grazing systems on Chinese temperate grasslands	Project	Active 01/07/2011

Project ID	Title	Project Type	Status
East Timor			
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
LPS/2009/036	Enhancing smallholder cattle production in East Timor	Project	Active 01/06/2012
FIS/2010/097	Exploring options for improving livelihoods and resource management in Timor-Leste's coastal communities	Restricted Grant (Large)	Active 01/12/2013
LPS/2013/022	Improving farmer profits from beef cattle by using dry land forage production systems in Timor Leste	Small R&D Activity	Active 01/09/2014
CIM/2015/009	Protecting stored grains against pests	Small R&D Activity	Active 13/04/2015
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
CIM/2009/049	Seeds of Life 3	Project	Active 01/02/2011
AH/2015/002	Using <i>Apis mellifera</i> and <i>A. cerana</i> in landless and subsistence agricultural communities in Timor-Leste and Indonesia	Small R&D Activity	Active 13/04/2015
Egypt			
CSE/2011/036	Improving productivity in farming systems of the Nile Delta	Project	Active 01/07/2013
LWR/2011/045	Management of water and salinity in the Nile Delta: A cross-scale integrated analysis of efficiency and equity issues	Restricted Grant (Large)	Active 01/09/2012
Ethiopia			
CIM/2013/005	A targeted approach to sorghum improvement in Ethiopia	Project	Active 01/06/2014

Project ID	Title	Project Type	Status
FSC/2012/047	Farm mechanisation and conservation agriculture for sustainable intensification	Restricted Grant (Large)	Active 01/03/2013
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa	Restricted Grant (Large)	Active 21/06/2012
FSC/2012/111	Improving income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems in peri-urban corridors	Restricted Grant (Large)	Active 24/06/2013
FSC/2012/014	Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa	Restricted Grant (Large)	Active 01/06/2012
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010
Fiji			
FST/2015/020	Assessing genetic diversity of natural and hybrid populations in Fiji and Tonga	Small R&D Activity	Active 01/05/2015
HORT/2007/118	Developing cleaner export pathways for Pacific agriculture commodities	Project	Active 01/03/2011
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities	Project	Active 01/05/2012

Project ID	Title	Project Type	Status
FIS/2010/098	Diversification of seaweed industries in Pacific island countries	Project	Active 01/10/2013
FIS/2010/096	Evaluating the impacts of improving postharvest processing of sea cucumbers in the western Pacific region	Project	Active 01/06/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
FIS/2012/076	Improving community-based aquaculture in Fiji, Kiribati, Samoa and Vanuatu	Project	Active 01/10/2013
ADP/2014/012	Improving livelihoods and economic progress through rehabilitation of degraded catchments in Fiji and Vanuatu	Small R&D Activity	Active 10/06/2014
SMCN/2009/003	Improving soil health in support of sustainable development in the Pacific	Project	Active 01/04/2011
HORT/2010/065	Integrated crop management strategies for root and tuber crops: strengthening national and regional capacities in Papua New Guinea, Fiji, Samoa, Solomon Islands and Tonga	Project	Active 20/06/2014
FIS/2015/028	Investigating the long-line nursery system for giant clam (<i>Tridacna</i> sp.) farming in Savusavu Bay, Fiji	Small R&D Activity	Active 04/06/2015
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
FIS/2009/057	Pearl industry development in the western Pacific	Project	Active 01/04/2013
FIS/2014/103	Pearl livelihood development in Fiji	Small R&D Activity	Active 01/03/2015

Project ID	Title	Project Type	Status
ADP/2014/013	Promoting sustainable agriculture and agroforestry to replace unproductive land-use in Fiji and Vanuatu	Small R&D Activity	Active 22/05/2014
HORT/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production	Project	Active 01/11/2011
FIS/2014/018	Understanding pearl oyster mortality in Fiji	Small R&D Activity	Active 01/04/2014
HORT/2012/011	Understanding the responses of taro and cassava to climate change	Project	Active 01/08/2012
Ghana			
FSC/2013/019	Demand led plant variety design for emerging markets in Africa	Medium Project	Active 26/06/2014
India			
LWR/2015/019	An exploration of opportunities to utilise urban organic waste for the livelihood improvement of rural and urban communities in Bangladesh and India	Small R&D Activity	Active 01/06/2015
ADP/2015/032	Climatic stress, structural change and farm and non-farm enterprise uptake by farmers in India and Bangladesh	Small R&D Activity	Active 16/06/2015
LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao PDR, Bangladesh and India	Project	Active 01/04/2010
CSE/2006/124	Fine-tuning the Happy Seeder technology for adoption in northwest India	Medium Project	Active 01/10/2007

Project ID	Title	Project Type	Status
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014
LWR/2007/113	Impacts of climate change and watershed development on whole-of-basin agricultural water security in the Krishna and Murray-Darling Basins	Project	Active 01/04/2010
LWR/2006/072	Impacts of meso-scale Watershed Development in Andhra Pradesh (India) and their implications for designing and implementing improved WSD policies and programs	Project	Active 01/06/2009
LWR/2010/015	Improved village scale groundwater recharge and management for agriculture and livelihood development in India	Project	Active 01/09/2011
LWR/2012/079	Improving dry season agriculture for marginal and tenant farmers in the Eastern Gangetic Plains through conjunctive use of pond and groundwater resources	Project	Active 01/09/2014
LWR/2010/082	Improving livelihoods with innovative cropping systems on the East India Plateau	Project	Active 01/10/2012
CIM/2007/120	Improving post-rainy sorghum varieties to meet the growing grain and fodder demand in India	Restricted Grant (Large)	Active 01/07/2008
CIM/2013/011	Indo-Australian project on root and establishment traits for greater water use efficiency in wheat 2	Project	Active 01/08/2013
CIM/2013/009	Molecular marker technologies for faster wheat breeding in India 2	Project	Active 03/12/2013

Project ID	Title	Project Type	Status
CIM/2007/084	Molecular markers for broadening the genetic base of stem rust resistance genes effective against strain Ug99	Project	Active 01/06/2009
CIM/2015/008	Multiplication and distribution of mungbean mini-core germplasm	Small R&D Activity	Active 01/04/2015
CSE/2011/077	Sustainable and resilient farming systems intensification in the Eastern Gangetic Plains (SRFSI)	Restricted Grant (Large)	Active 12/05/2014
CSE/2015/012	Using ICTs to enhance adoption of new agricultural technologies and innovations	Small R&D Activity	Active 15/06/2015
CSE/2004/033	Zero-tillage rice establishment and crop-weed dynamics in rice and wheat cropping systems in India and Australia	Project	Active 01/07/2006

Indonesia

AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
LPS/2013/020	Adoption processes to enhance uptake of forage tree legumes in Indonesia	Small R&D Activity	Active 27/06/2014
AGB/2015/015	Analysis of mango markets, trade and strategic research issues in the Asia-Pacific	Small R&D Activity	Active 24/06/2015
HORT/2008/041	Area-wide management of pest fruit flies in an Indonesian mango production system	Project	Active 01/01/2010
GMCP/2015/016	Assessment of digital data collection apps (DDCAs) to support ACIAR's M&E	Small R&D Activity	Active 20/06/2015

Project ID	Title	Project Type	Status
FST/2015/007	Developing a DNA chain of custody method to verify legally sourced teak in Indonesia and Myanmar	Small R&D Activity	Active 01/03/2015
FIS/2009/059	Developing research capacity for management of Indonesia's pelagic fisheries resources	Project	Active 01/06/2012
FST/2012/039	Development of timber and non-timber forest products' production and market strategies for improvement of smallholders' livelihoods in Indonesia	Restricted Grant (Large)	Active 01/01/2013
FIS/2007/124	Diversification of smallholder coastal aquaculture in Indonesia	Project	Active 01/01/2010
LPS/2014/034	Economic analysis of cattle fattening systems based on forage tree legume diets in eastern Indonesia	Small R&D Activity	Active 01/10/2014
FST/2012/040	Enhancing smallholder benefits from reduced emissions from deforestation and forest degradation in Indonesia	Project	Active 01/05/2013
AGB/2010/099	Evaluating smallholder livelihoods and sustainability in Indonesian coffee and cocoa value chains	Project	Active 01/03/2014
FIS/2014/059	Expanding spiny lobster aquaculture in Indonesia	Project	Active 01/07/2015
LPS/2015/017	Fodder markets in East Java: Identifying interventions to improve market performance and quality	Restricted Grant (Small)	Active 01/06/2015
LPS/2014/022	Heifer-calf and fattening strategies - Indonesia	Small R&D Activity	Active 01/05/2014
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014

Project ID	Title	Project Type	Status
SMAR/2008/025	Improved seaweed culture and postharvest waste utilisation in South-East Asia	Project	Active 01/06/2010
LPS/2013/022	Improving farmer profits from beef cattle by using dry land forage production systems in Timor Leste	Small R&D Activity	Active 01/09/2014
FIS/2010/101	Improving fish health management and production protocols in marine finfish aquaculture in Indonesia and Australia	Project	Active 01/07/2013
AGB/2009/060	Improving market integration for high value fruit and vegetable production systems in Indonesia	Project	Active 01/12/2013
LPS/2013/017	Improving nutrition during pregnancy and lactation to achieve production targets for Bali cattle	Small R&D Activity	Active 01/08/2013
LPS/2008/054	Improving smallholder cattle fattening systems based on forage tree legume diets in eastern Indonesia and northern Australia	Project	Active 01/04/2011
SMCN/2012/103	Improving soil and water management and crop productivity of dryland agriculture systems of Aceh and NSW	Project	Active 01/12/2014
HORT/2010/011	Improving the sustainability of cocoa production in eastern Indonesia through integrated pest, disease and soil management in an effective extension and policy environment	Project	Active 01/04/2011
FST/2009/051	Increasing productivity and profitability of Indonesian smallholder plantations	Project	Active 01/04/2011

Project ID	Title	Project Type	Status
LPS/2015/027	IndoBeef Preliminary Program and Projects Development - Phase 1 Design	Small R&D Activity	Active 15/05/2015
AGB/2014/058	IndoBeef strategic framework and cross-cutting themes	Small R&D Activity	Active 10/07/2014
AGB/2012/055	Indonesian seed potato value chains - analysis of development opportunities	Small R&D Activity	Active 15/12/2013
AGB/2012/056	Innovative business opportunities for profitable and sustainable cassava value chains in Southeast Asia	Restricted Grant (Small)	Active 01/12/2013
HORT/2012/083	Integrated disease management of sugarcane streak mosaic in Indonesia	Project	Active 01/10/2014
SMAR/2007/203	Integrated tropical passionfruit production systems in South Sulawesi	Medium Project	Active 01/04/2008
LPS/2012/064	Integrating herbaceous forage legumes into crop and livestock systems in East Nusa Tenggara, Indonesia	Project	Active 01/12/2014
FST/2008/030	Overcoming constraints to community-based commercial forestry in Indonesia	Project	Active 01/04/2011
FIS/2014/019	Positioning Indonesian lobster farming for significant expansion and increased productivity	Small R&D Activity	Active 01/04/2014
SMAR/2007/068	Productivity and profitability enhancement of tropical pulses in Indonesia and Australia	Project	Active 01/06/2008
SMAR/2007/193	Quality management to enhance effective supply chains for mangoes and rambutans in Nusa Tenggara Barat (NTB), Indonesia and Australia	Project	Active 01/05/2008

Project ID	Title	Project Type	Status
FIS/2015/034	Research support for lobster restocking in Indonesia	Small R&D Activity	Active 26/06/2015
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
FIS/2014/104	Small-scale fisheries in Indonesia: benefits to households, the roles of women, and opportunities for improving livelihoods	Small R&D Activity	Active 01/04/2015
SMAR/2008/021	Spiny lobster aquaculture development in Indonesia, Vietnam and Australia	Project	Active 01/09/2009
FIS/2011/030	Strategic plan for ACIAR engagement in developing Indonesia's capture fisheries research and management capacity	Small R&D Activity	Active 01/12/2011
AGB/2014/033	Supporting capacity building for research on improving market integration for dairy production systems in Indonesia	Small R&D Activity	Active 16/06/2014
AGB/2014/031	Supporting capacity building for research on improving market integration for high value fruit and vegetable systems in Indonesia	Small R&D Activity	Active 15/06/2014
AH/2010/039	Surveillance tools and strategies for improved control, monitoring and eradication of avian influenza in Indonesia	Project	Active 01/10/2011
HORT/2009/056	Sustainable productivity improvements in allium and solanaceous vegetable crops in Indonesia and sub-tropical Australia	Project	Active 01/04/2012

Project ID	Title	Project Type	Status
AH/2015/002	Using <i>Apis mellifera</i> and <i>A. cerana</i> in landless and subsistence agricultural communities in Timor-Leste and Indonesia	Small R&D Activity	Active 13/04/2015
CIM/2014/023	Improving mungbean breeding and production	Restricted Grant (Small)	Concluded 30/12/2014
Iraq			
CIM/2008/027	Development of conservation cropping systems in the drylands of northern Iraq	Restricted Grant (Large)	Concluded 30/09/2015
Kenya			
FSC/2013/019	Demand led plant variety design for emerging markets in Africa	Medium Project	Active 26/06/2014
FSC/2012/047	Farm mechanisation and conservation agriculture for sustainable intensification	Restricted Grant (Large)	Active 01/03/2013
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa	Restricted Grant (Large)	Active 21/06/2012
HORT/2014/100	Linking smallholders to markets. Scoping study on developing value chains for conserving local biodiversity and improving diets	Restricted Grant (Small)	Active 15/06/2015
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010

Project ID	Title	Project Type	Status
Kiribati			
FIS/2010/098	Diversification of seaweed industries in Pacific island countries	Project	Active 01/10/2013
FIS/2010/096	Evaluating the impacts of improving postharvest processing of sea cucumbers in the western Pacific region	Project	Active 01/06/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
FIS/2012/076	Improving community-based aquaculture in Fiji, Kiribati, Samoa and Vanuatu	Project	Active 01/10/2013
FIS/2012/074	Improving community-based fisheries management in Pacific island countries	Restricted Grant (Large)	Active 01/06/2013
SMCN/2009/003	Improving soil health in support of sustainable development in the Pacific	Project	Active 01/04/2011
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
FIS/2010/056	Scaling-out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu	Restricted Grant (Large)	Active 17/06/2011
Lao PDR			
AGB/2012/057	A strategic approach to pro-poor market and consumer research in China and Mekong	Small R&D Activity	Active 01/02/2014
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015

Project ID	Title	Project Type	Status
FIS/2010/058	Assessing economic and welfare values of fish in the Lower Mekong Basin	Restricted Grant (Large)	Active 01/12/2011
FST/2012/091	Biological control of galling insect pests of eucalypt plantations in the Mekong region	Project	Active 01/02/2014
ASEM/2014/102	Critical factors for self-sustaining farmer organisations in northern Lao PDR	Small R&D Activity	Active 01/03/2015
CSE/2014/086	Crop-livestock systems platform for capacity building, testing practices, commercialisation and community learning	Project	Active 19/12/2014
FIS/2011/013	Culture-based fisheries development in Lao PDR and Cambodia	Project	Active 01/03/2012
CSE/2009/004	Developing improved farming and marketing systems in rainfed regions of southern Lao PDR	Project	Active 01/12/2009
LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao PDR, Bangladesh and India	Project	Active 01/04/2010
AH/2012/068	Development of a market-driven biosecure beef production system in Lao PDR	Project	Active 01/02/2015
FIS/2009/041	Development of fish passage technology to increase fisheries production on floodplains in the lower Mekong and Murray - Darling River basins	Project	Active 01/10/2010
FST/2011/003	Effective implementation of payments for environmental services in Lao PDR	Project	Active 01/10/2012

Project ID	Title	Project Type	Status
HORT/2010/069	Enabling improved plant biosecurity practices in Cambodia, Lao PDR and Thailand	Project	Active 01/09/2013
ASEM/2011/075	Enhancing district delivery and management of agriculture extension in Lao PDR	Project	Active 01/12/2012
FST/2010/012	Enhancing key elements of the value chains for plantation-grown wood in Lao PDR	Project	Active 01/06/2012
LWR/2010/081	Enhancing the resilience and productivity of rainfed-dominated systems in Lao PDR through sustainable groundwater use	Restricted Grant (Large)	Active 01/08/2012
AH/2012/067	Enhancing transboundary livestock disease risk management in Lao PDR	Project	Active 01/02/2015
ASEM/2009/055	Facilitating livelihood adaptation to natural resource pressures in Lao PDR	Project	Active 01/05/2012
ASEM/2012/073	Improving food security in the northern uplands of Lao PDR: identifying drivers and overcoming barriers	Project	Active 01/09/2014
ASEM/2012/081	Improving market engagement, postharvest management and productivity of the Cambodian and Lao PDR vegetable industries	Project	Active 01/08/2014
FIS/2012/100	Improving the design of irrigation infrastructure to increase fisheries production in floodplain wetlands of the Lower Mekong and Murray-Darling Basins	Project	Active 01/04/2014

Project ID	Title	Project Type	Status
SMCN/2012/071	Improving water and nutrient management to enable double cropping in the rice growing lowlands of Lao PDR and Cambodia	Project	Active 01/12/2014
CSE/2012/077	Mechanization and value adding for diversification of lowland cropping systems in Lao PDR and Cambodia	Project	Active 20/06/2014
CIM/2014/027	Optimisation of the single drop genomics assay to detect food pathogens	Small R&D Activity	Active 15/06/2014
LWR/2012/110	Regional co-learning in simple mechanised tools for rice planting	Small R&D Activity	Active 01/04/2013
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
SMCN/2014/014	Sustainable management practices for profitable crop livestock systems for Thailand, Cambodia and Lao PDR	Small R&D Activity	Active 17/06/2014
FST/2012/041	Teak-based agroforestry systems to enhance and diversify smallholder livelihoods in Luang Prabang province of Lao PDR	Project	Active 01/08/2013
ASEM/2014/007	Lao PDR Agricultural Research Fund 3	Small project	Active 09/06/2015
ASEM/2014/010	Scoping constraints and opportunities to improve agribusiness market engagement by rural women in Lao PDR	Small R&D Activity	Concluded 31/03/2015
CIM/2014/027	Optimisation of the single drop genomics assay to detect food pathogens	Small R&D Activity	Concluded 31/05/2105

Project ID	Title	Project Type	Status
Malawi			
LWR/2014/085	A virtual irrigation academy to improve water productivity in Malawi and Tanzania	Project	Active 30/06/2015
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa	Restricted Grant (Large)	Active 21/06/2012
FSC/2012/111	Improving income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems in peri-urban corridors	Restricted Grant (Large)	Active 24/06/2013
LWR/2015/035	Low cost water salinity sensor for smallholder irrigators in developing countries	Small R&D Activity	Active 25/06/2015
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010
Morocco			
CSE/2011/025	Adapting conservation agriculture for rapid adoption by smallholder farmers in northern Africa	Restricted Grant (Large)	Active 22/06/2012

Project ID	Title	Project Type	Status
Mozambique			
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa	Restricted Grant (Large)	Active 21/06/2012
FSC/2012/111	Improving income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems in peri-urban corridors	Restricted Grant (Large)	Active 24/06/2013
FSC/2013/006	Increasing irrigation water productivity in Mozambique, Tanzania and Zimbabwe through on-farm monitoring, adaptive management and agricultural innovation platforms	Project	Active 15/06/2013
LWR/2015/035	Low cost water salinity sensor for smallholder irrigators in developing countries	Small R&D Activity	Active 25/06/2015
LWR/2014/029	Pilot testing of the Chameleon sensor	Small R&D Activity	Active 01/06/2014
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010

Project ID	Title	Project Type	Status
Nepal			
FST/2011/076	Enhancing livelihoods and food security from agroforestry and community forestry in Nepal	Project	Active 01/04/2013
LWR/2012/079	Improving dry season agriculture for marginal and tenant farmers in the Eastern Gangetic Plains through conjunctive use of pond and groundwater resources	Project	Active 01/09/2014
CSE/2011/077	Sustainable and resilient farming systems intensification in the Eastern Gangetic Plains (SRFSI)	Restricted Grant (Large)	Active 12/05/2014
CSE/2015/012	Using ICTs to enhance adoption of new agricultural technologies and innovations	Small R&D Activity	Active 15/06/2015
Pakistan			
AGB/2015/015	Analysis of mango markets, trade and strategic research issues in the Asia-Pacific	Small R&D Activity	Active 24/06/2015
ADP/2010/091	Enabling agricultural policies for benefitting smallholders in dairy, citrus and mango industries in Pakistan	Project	Active 01/11/2013
ADP/2015/004	Farmer's capabilities, productivity, and profitability: A case study of smallholders in selected agro zones in Pakistan	Small R&D Activity	Active 01/05/2015
LWR/2015/011	Handover and training of surface-groundwater and econometric models to end users in Pakistan	Small R&D Activity	Active 01/06/2015

Project ID	Title	Project Type	Status
HORT/2012/002	Heat stress alleviation in summer vegetables - enhancing the use of genetic diversity in central Punjab, Pakistan	Project	Active 01/04/2013
HORT/2010/006	Integrated crop management practices to enhance value chain outcomes for the mango industry in Pakistan and Australia - ASLP Phase 2	Project	Active 01/12/2010
HORT/2010/001	Mango value chain improvement	Project	Active 01/12/2010
LWR/2005/144	Optimising canal and groundwater management to assist water user associations in maximising crop production and managing salinisation	Project	Active 01/01/2008
ASEM/2010/003	Social research to foster effective collaboration and strengthen pro-poor value chains	Project	Active 01/01/2011
LPS/2010/007	Strengthening dairy value chains in Pakistan through improved farm management and more effective extension services	Project	Active 01/01/2011
HORT/2010/002	The enhancement of citrus value chains production in Pakistan and Australia through improved orchard management practices	Project	Active 01/04/2011
Papua New Guinea			
ASEM/2011/048	An integrated approach for systemic change and sustained development of the Papua New Guinea sweetpotato value chain	Project	Active 01/06/2012
HORT/2012/087	Bogia coconut syndrome in Papua New Guinea: developing biological knowledge and a risk management strategy	Medium Project	Active 23/06/2014

Project ID	Title	Project Type	Status
FIS/2010/055	Building research and project management skills in fisheries staff in Papua New Guinea	Project	Active 01/01/2014
CIM/2012/086	Developing a foundation for the long-term management of basal stem rot of oil palm in Papua New Guinea and Solomon Islands	Project	Active 15/07/2014
FST/2010/013	Developing markets and products for the Papua New Guinea Canarium nut industry	Project	Active 01/05/2012
FST/2014/099	Enhancing private sector-led development of the Canarium nut industry in Papua New Guinea	Project	Active 25/06/2015
ASEM/2010/053	Enhancing role of small scale feed milling in the development of the monogastric industries in Papua New Guinea	Project	Active 01/01/2012
FST/2011/057	Enhancing the implementation of community forestry approaches in Papua New Guinea	Project	Active 01/09/2013
FST/2012/092	Enhancing value added wood processing in Papua New Guinea	Project	Active 01/08/2014
ASEM/2010/052	Examining women's business acumen in Papua New Guinea: Working with women smallholders in horticulture	Project	Active 01/06/2012
HORT/2012/026	Improved management strategies for cocoa in Papua New Guinea	Project	Active 20/07/2014
HORT/2015/023	Improving coffee-based production systems for smallholder farmers in Papua New Guinea: a scoping study	Small R&D Activity	Active 30/05/2015

Project ID	Title	Project Type	Status
ASEM/2008/036	Improving livelihoods of smallholder families through increased productivity of coffee-based farming systems in the highlands of Papua New Guinea	Project	Active 01/01/2010
FIS/2014/062	Improving technologies for inland aquaculture in Papua New Guinea	Project	Active 13/05/2015
FST/2009/016	Improving the Papua New Guinea balsa value chain to enhance smallholder livelihoods	Project	Active 01/05/2011
FIS/2008/023	Increasing production from inland aquaculture in Papua New Guinea for food and income security	Project	Active 01/04/2010
SMCN/2008/008	Increasing vegetable production in Central Province, Papua New Guinea to supply Port Moresby markets	Project	Active 01/01/2010
HORT/2010/065	Integrated crop management strategies for root and tuber crops: strengthening national and regional capacities in Papua New Guinea, Fiji, Samoa, Solomon Islands and Tonga	Project	Active 20/06/2014
FIS/2010/054	Mariculture development in New Ireland, Papua New Guinea	Project	Active 01/05/2012
FIS/2009/057	Pearl industry development in the western Pacific	Project	Active 01/04/2013
FST/2014/030	Pilot testing of wood properties for Papua New Guinea timber species	Small R&D Activity	Active 09/06/2014
ASEM/2012/084	Promoting traditional vegetable production and consumption for improved livelihoods in Papua New Guinea and northern Australia	Project	Active 01/06/2014

Project ID	Title	Project Type	Status
ASEM/2012/072	Strengthening livelihoods for food security amongst cocoa and oil palm farming communities in Papua New Guinea	Project	Active 01/01/2014
FIS/2013/015	Sustainable management of sport fisheries for communities in Papua New Guinea	Medium Project	Active 01/03/2014
FIS/2012/102	Sustainable management of the shark resources of Papua New Guinea: socioeconomic and biological characteristics of the fishery	Project	Active 01/11/2013
ASEM/2010/051	Coffee green scales in Papua New Guinea: Highland arabica coffee and yield loss	Restricted Grant (Small)	Concluded 31/03/2015
ASEM/2014/008	Pilot - A business approach to product and market development for processed sweetpotato products in Papua New Guinea	Small R&D Activity	Concluded 30/06/2015

Philippines

AGB/2012/057	A strategic approach to pro-poor market and consumer research in China and Mekong	Small R&D Activity	Active 01/02/2014
FIS/2011/031	Coral reef restoration using mass coral larval reseeded	Small R&D Activity	Active 01/12/2011
FIS/2012/101	Developing technologies for giant grouper (<i>Epinephelus lanceolatus</i>) aquaculture in Vietnam, the Philippines and Australia	Project	Active 01/01/2014
AGB/2012/109	Developing vegetable and fruit value chains and integrating them with community development in the southern Philippines	Project	Active 01/03/2014

Project ID	Title	Project Type	Status
AH/2014/087	Epidemiology of henipavirus in horses and pigs in Sultan Kudarat, Mindanao, Philippines	Small R&D Activity	Active 01/12/2014
FIS/2010/042	Expansion and diversification of production and management systems for sea cucumbers in the Philippines, Vietnam and northern Australia	Project	Active 01/03/2013
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014
HORT/2012/098	Improved postharvest management of fruit and vegetables in the southern Philippines and Australia	Project	Active 20/12/2013
SMAR/2008/025	Improved seaweed culture and postharvest waste utilisation in South-East Asia	Project	Active 01/06/2010
ASEM/2012/063	Improving the methods and impacts of agricultural extension in Western Mindanao, Philippines	Project	Active 01/10/2013
AH/2012/066	Improving the production and competitiveness of Australian and Philippines pig production through better health and disease control	Project	Active 01/01/2015
ASEM/2010/050	Improving watershed rehabilitation outcomes in the Philippines using a systems approach	Project	Active 01/03/2012
HORT/2012/020	Integrated crop management to enhance vegetable profitability and food security in the southern Philippines and Australia	Project	Active 01/03/2013

Project ID	Title	Project Type	Status
HORT/2012/113	Integrated disease management strategies for the productive, profitable and sustainable production of high quality papaya fruit in the southern Philippines and Australia	Project	Active 01/02/2014
HORT/2012/097	Integrated management of Fusarium wilt of bananas in the Philippines and Australia	Project	Active 20/06/2014
HORT/2012/019	Research and development of integrated crop management for mango production in the southern Philippines and Australia	Project	Active 01/06/2014
FIS/2014/063	Restoring damaged coral reefs using mass coral larval reseedling	Project	Active 01/07/2015
SMCN/2012/029	Soil and nutrient management strategies for sustainable vegetable production in southern Philippines	Project	Active 01/05/2014
HORT/2012/095	Tropical tree fruit research and development in the Philippines and northern Australia to increase productivity, resilience and profitability	Project	Active 20/12/2013
SMCN/2009/031	Watershed evaluation for sustainable use of sloping agricultural land in the southern Philippines	Project	Active 01/05/2011
CIM/2015/010	Weedy rice in the Philippines and Vietnam	Small R&D Activity	Active 01/05/2015

Project ID	Title	Project Type	Status
Rwanda			
FSC/2012/014	Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa	Restricted Grant (Large)	Active 01/06/2012
CSE/2015/026	Supporting equitable benefits among men and women through agricultural innovation platforms in Rwanda	Restricted Grant (Small)	Active 15/06/2015
Samoa			
HORT/2007/118	Developing cleaner export pathways for Pacific agriculture commodities	Project	Active 01/03/2011
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities	Project	Active 01/05/2012
FIS/2010/098	Diversification of seaweed industries in Pacific island countries	Project	Active 01/10/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
FIS/2012/076	Improving community-based aquaculture in Fiji, Kiribati, Samoa and Vanuatu	Project	Active 01/10/2013
SMCN/2009/003	Improving soil health in support of sustainable development in the Pacific	Project	Active 01/04/2011
HORT/2010/065	Integrated crop management strategies for root and tuber crops: strengthening national and regional capacities in Papua New Guinea, Fiji, Samoa, Solomon Islands and Tonga	Project	Active 20/06/2014

Project ID	Title	Project Type	Status
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
HORT/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production	Project	Active 01/11/2011
Senegal			
FSC/2013/019	Demand led plant variety design for emerging markets in Africa	Medium Project	Active 26/06/2014
Solomon Islands			
CIM/2012/086	Developing a foundation for the long-term management of basal stem rot of oil palm in Papua New Guinea and Solomon Islands	Project	Active 15/07/2014
FIS/2010/057	Developing inland aquaculture in Solomon Islands	Restricted Grant (Large)	Active 01/10/2011
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities	Project	Active 01/05/2012
FST/2012/043	Enhancing economic opportunities offered by community and smallholder forestry in Solomon Islands	Project	Active 01/01/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
FIS/2012/076	Improving community-based aquaculture in Fiji, Kiribati, Samoa and Vanuatu	Project	Active 01/10/2013
FIS/2012/074	Improving community-based fisheries management in Pacific island countries	Restricted Grant (Large)	Active 01/06/2013

Project ID	Title	Project Type	Status
FST/2014/066	Improving returns from community teak plantings in Solomon Islands	Project	Active 01/07/2015
HORT/2010/065	Integrated crop management strategies for root and tuber crops: strengthening national and regional capacities in Papua New Guinea, Fiji, Samoa, Solomon Islands and Tonga	Project	Active 20/06/2014
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
FIS/2010/056	Scaling-out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu	Restricted Grant (Large)	Active 17/06/2011
HORT/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production	Project	Active 01/11/2011
South Africa			
LPS/2005/128	High quality markets and value chains for small-scale and emerging beef cattle farmers in South Africa	Project	Active 02/02/2015
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010

Project ID	Title	Project Type	Status
Tanzania			
LWR/2014/085	A virtual irrigation academy to improve water productivity in Malawi and Tanzania	Project	Active 30/06/2015
FSC/2012/047	Farm mechanisation and conservation agriculture for sustainable intensification	Restricted Grant (Large)	Active 01/03/2013
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa	Restricted Grant (Large)	Active 21/06/2012
FSC/2012/111	Improving income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems in peri-urban corridors	Restricted Grant (Large)	Active 24/06/2013
FSC/2013/006	Increasing irrigation water productivity in Mozambique, Tanzania and Zimbabwe through on-farm monitoring, adaptive management and agricultural innovation platforms	Project	Active 15/06/2013
LWR/2015/035	Low cost water salinity sensor for smallholder irrigators in developing countries	Small R&D Activity	Active 25/06/2015
CSE/2015/022	Piloting a farming systems approach to investment planning for climate-smart smallholder agriculture in Africa	Small R&D Activity	Active 01/06/2015
CIM/2015/009	Protecting stored grains against pests	Small R&D Activity	Active 13/04/2015

Project ID	Title	Project Type	Status
FSC/2012/023	Strengthening food and nutrition security through family poultry and crop integration in Tanzania and Zambia	Project	Active 01/02/2014
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)	Restricted Grant (Large)	Active 12/05/2014
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)	Restricted Grant (Large)	Active 01/01/2010
FIS/2011/069	Technical support for pearl culture in coastal Tanzania	Small R&D Activity	Active 01/04/2012
Thailand			
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
FIS/2015/006	Application of fish passage design principles to enhance sustainability of inland fishery resources in the Southeast Asian region	Small R&D Activity	Active 01/05/2015
FIS/2010/058	Assessing economic and welfare values of fish in the Lower Mekong Basin	Restricted Grant (Large)	Active 01/12/2011
FST/2012/091	Biological control of galling insect pests of eucalypt plantations in the Mekong region	Project	Active 01/02/2014
HORT/2010/069	Enabling improved plant biosecurity practices in Cambodia, Lao PDR and Thailand	Project	Active 01/09/2013
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014

Project ID	Title	Project Type	Status
SMCN/2014/014	Sustainable management practices for profitable crop livestock systems for Thailand, Cambodia and Lao PDR	Small R&D Activity	Active 17/06/2014
Tonga			
FST/2015/020	Assessing genetic diversity of natural and hybrid populations in Fiji and Tonga	Small R&D Activity	Active 01/05/2015
FIS/2010/096	Evaluating the impacts of improving postharvest processing of sea cucumbers in the western Pacific region	Project	Active 01/06/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
HORT/2010/065	Integrated crop management strategies for root and tuber crops: strengthening national and regional capacities in Papua New Guinea, Fiji, Samoa, Solomon Islands and Tonga	Project	Active 20/06/2014
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
FIS/2009/057	Pearl industry development in the western Pacific	Project	Active 01/04/2013
HORT/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production	Project	Active 01/11/2011
HORT/2014/090	Supporting a diverse and sustainable fruit industry in Tonga	Small R&D Activity	Active 19/12/2014
HORT/2012/011	Understanding the responses of taro and cassava to climate change	Project	Active 01/08/2012

Project ID	Title	Project Type	Status
Tunisia			
CSE/2011/025	Adapting conservation agriculture for rapid adoption by smallholder farmers in northern Africa	Restricted Grant (Large)	Active 22/06/2012
Uganda			
FSC/2013/019	Demand led plant variety design for emerging markets in Africa	Medium Project	Active 26/06/2014
FST/2014/093	Developing value chain innovation platforms to improve food security in east and southern Africa	Restricted Grant (Large)	Active 01/06/2015
FSC/2012/014	Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa	Restricted Grant (Large)	Active 01/06/2012
CSE/2015/025	Testing participatory entrepreneurship for enhancing private sector-led scaling out of innovations for crop intensification	Restricted Grant (Small)	Active 15/06/2015
Vanuatu			
FST/2012/042	Enhancing management and processing systems for value-adding in plantation-grown whitewood in Vanuatu	Project	Active 01/01/2013
AGB/2015/014	Evaluation of livelihood impacts from agribusiness development opportunities in the Pacific (PARDI II)	Small R&D Activity	Active 19/06/2015
FIS/2012/076	Improving community-based aquaculture in Fiji, Kiribati, Samoa and Vanuatu	Project	Active 01/10/2013
FIS/2012/074	Improving community-based fisheries management in Pacific island countries	Restricted Grant (Large)	Active 01/06/2013

Project ID	Title	Project Type	Status
ADP/2014/012	Improving livelihoods and economic progress through rehabilitation of degraded catchments in Fiji and Vanuatu	Small R&D Activity	Active 10/06/2014
AGB/2008/044	Pacific Agribusiness Research for Development Initiative	Project	Active 01/02/2010
ADP/2014/013	Promoting sustainable agriculture and agroforestry to replace unproductive land-use in Fiji and Vanuatu	Small R&D Activity	Active 22/05/2014
FIS/2010/056	Scaling-out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu	Restricted Grant (Large)	Active 17/06/2011
HORT/2012/011	Understanding the responses of taro and cassava to climate change	Project	Active 01/08/2012
Vietnam			
AGB/2015/029	A strategic approach to pro-poor consumer research in the Mekong region - extended analyses	Small R&D Activity	Active 09/06/2015
AGB/2012/057	A strategic approach to pro-poor market and consumer research in China and Mekong	Small R&D Activity	Active 01/02/2014
AGB/2015/024	Additional analysis of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 19/06/2015
FST/2010/034	Agroforestry for livelihoods of smallholder farmers in north-western Vietnam	Restricted Grant (Large)	Active 01/11/2011
AGB/2015/015	Analysis of mango markets, trade and strategic research issues in the Asia-Pacific	Small R&D Activity	Active 24/06/2015
FIS/2010/058	Assessing economic and welfare values of fish in the Lower Mekong Basin	Restricted Grant (Large)	Active 01/12/2011

Project ID	Title	Project Type	Status
ADP/2011/039	Assessing farmer responses to climate change - adjustment policy options	Project	Active 01/07/2014
FST/2012/091	Biological control of galling insect pests of eucalypt plantations in the Mekong region	Project	Active 01/02/2014
SMCN/2009/021	Climate change affecting land use in the Mekong Delta: adaptation of rice-based cropping systems (CLUES)	Restricted Grant (Large)	Active 01/03/2011
LPS/2012/062	Developing productive, sustainable and profitable smallholder beef enterprises in central Vietnam	Project	Active 01/02/2014
FIS/2012/101	Developing technologies for giant grouper (<i>Epinephelus lanceolatus</i>) aquaculture in Vietnam, the Philippines and Australia	Project	Active 01/01/2014
FST/2008/039	Enhancement of production of acacia and eucalypt peeled and sliced veneer products in Vietnam and Australia	Project	Active 01/11/2011
FIS/2010/100	Enhancing bivalve production in northern Vietnam and Australia	Project	Active 01/01/2014
AGB/2013/018	Evaluation of agribusiness research and development opportunities for tropical fruit in southern Vietnam	Small R&D Activity	Active 20/06/2014
FIS/2010/042	Expansion and diversification of production and management systems for sea cucumbers in the Philippines, Vietnam and northern Australia	Project	Active 01/03/2013

Project ID	Title	Project Type	Status
CIM/2014/024	Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials	Restricted Grant (Small)	Active 01/06/2014
AGB/2009/053	Improved market engagement for counter-seasonal vegetable producers in north-western Vietnam	Project	Active 01/04/2011
AGB/2008/002	Improved market engagement for sustainable upland production systems in the north-western highlands of Vietnam	Project	Active 01/06/2009
AGB/2012/060	Improving smallholder incomes in the north-western highlands of Vietnam by increasing access and competitiveness in regional temperate and subtropical fruit markets	Project	Active 01/07/2014
SMCN/2010/083	Improving the sustainability of rice-shrimp farming systems in the Mekong Delta, Vietnam	Project	Active 01/06/2013
AGB/2006/112	Increasing the safe production, promotion and utilisation of indigenous vegetables by women in Vietnam and Australia	Project	Active 01/03/2008
AGB/2012/056	Innovative business opportunities for profitable and sustainable cassava value chains in Southeast Asia	Restricted Grant (Small)	Active 01/12/2013
SMCN/2012/069	Integrated water, soil and nutrient management for sustainable farming systems in south central coastal Vietnam and Australia	Project	Active 01/06/2014

Project ID	Title	Project Type	Status
LPS/2008/049	Overcoming technical and market constraints to the emergence of profitable beef enterprises in the north-western highlands of Vietnam	Project	Active 01/04/2011
LWR/2014/029	Pilot testing of the Chameleon sensor	Small R&D Activity	Active 01/06/2014
LPS/2010/047	Reducing disease risks and improving food safety in smallholder pig value chains in Vietnam	Restricted Grant (Large)	Active 15/06/2012
AGB/2012/048	Review of regional beef markets and trade in China and South-East Asia	Small R&D Activity	Active 10/04/2014
SMAR/2008/021	Spiny lobster aquaculture development in Indonesia, Vietnam and Australia	Project	Active 01/09/2009
AGB/2012/030	Towards more profitable and sustainable vegetable-based farming systems in north-western Vietnam and Australia	Small R&D Activity	Active 01/11/2012
AGB/2012/059	Towards more profitable and sustainable vegetable production systems in north-western Vietnam	Project	Active 01/03/2014
CIM/2015/010	Weedy rice in the Philippines and Vietnam	Small R&D Activity	Active 01/05/2015
ADP/2015/001	Scoping study for agricultural development policy review for Vietnam food security	Small R&D Activity	Active 01/03/2015
Zambia			
FSC/2014/101	Developing a model for understanding and promoting dietary diversity in Zambia	Small R&D Activity	Active 01/05/2015
FST/2014/093	Developing value chain innovation platforms to improve food security in east and southern Africa	Restricted Grant (Large)	Active 01/06/2015

Project ID	Title	Project Type	Status
FSC/2012/023	Strengthening food and nutrition security through family poultry and crop integration in Tanzania and Zambia	Project	Active 01/02/2014
Zimbabwe			
FSC/2012/047	Farm mechanisation and conservation agriculture for sustainable intensification	Restricted Grant (Large)	Active 01/03/2013
FSC/2013/006	Increasing irrigation water productivity in Mozambique, Tanzania and Zimbabwe through on-farm monitoring, adaptive management and agricultural innovation platforms	Project	Active 15/06/2013
CSE/2010/022	Integrating crops and livestock for improved food security and livelihoods in rural Zimbabwe	Restricted Grant (Large)	Active 22/06/2012

Multilateral projects

Multilateral projects, those that have an International Agricultural Research Centre as the project leader (commissioned organisation), are included in this list only, not in the country list on previous pages.

International Agricultural Research Centre

International Center for Agricultural Research in the Dry Areas

AH/2012/021	Forage options for smallholder livestock in water-scarce environments of Afghanistan
CIM/2008/027	Development of conservation cropping systems in the drylands of northern Iraq
CSE/2011/025	Adapting conservation agriculture for rapid adoption by smallholder farmers in northern Africa
LWR/2008/047	Integrated catchment management and capacity building for improving livelihoods in Afghanistan
LWR/2011/045	Management of water and salinity in the Nile Delta: A cross-scale integrated analysis of efficiency and equity issues

International Center for Tropical Agriculture

AGB/2012/056	Innovative business opportunities for profitable and sustainable cassava value chains in Southeast Asia
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International Crops Research Institute for the Semi Arid Tropics

CIM/2007/120	Improving post-rainy sorghum varieties to meet the growing grain and fodder demand in India
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International Livestock Research Institute

CSE/2010/022	Integrating crops and livestock for improved food security and livelihoods in rural Zimbabwe
LPS/2010/010	Competitive smallholder livestock in Botswana
LPS/2010/047	Reducing disease risks and improving food safety in smallholder pig value chains in Vietnam
LPS/2015/017	Fodder markets in East Java: Identifying interventions to improve market performance and quality

International Maize and Wheat Improvement Center

CIM/2011/026	Sustainable wheat and maize production in Afghanistan
CSE/2009/024	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa (SIMLESA)
CSE/2013/008	Sustainable intensification of maize-legume cropping systems for food security in eastern and southern Africa II (SIMLESA II)
CSE/2015/026	Supporting equitable benefits among men and women through agricultural innovation platforms in Rwanda

International Agricultural Research Centre

FSC/2012/024 Identifying socioeconomic constraints to and incentives for faster technology adoption: Pathways to sustainable intensification in eastern and southern Africa

FSC/2012/047 Farm mechanisation and conservation agriculture for sustainable intensification

International Rice Research Institute

CIM/2014/024 Identification and validation of functional markers from diverse germplasm to reduce chalk in rice breeding materials

CSE/2009/005 Improved rice germplasm for Cambodia and Australia

SMCN/2009/021 Climate change affecting land use in the Mekong Delta: adaptation of rice-based cropping systems (CLUES)

SMCN/2011/046 Diversification and intensification of rice-based systems in lower Burma

International Water Management Institute

LWR/2010/081 Enhancing the resilience and productivity of rainfed-dominated systems in Lao PDR through sustainable groundwater use

The World Vegetable Center

FSC/2012/111 Improving income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems in peri-urban corridors

World Agroforestry Centre

FSC/2012/014 Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa

FST/2010/034 Agroforestry for livelihoods of smallholder farmers in north-western Vietnam

WorldFish Center

FIS/2010/056 Scaling-out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu

FIS/2010/057 Developing inland aquaculture in Solomon Islands

FIS/2010/058 Assessing economic and welfare values of fish in the Lower Mekong Basin

FIS/2010/097 Exploring options for improving livelihoods and resource management in Timor-Leste's coastal communities

FIS/2011/052 Improving research and development of Burmas' inland and coastal fisheries

FIS/2012/074 Improving community-based fisheries management in Pacific island countries

APPENDIX 5: PUBLICATIONS 2014–15

Publ. Code	Title	Authors	Year	Pages
Impact Assessment Series reports				
IAS88	ACIAR-funded crop-Livestock projects, Tibet Autonomous Region, People's Republic of China	Michael Clarke, Principal, AgEconPlus Pty Ltd	2015	58
Monographs				
MN159	Restoring agriculture after a tsunami: the experience from Aceh, Indonesia	New South Wales Department of Primary Industries	2014	88
MN160a and MN160b	Maria's family goes to market [Femili bilong Maria go long maket] – Western Highlands (MN160a) and East New Britain (MN160b) editions	Barbara Pamphilon, Kym Simoncini and Damien Veal	2014	25
MN161	Maria's family saves their kina [Femili bilong Maria sevim moni]	Barbara Pamphilon, Kym Simoncini and Damien Veal	2014	24
Proceedings				
PR142	A policy dialogue on rice futures: rice-based farming systems research in the Mekong region	Lisa Robins (ed.)	2014	158
Technical Reports				
TR083	Enhancing and coping with change: women-headed farming households in the Eastern Gangetic Plains	Kuntala Lahiri-Dutt	2014	65
TR084	Sustainable plantation forestry in South-East Asia	C.E. Harwood and E.K.S. Nambiar	2014	100
TR085	Planted teak: global production and markets, with reference to Solomon Islands	Stephen Midgley, R.T. Somaiya, P.R. Stevens, Alan Brown, Nguyen Duc Kien and Richard Laity	2015	92

Publ. Code	Title	Authors	Year	Pages
Corporate publications				
	ACIAR Annual Report 2013–14	ACIAR	2014	240
	<i>Partners in Research for Development</i> magazine (Nutritional security 2014, Private sector engagement 2015 and Building resilience in the Pacific Islands 2015)	ACIAR	2014 and 2015	32
	ACIAR Annual Operational Plan 2014–15	ACIAR	2014	126
	Adoption of ACIAR project outputs 2014	Amir Jilani, David Pearce and Andrew Alford Allen D. McHugh. Rao C.N. Rachaputi and Michael Hughes Stephen Walkden-Brown and Chanda Nimbkar. Greg Hamilton, Zahid Hussain, Ghani Akbar and Muhammad Irfan Neal Menzies and K. Sammi Reddy Andrew Beattie	2015	82
	Position Paper – ACIAR’s engagement with the private sector	ACIAR	2015	14

APPENDIX 6: STAFFING STATISTICS

Employee numbers 2014–15

Public Service Act 1999 employee numbers (ongoing and non-ongoing)

	Ongoing staff	Non-ongoing staff	Total
Full-time			
Male	5	18	23
Female	16	5	21
Part-time			
Male	0	0	0
Female	7	0	7
Total	28	23	51

Staff turnover

Retention rates were maintained in ACIAR in 2014–15. Thirteen employees ceased employment and two staff remained on leave without pay. The table below shows a comparison of employee turnover over the past four years.

	2011–2012	2012–2013	2013–2014	2014–2015
Retrenched		1	3	5
Promotions/transfers	2		2	1
End of contract	1	3		1
Resigned	5	2	5	5
Retired	1	1	4	1
Leave without pay	3	3	2	2
Temporary movement				
Other		1		
Total	12	11	16	15

Non-APS employees employed overseas

18 contract and locally engaged staff are employed by ACIAR in Australian overseas missions to provide program support locally, as detailed below.

Post	Male	Female	Full-time	Part-time	Total
Laos	1	0	1	0	1
Beijing	1	0	1	0	1
Hanoi	1	2	3	0	3
Jakarta	1	2	3	0	3
Manila	1	2	3	0	3
New Delhi	1	2	3	0	3
Nairobi	0	2	2	0	2
Port Moresby	0	2	1	1	2
Total	6	12	17	1	18

Classification structure

ACIAR employees by broadband (excludes 2xSES and LWOP)

ACIAR broadband	APS classification	Employees by classification	Ongoing	Non-ongoing	Female	Male
Band 4	EL 2	2	2	0	1	1
Band 3	EL 1	7	5	2	3	4
Band 2	APS 6	3	3	0	3	0
	APS 5	10	8	2	8	2
	APS 4	12	7	4	10	2
Band 1	APS 3	2	1	1	2	0
	APS 2	No employees at this level				
	APS 1	No employees at this level				

Research Program Manager Structure

ACIAR broadband	APS classification	Employees by classification	Ongoing	Non-ongoing	Female	Male
Band 4	EL2—RPM	13		13	1	12

APPENDIX 7: COMPLIANCE CHECKLIST

Part of Report	Description	Requirement	Page No.
	Letter of transmittal	Mandatory	iii
	Table of contents	Mandatory	1-2
	Alphabetical Index	Mandatory	244
	Glossary	Mandatory	241-243
	Contact officer(s)	Mandatory	ii
	Internet home page address and Internet address for report	Mandatory	ii
Review by Chief Executive Officer			
	Review by Chief Executive Officer	Mandatory	6-12
	Summary of significant issues and developments	Suggested	3, 6-12
	Overview of department's performance and financial results	Suggested	3, 6-12, 80-81
	Outlook for following year	Suggested	11-12
	Significant issues and developments – portfolio	Portfolio departments – suggested	na
Departmental Overview			
	Role and functions	Mandatory	3-4 74-78
	Organisational structure	Mandatory	187
	Outcome and program structure	Mandatory	150
	Where outcome and program structures differ from PB Statements/PAES or other portfolio statements accompanying any other additional appropriation bills (other portfolio statements), details of variation and reasons for change	Mandatory	na
	Portfolio structure	Portfolio departments - mandatory	na
Report on Performance			
	Review of performance during the year in relation to programs and contribution to outcomes	Mandatory	14-65 151-152

Part of Report	Description	Requirement	Page No.
	Actual performance in relation to deliverables and KPIs set out in PB Statements/PAES or other portfolio statements	Mandatory	153-176
	Where performance targets differ from the PBS/PAES, details of both former and new targets, and reasons for the change	Mandatory	na
	Narrative discussion and analysis of performance	Mandatory	14-65
	Trend information	Mandatory	2
	Significant changes in nature of principal functions/services	Suggested	na
	Performance of purchaser/provider arrangements	If applicable, suggested	na
	Factors, events or trends influencing departmental performance	Suggested	6-12
	Contribution of risk management in achieving objectives	Suggested	78-80
	Performance against service charter customer service standards, complaints data, and the department's response to complaints	If applicable, mandatory	na
	Discussion and analysis of the department's financial performance	Mandatory	80-81
	Discussion of any significant changes in financial results from the prior year, from budget or anticipated to have a significant impact on future operations.	Mandatory	80-81
	Agency resource statement and summary resource tables by outcomes	Mandatory	188
Management and Accountability			
Corporate Governance			
	Agency heads are required to certify that their agency complies with the 'Commonwealth Fraud Control Guidelines'.	Mandatory	79
	Statement of the main corporate governance practices in place	Mandatory	68-81
	Names of the senior executive and their responsibilities	Suggested	69, 187,x
	Senior management committees and their roles	Suggested	na
	Corporate and operational plans and associated performance reporting and review	Suggested	188

Part of Report	Description	Requirement	Page No.
	Internal audit arrangements including approach adopted to identifying areas of significant financial or operational risk and arrangements to manage those risks	Suggested	77-78
	Policy and practices on the establishment and maintenance of appropriate ethical standards	Suggested	78
	How nature and amount of remuneration for SES officers is determined	Suggested	121
External Scrutiny			
	Significant developments in external scrutiny	Mandatory	77-78
	Judicial decisions and decisions of administrative tribunals and by the Australian Information Commissioner	Mandatory	na
	Reports by the Auditor-General, a Parliamentary Committee, the Commonwealth Ombudsman or an agency capability review	Mandatory	84-85
Management of Human Resources			
	Assessment of effectiveness in managing and developing human resources to achieve departmental objectives	Mandatory	178-181
	Workforce planning, staff retention and turnover	Suggested	236-237
	Impact and features of enterprise or collective agreements, individual flexibility arrangements (IFAs), determinations, common law contracts and Australian Workplace Agreements (AWAs)	Suggested	179-181
	Training and development undertaken and its impact	Suggested	179-181
	Work health and safety performance	Suggested	180-181
	Productivity gains	Suggested	184
	Statistics on staffing	Mandatory	178-179 236-237
	Enterprise or collective agreements, IFAs, determinations, common law contracts and AWAs	Mandatory	179-180
	Performance pay	Mandatory	179
Assets management			
	Assessment of effectiveness of assets management	If applicable, mandatory	80
Purchasing			
	Assessment of purchasing against core policies and principles	Mandatory	177

ACRONYMS AND ABBREVIATIONS

AAPBP	Australian Africa Plant Biosecurity Partnership
AAUN	Australia Africa University Network
ACACA	<i>Australia–China Agricultural Cooperation Agreement</i>
ACIAR	Australian Centre for International Agricultural Research
AIFSRC	Australian International Food Security Research Centre
ANAO	Australian National Audit Office
AOP	Annual Operational Plan (of ACIAR)
APS	Australian Public Service
APSIM	Agricultural Production System Simulator
ASLP	Agriculture Sector Linkages Program (Australia–Pakistan)
ATSE	Academy of Technological Sciences and Engineering (Australia)
AusAID	Australian Agency for International Development
AYAD	Australian Youth Ambassadors for Development
CA	conservation agriculture
CAADP	Comprehensive Africa Agriculture Development Programme
CARDI	Cambodian Agricultural Research and Development Institute
CARF	Cambodian Agricultural Research Fund
CAVAC	Cambodian Agriculture Value Chain (program)
CEO	Chief Executive Officer
CGIAR	Consultative Group on International Agricultural Research
CIFOR	Center for International Forestry Research
CIMMYT	International Maize and Wheat Improvement Center (Mexico)
CPB	coca pod borer
CRC	Cooperative Research Centre
CSF	classical swine fever
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
DFAT	Department of Foreign Affairs and Trade (Australia)
EBRM	ecologically-based rodent management
EEO	equal employment opportunity
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
FAO	Food and Agriculture Organization (of the United Nations)
FARA	Forum for Agricultural Research in Africa
FMD	foot-and-mouth disease
FMOs	Finance Minister's Orders
FOI	freedom of information

AAPBP	Australian Africa Plant Biosecurity Partnership
FTE	full-time equivalent (staff)
G20	The Group of Twenty—a forum for international economic cooperation and decision-making, established 1999, comprising 19 countries.
IA	Impact Assessment (program) (ACIAR)
IARCs	International Agricultural Research Centres
ICAR	Indian Council of Agricultural Research
ICARDA	International Center for Agricultural Research in the Dry Areas
ICM	Integrated Crop Management
ICRAF	World Agroforestry Centre (Kenya)
ICRISAT	International Crop Research Institute for the Semi-arid Tropics (India)
IDM	integrated disease management
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute (USA)
IHR	in-house review (ACIAR)
IITA	International Institute of Tropical Agriculture (Nigeria)
ILRI	International Livestock Research Institute (Kenya)
IPM	integrated pest management
IRRI	International Rice Research Institute (Philippines)
IUU	illegal, unreported and unregulated (fishing)
IWM	integrated weed management
IWMI	International Water Management Institute (Sri Lanka)
KPI	key performance indicator
LARF	Lao Agricultural Research Fund
MAD	Mobile acquired data
MAF	Ministry of Agriculture and Fisheries (Timor-Leste)
MDGs	Millennium Development Goals
NAMA	Northwest Agricultural Marketing Association (Cambodia)
NARI	National Agricultural Research Institute (PNG)
NARS	National Agricultural Research Systems
NESB	non-English speaking background
NGO	non-government organisation
ODA	official development assistance
ODE	Office of Development Effectiveness
OH&S	occupational health and safety
OIE	World Organisation for Animal Health
PARDI	Pacific Agribusiness Research for Development Initiative
PCR	polymerase chain reaction
PGR	plant genetic resource

AAPBP	Australian Africa Plant Biosecurity Partnership
PGPA Act 2013	Public Governance, Performance and Accountability Act 2013
PHAMA	Pacific Horticulture and Agriculture Market Access
PIC(s)	Pacific island country(ies)
PNG	Papua New Guinea
PRB	permanent raised bed
QTL	quantitative trait locus
R&D	research and development
RFID	Radio Frequency Identification
RMD	remote microscope diagnostics
RoU	Record of Understanding
RPM	Research Program Manager
RSA	Republic of South Africa
SADI	Smallholder Agribusiness Development Initiative
SES	Senior Executive Service (of APS)
SIMLESA	Sustainable intensification of maize–legume cropping systems for food security in eastern and southern Africa
SMAR	Support for Market-Driven Adoptive Research
SME	small–medium enterprise
SoL	Seeds of Life (program)
SPC	Secretariat of the Pacific Community
TSI	Torres Strait Islands
USP	University of the South Pacific
WSD	watershed development
WTO	World Trade Organization

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