Australian Government

Australian Centre for International Agricultural Research

ACIAR ANNUAL REPORT 2010-11

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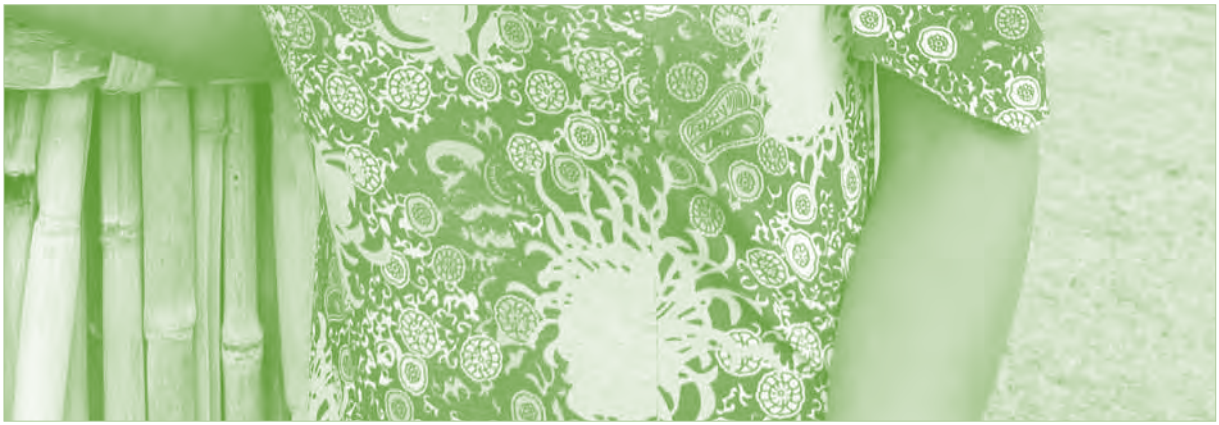

Distribution

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Cover photo: Maize is king in Makabasa Korke village in southern Ethiopia where a woman stands by her maize store. The crop produces grain for vital food needs, grazing for livestock early in the season, and post-harvest stover for animal feed. Farmers are also starting to maintain the stover in their fields to improve the soil and retain soil moisture.

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Hon Kevin Rudd MP
Minister for Foreign Affairs

Dear Minister,

ACIAR Annual Report 2010–11

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 2011.

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 49 of the *Financial Management and Accountability Act 1997*, I have taken steps to ensure that the annual financial statements have been prepared in accordance with the Finance Minister's Orders. The Report includes the Centre's audited financial statements, certified by the Australian National Audit Office, as required by section 57 of the *Financial Management and Accountability Act 1997*.

In presenting the Annual Report, I acknowledge the important contribution made by ACIAR's staff and commissioned research organisations, in achieving more productive and sustainable agricultural systems for the benefit of developing countries and Australia through international agricultural research partnerships.

Yours sincerely

Dr Nick Austin
Chief Executive Officer
ACIAR
October 2011

CC: The Hon. Richard Marles
Parliamentary Secretary for Pacific Island Affairs

ACIAR
Research that works for developing countries and Australia
www.aciar.gov.au

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HIGHLIGHTS

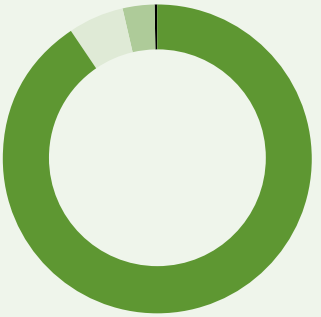
About ACIAR

The Australian Centre for International Agricultural Research (ACIAR) forms part of the Australian Government's international development assistance program and works towards the aid program's objective of assisting developing countries to reduce poverty and achieve sustainable development in line with Australia's national interest. Australia will pursue results against five key themes:

- saving lives
- promoting opportunities for all
- investing in food security, sustainable economic growth and private sector development
- supporting security, improving the quality of governance and strengthening civil society
- preparing for, and responding to, disasters and humanitarian crises.

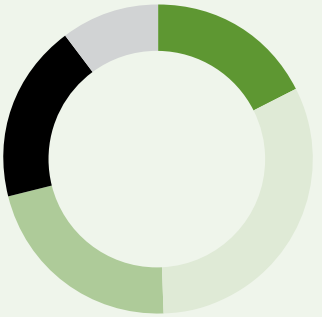
ACIAR works collaboratively with AusAID in areas of mutual priority, with both organisations contributing to the whole-of-Government emphases of the aid program. The Centre encourages Australia's agricultural scientists to use their skills for the benefit of developing countries and Australia. ACIAR funds research projects that are developed within a framework that reflects the priorities of Australia's aid program and national research strengths, together with the agricultural research and development priorities of partner countries.

ACIAR expenditure 2010–11



- International development assistance **90.8%**
- Employees **5.8%**
- Suppliers **3.2%**
- Depreciation **0.2%**

Research expenditure by region 2010–11



- Papua New Guinea and Pacific island countries **17.5%**
- Indonesia, East Timor, Philippines **32.1%**
- Mekong countries and China **21.6%**
- South and west Aisa **18.1%**
- Africa **10.1%**

ACIAR administered expenditure overview

	2010–11 AOP budget ($)	2010–11 actual ($)	2009–10 actual ($)	2008–09 actual ($)
Bilateral and multilateral projects by region and country				
Papua New Guinea and Pacific Island countries	**10,099,323**	**9,993,999**	**9,358,076**	**7,864,307**
Papua New Guinea	4,488,347	4,048,526	4,504,326	4,704,897
Pacific Island countries	5,610,976	5,945,473	4,853,750	3,159,410
Indonesia, East Timor, Philippines	**18,094,830**	**18,305,714**	**17,852,433**	**17,829,717**
Indonesia	9,139,830	8,508,937	11,568,086	11,497,371
East Timor	3,760,000	5,901,188	2,517,022	2,603,453
Philippines	5,195,000	3,895,589	3,767,325	3,728,893
Mekong countries and China	**12,934,504**	**12,302,937**	**10,912,736**	**8,758,136**
Vietnam	3,730,000	4,013,569	3,079,900	2,652,372
Laos PDR	3,672,371	3,589,996	2,737,637	1,718,050
Cambodia	4,222,133	3,645,304	3,301,320	1,788,936
Thailand	120,000	125,440	356,836	377,872
Burma	70,000	64,029	137,043	140,292
China	1,120,000	864,599	1,300,000	2,080,614
South and west Asia	**10,329,964**	**10,681,113**	**7,727,887**	**8,453,522**
India	3,190,000	3,225,096	2,923,604	2,792,556
Bangladesh	1,071,520	1,302,517	1,272,181	1,036,971
Pakistan	2,390,000	2,314,631	1,289,417	1,960,521
Afghanistan	65,000	40,950	436,957	623,001
Iraq	110,000	3,405,071	1,588,232	1,784,778
Bhutan	3,453,444	215,312	167,496	205,695
Other south and west Asia	50,000	177,536	50,000	50,000
Africa	**5,530,000**	**5,719,378**	**2,705,383**	**413,795**
African countries	5,530,000	5,719,378	2,705,383	413,795
Total projects	**56,988,621**	**57,003,141**	**48,556,516**	**43,319,477**
Multilateral program	13,600,000	28,994,344	10,599,063	5,581,032
Building research capacity	6,750,000	7,957,859	7,067,954	7,447,685
Communicating research results	750,000	668,287	593,250	779,809
Measuring research impacts	600,000	562,973	547,301	491,853
Research program support	1,676,000	1,753,820	2,557,280	1,496,215
TOTAL	80,364,621	96,940,424	69,921,363	59,116,071

Selected achievements

ACIAR initiates scoping studies on conservation agriculture work in north Africa

In Indonesia two projects focusing on potato and poultry value chains are linking smallholder farmers with supermarkets chains

ACIAR brokers a trilateral relationship between East Timor, Indonesia and Australia, addressing mutual research challenges

ACIAR research is helping revitalise the dormant pyrethrum industry in Enga Province, Papua New Guinea, creating a regular cash income with benefits flowing to women and children

Exchanges of wheat germplasm between India and Australia, as part of an ACIAR project, helps identify varieties with improved root systems

Farmers in north-western Cambodia are benefiting from research expanding their cropping options beyond maize, allowing planting of cash generating crops such as mungbean and peanut

Research trials in Tibet Autonomous Region, China, demonstrate the efficacy of triticale as a fodder producing crop

A highly productive strain of giant freshwater prawn from Vietnam is revitalising the Fijian aquaculture industry, with the promise of higher returns to local farmers

Trials of low cost protected cropping systems for vegetables demonstrate the viability of wet season production, with public and private sector investment now furthering this in the Philippines

Uptake of zero tillage technologies in northern Iraq expanding rapidly

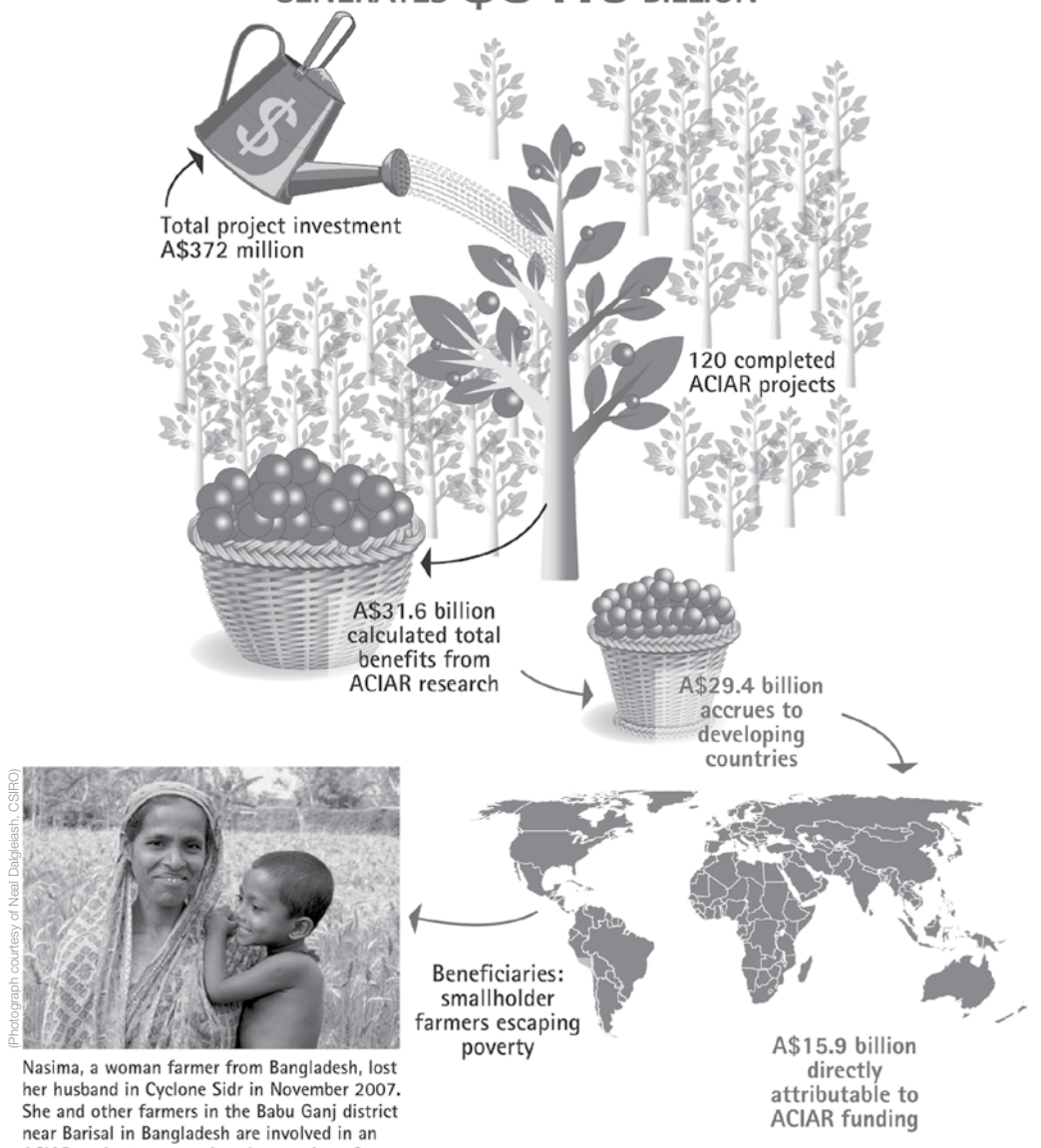
ACIAR's five-country African maize and legume program commences trials, with results encouraging neighbouring farmers not involved in the project to adopt varieties and improved practices

Sandfish ranching in the Philippines is proven as a means of creating supplemental incomes for poor coastal communities and as a reserve to replenish depleted stocks

Local production of furniture, using eucalypt and teak grown in Laos, furthered through demonstration of new range and quality of products

Bounthong Bouahom (NAFRI) and **John Lacy** (NSW I&I) discussing the growth of irrigated rice during a visit to experiments being conducted in a research partnership between Laos and Australia at Yanco Experimental Station, Leeton. Water use by rice is a critical issue for both countries and is a high priority for research supported by the ACIAR. The Leeton experiments are designed to discover ways to minimise water use by delaying flooding of the rice crop. Dr Bounthong and colleagues from NAFRI also visited CSU at Wagga Wagga and had discussion with CSIRO, the University of Sydney and other research partners about expanding joint research between the two countries, focussed on smallholder farming systems and the development of market-oriented agriculture.

Return on investment



(Photograph courtesy of Neal Dalgleish, CSIRO)

Nasima, a woman farmer from Bangladesh, lost her husband in Cyclone Sidr in November 2007. She and other farmers in the Babu Ganj district near Barisal in Bangladesh are involved in an ACIAR project encouraging the growing of alternative crops in their fallow rice paddies to boost incomes and reduce poverty. Nasima's wheat crop yielded 3.7 t/ha, and she sold the surplus wheat and mung beans to earn a modest profit for her family.

*An analysis of 46 impact assessments of 120 completed ACIAR projects (total project investment A$372 million) calculated the total benefits generated from ACIAR research at A$31.6 billion. Of this, A$15.9 billion in benefits is directly attributable to ACIAR funding, which is more than three times ACIAR's total expenditure since its inception in 1982.

COMMISSION CHAIR'S AND CHIEF EXECUTIVE OFFICER'S REVIEW

SNAPSHOT: CHAIR AND CEO'S REVIEW

Food prices still near record high and highly volatile.

Urgent problem: World food stocks are low, 12 million lives are at risk.

The heart of ACIAR's mission is to lift agricultural productivity through research and innovation.

Agricultural research is central to the challenge of feeding half of the world's poor.

Return on 120 ACIAR projects is $31.6 billion in benefits.

Effectiveness and efficiency of agricultural research as a way of delivering aid and development.

Benefits have accrued because of the effectiveness of our partnerships.

Program successes:

- In 11 years the Seeds of Life (East Timor) program has gone from identifying suitable varieties to establishing the foundations of a national seed system.
- ACIAR's program in Africa has established to boost production of the main food staple—maize—and legumes as an important dietary protein source for the rural poor.
- ACIAR's research program for the Pacific focuses on food production and the possibilities of high-value agriculture, fisheries and forestry products, with the aim of improving competitiveness in supply chains.
- In Indonesia, two projects are helping link smallholders into supply chains.
- ACIAR is working in new areas, such as in North Africa to provide research support focused on conservation agriculture.
- A program in Burma comprises components including productivity of grain legumes and intensification of rice-based systems.

One of several recommendations from a review of Australia's aid program was endorsed by the Government and directly relates to the work of ACIAR: improving food security by investing in agricultural productivity, infrastructure, social protection and the opening of markets.

There is a renewed focus on agricultural research as an important Australian contribution to the food security and development challenge.

ACIAR is ensuring our work remains connected to adoption pathways, and therefore to real impacts on improved lives for the people we are working to help.

As the Australian Centre for International Agricultural Research (ACIAR) approaches its 30th anniversary, we acknowledge our achievements but have our attention firmly fixed on the world's serious continuing food security challenge. The urgency of the situation and the changing global landscape—urbanisation, climate change, new technology, changes in economic order—all provide an impetus to look for new ways of doing business and new and improved partnerships.

Food prices are still near the record highs of 2008 and are subject to much sharper volatility, especially for staples like rice and sugar. Combined with low world food stocks, the world's poorest people are at significant risk. The number of food insecure people—defined by the Food and Agriculture Organization of the United Nations (FAO) as not having adequate physical, social or economic access to safe, nutritious food—has been growing again, reversing decades of slow progress in reducing hunger. The immediate crisis is most sharply

illustrated today in the Horn of Africa. High food prices, after years of severe drought and political instability, have placed some 12 million lives at risk and remind us that food security is a serious challenge that cannot be left to solve itself.

This grim reality underlines the urgency of action. The situation in the Horn of Africa is, however, only the latest manifestation of a deeper and enduring global challenge: How is the world to feed the estimated nine billion people expected to live on the planet by 2050?

The Australian Government has been at the forefront of international efforts to re-energise sustained, long term action on food security. At the United Nations (including the Food and Agriculture Organisation), through the World Bank and especially through work in the G20 group of countries, mobilisation is underway on several fronts including a push for long overdue reforms in agricultural markets, boosting private and public investment in agriculture and new approaches to improving the world's emergency food reserves. But it is the renewed effort to lift agricultural productivity through research and innovation that is at the heart of ACIAR's mission.

Agricultural research is central to the challenge of feeding half of the world's poor, who rely on agrarian enterprises for food security and a livelihood. Recent research by the University of Minnesota's Dr Phil Pardy demonstrates returns on investment in agricultural research average 10 per cent. This confirms other research on this subject and underlines the effectiveness of agricultural research as a tool of aid for development.

A recent report by the Centre for International Economics suggests that the benefits generated, and still to be generated, from a suite of 120 ACIAR projects is $31.6 billion. Of this amount $29.4 billion accrues to developing countries within ACIAR's mandate, and the remainder back to Australian agriculture. This was from a total ACIAR investment of $372 million.

A separate report on Australia's investment in the International Rice Research Institute suggests a 28 per cent return on each dollar invested. ACIAR administers and manages Australia's contribution to the centre, along with other members of the Consultative Group on International Agricultural Research (CGIAR), ensuring that some of Australia's funds are directed to research challenges in the region.

The recurring theme that emerges from these studies is the effectiveness and efficiency of agricultural research as a way of delivering aid and development. One of the main efficiencies in projects using agricultural research for development is leveraging existing technologies, and science, and adapting these into smallholder farming contexts.

This means understanding the science, and the context, and bringing them together in projects to use technologies, research and knowledge not yet disseminated in developing countries. It also supports developing country scientists, and smallholder farmers in their critical challenge of gaining access to the latest in scientific innovation in agriculture.

While the world's focus on immediate or imminent hunger in defining food security is natural, a broader approach can encompass the production of food surpluses, allowing those living in poverty to sell the excess for income. From that income can come opportunities—for a child's education, to change traditional gender roles or to gain access to health services.

Surpluses, and income derived from those surpluses, are in many ways central to achieving the aims of aid, including those of the Millennium Development Goals. Without that surplus, little more than subsistence is possible for poor smallholder farmers.

This philosophy of agricultural research creating surpluses—and through these, opportunity—underpins the development of ACIAR projects and research programs.

Nick Austin in conversation with **Ashok Yadav**, project scientist in the direct seeded rice project, India.

Partnerships

The vast majority of benefits from ACIAR-research have accrued to developing countries because of the effectiveness of our partnerships that link in-country researchers and Australia's best agricultural scientists together.

This is a key component of ACIAR's effective delivery; ensuring research builds capacity in developing countries, among scientists and smallholder farmers. In addition, these linkages help focus research, through formal and informal consultations, to areas of greatest need.

ACIAR can only achieve its outcomes because of the considerable co-investment of its partners in Australia. ACIAR itself achieves its multi-billion dollar return through leveraging Australian investments. And the record of success ACIAR has built is due to the strength of the partnerships. This reflects the dedication of all involved, at ACIAR and from our partners, in Australia and beyond. Their commitment, passion and enthusiasm for using science have led to the improvements we have been able to support in developing country agriculture. In many cases the results of our work in developing countries also feed back into useful research findings for Australian agriculture.

While only illustrative of a large body of work, we have selected three program highlights in what follows to feature successful ACIAR partnerships. These programs—in East Timor, Africa and the Pacific region—highlight how this philosophy is delivered and how the ACIAR partnerships modality creates flexible and sustainable solutions.

In **East Timor**, the **Seeds of Life** program has entered a third project cycle. Food security remains a challenge in the largely agrarian country. The first project began in 2000, aiming to introduce improved seed varieties of staple crops; maize, sweetpotato, cassava, peanut and irrigated rice sourced from centres of the CGIAR.

This laid a foundation on which the second and third Seeds of Life projects have built. The East Timorese Ministry of Agriculture, Forestry and Fisheries has been a key partner, as have Australian researchers. The second project consolidated the original work, and the third and current project is now expanding on that work—both of these with significant AusAID funding.

In 11 years the program has gone from identifying suitable varieties to establishing the foundations of a national seed system. We now propose to provide access to seeds of improved varieties to farmers throughout the country.

ACIAR's program in **Africa** is aiming to achieve a similar outcome, albeit across five countries; Ethiopia, Kenya, Tanzania, Mozambique and Malawi. The project, led by the International Maize and Wheat Improvement Center (CIMMYT) aims to boost production of the main food staple—maize—and legumes as an important dietary protein source for the rural poor. Using CIMMYT's existing networks in Africa, we have helped accelerate implementation.

Local farmer **Francisca** shows the Australian Minister for Foreign Affairs, the Hon. **Kevin Rudd** MP, improved crops grown under the Australian-supported Seeds of Life program in Maliana, East Timor.

(Photograph courtesy of Corporal Melina Mancuso)

There is considerable promise in combined rainfed maize–legume cropping systems if productivity can be boosted and declines in soil fertility reversed. The project is also examining the marketing systems for maize.

Already farmers involved in the project are growing surpluses. To help them sell these they are able to call local extension workers to check market prices, allowing greater bargaining power when selling surpluses.

The project, like most that ACIAR funds, is also actively building the capacity of local research systems. Scientists from the partner countries are involved in training activities, both informally through their interactions with Australian and CIMMYT counterparts, and in formal training settings using the infrastructure available in South Africa.

The focus on training and capacity building ensures that projects transfer knowledge and create solutions that are owned by the in-country stakeholders, resulting in a level of sustainability that lasts beyond the project.

In the **Pacific** the challenges and research needs for food production and agricultural sector development are different again. They include isolation from key growth markets and limited coordination of supply chains, limiting the competitiveness of these industries and the potential of agriculture as a platform for stronger economic growth.

ACIAR developed its research program for the Pacific to focus on food production and the possibilities of high-value agriculture, fisheries and forestry products, with the aim of improving competitiveness in a number of commodity supply chains. Across the Pacific the challenges are similar, yet each value chain also has its particular issues.

To help determine the best approaches the Pacific Agribusiness Research for Development Initiative (PARDI) has undertaken reviews of supply chains for 19 products. These are informing the development of targeted interventions, ranging from examining process techniques and postharvest management to consumer preferences for specific crop varieties. A key component of many of these smaller research activities is integration into other donor-funded activities, including links with the Secretariat of the Pacific Community, European Union projects and the AusAID-led Pacific Horticultural and Agricultural Market Access Program (PHAMA) initiative.

Entering new markets

Helping smallholders grow surpluses is only part of the development puzzle. Linking smallholders into markets remains a challenge. The 2011 Crawford Fund Parliamentary Conference addressed this issue with its theme of *The Supermarket Revolution: Good, Bad of Ugly for the World's Farmers, Consumers and Retailers?*

The conference suggested that the potential to help smallholders integrate into value chains is great, but the possibilities are unlikely to be reached for many without assistance.

ACIAR has been working on this area for several years. Research from the University of Michigan State in the USA, by Dr Tom Reardon, indicates that post-farmgate retail accounts for 50–70 per cent of the price consumers pay for food. Efficiencies in the post-farmgate value chain can minimise the price paid to consumers, enhancing food security.

The obverse of this argument is that if post-farmgate efficiencies cannot be found, supply chains will try to create these efficiencies elsewhere, and this is likely to result in pressure to reduce the price they pay producers. For smallholders the challenge is how to work with supply chains to meet their needs, while maximising returns. ACIAR is trying to help farmers with this challenge with five trial projects using Farmer Business Schools, building on the Farmer Field Schools that have grown over the past three decades. The work focuses on marketing improvements; the emergence of wholesalers focusing on a single commodity, work on supply chains accessing regional networks that cross national borders, product differentiation and associated quality demands from players in the chain, and certification of standards.

In **Indonesia** two projects are helping link smallholders into supply chains. The first involves the International Potato Center, and is helping smallholders market their products under known brands. Ida Rosida is one participant, who is now marketing potatoes as

a snack food, under the Cummely brand. The product, potato chips with the tuber skin intact, is earning Ida sufficient income to expand her product range. Through her involvement in the project's participatory market chain approach it has taken Ida just two years to go from a rural potato producer to earning a living as a snack food producer.

A second project in Indonesia is working to develop a clean market chain for meat and eggs from certified biosecure farms to be sold at premium prices in supermarkets. The project has the support of major supermarket chains. Initial sales of the products are proving positive, suggesting that this approach is another avenue for smallholders to engage with business.

Smallholders are finding two main benefits; cleaner production systems that are resulting in increased production and better environments, and increased signs of resistance to diseases. A recent outbreak of avian influenza near the sites of participating farms in south Sulawesi saw reports of the disease in neighbouring farms. Participating farms reported no such outbreaks, suggesting the value of biosecure chains may convey increased resistance to diseases amongst flocks.

Working in new areas

The past year has seen some big geopolitical changes, nowhere more dramatically than in north Africa. The Australian Government has been closely attuned to these developments, and through ACIAR is deploying a small, strategic program to provide research support, focused on conservation agriculture.

The new initiatives are focused on Egypt (irrigated agriculture), and on Tunisia, Algeria and Morocco (dryland farming). They will link to other aid program initiatives in the region. ACIAR, in partnership with AusAID, is supporting targeted regional training and has initiated a multi-year research partnership between Australia, Tunisia and other north African countries. The partnership focuses on priority food security problems related to conservation agriculture, water use efficiency and crop rotations and will be implemented through respective countries' agricultural research organisations.

Another developing country in which there is a desperate need for enlivenment of the agricultural sector is Burma. While ACIAR has long supported a modest program in Burma, we have recently entered into an arrangement with AusAID for a larger multidisciplinary research program, aimed to improve food and livelihood security for small holder farmers. The program aims—through applied technical, social and economic research—to achieve practical impacts for Burmese smallholders. A multilateral collaborative program has been developed in consultation with Burmese counterparts, donors and potential research providers. The program comprises components on: the productivity of grain legumes; diversification and intensification of rice-based systems in the Ayeyarwady delta; smallholder and community aquaculture development; research support for smallholder livestock-based enterprises in the central dry zone; and socio-economic factors affecting the acceptability and adoption of promising technologies. The components encompass the main sectors that account for essentially all sources of food and contribute substantially rural household income, namely crops, fisheries and livestock.

Outlook

Renewed focus on agricultural research as an important Australian contribution to the food security and development challenge has underlined the continuing relevance of ACIAR's mandate. An independent review was commissioned by the Minister for Foreign Affairs, the Hon. Kevin Rudd MP. The report of the *Independent Review of Aid Effectiveness* examined whether the current systems, policies and procedures for the aid program maximise effectiveness and efficiency and was released along with the Government's response in June 2011. Its 39 recommendations included a clear focus on *Improving food security by investing in agricultural productivity, infrastructure social protection and the opening of markets*.

ACIAR has been working with AusAID and other agencies to make sure its work is consistent with the Government's response to the independent review and focused on delivering real change for those most in need.

For ACIAR, this means working even harder to align projects and programs to the areas of need and recommitting ourselves to maximising impacts. We have spent time over the past year examining our approaches and have identified areas where we can improve, especially through changes in our project development processes. We will be trying harder to ensure our work remains connected to adoption pathways, and therefore to real impacts on improved lives for the people we are working to help.

As next year marks 30 years of ACIAR operations, we are looking to build on the strong work already undertaken. That we have been effective in generating $31.6 billion in benefits is a source of pride. In the face of escalating numbers of hungry people, it also demonstrates the benchmark we need to surpass in the coming years.

Staffing

The past year saw ACIAR's staff continue to produce outcomes above and beyond those expected. It was also a difficult year, with the untimely passing of Dr Mirko Stauffacher. The death of a staff member is always challenging, particularly in a small agency. We thank ACIAR staff for their support of Mirko's family and for their solidarity in such a difficult time.

ACIAR's Commission underwent some renewal during the year, with the retirement of Dr Meryl Williams as Chair, and Commissioners Dr Barry Buffier and Mr Neil Andrew. Their passion for ACIAR, and their focus on achieving results helped to ensure the Centre continued to deliver genuine outcomes.

They are replaced by Professor Kym Anderson and Dr Conall O'Connell as new Commissioners, and Ms Joanna Hewitt as Chair.

ACIAR's great strength is its ability to attract talented people, dedicated to making a real difference in the lives of many in need of a helping hand. As we look forward to consolidating the work of the past year, and to the challenges that are ahead, our thanks go to the Commission, Policy Advisory Council, staff and project partners, both here and in partner countries.

Ms Joanna Hewitt
Commission Chair

Dr Nick Austin
Chief Executive Officer

THE YEAR IN REVIEW– REGIONAL AND PROGRAM ACHIEVEMENTS

PAPUA NEW GUINEA AND PACIFIC ISLAND COUNTRIES

Papua New Guinea

The main strategy of the Australian Centre for International Agricultural Research (ACIAR) program in Papua New Guinea is to secure improvements in food supply and rural incomes for smallholder farmers. Major research topics focus on sweetpotato (the staple food of a large proportion of the population), export tree commodities such as timber, palm oil, coffee, cocoa and coconut products, village-based aquaculture and other fisheries. ACIAR also promotes the role and effectiveness of women's groups in rural industries.

Pacific Island countries

The Pacific Island countries include Fiji, Solomon Islands, Vanuatu, Samoa, Tonga and Kiribati, where ACIAR strives 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 surmount the limited R&D capacity of many countries.

PAPUA NEW GUINEA

Highlights

- Short-rotation coppicing, in which young trees are repeatedly cut to the ground to stimulate growth of new shoots, confirmed as a basis for a sustainable national fuelwood economy.
- Farmers in East New Britain participating in a 'Training by Association' scheme have achieved dramatic results in reducing infestations from cocoa pod borer and plant diseases of cocoa.
- A revitalised scheme to grow pyrethrum in Enga Province is generating regular cash income only a short period after planting, benefiting women farmers and their children.
- An adaptation of the oil palm mobile card scheme is guaranteeing elderly growers an income in their retirement, smoothing the way for the transfer of block management from fathers to sons.

Overview

Papua New Guinea 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 Papua New Guinea—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 tailors its research program with the needs of smallholder farmers in mind. 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 Papua New Guinea is the ACIAR–AusAID research partnership. Current research area priorities include: addressing social, cultural and policy constraints to the adoption of agricultural technologies; lifting smallholder incomes from horticultural crops; and opportunities and strategies for crop diversification. 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.

Women from Huon Gulf District in Morobe Province, Papua New Guinea, participating in a three-month course on improving management of sweetpotato crops. (Photograph courtesy of Papua New Guinea's National Agricultural Research Institute)

Research achievements

Overharvesting of trees in Papua New Guinea has created a fuelwood supply crisis, but this has opened an opportunity for smallholders to earn income selling wood gained by **short-rotation cropping**. Young tree stems are repeatedly cut to the ground to stimulate coppicing, which enables repeated harvesting in a sustainable manner. It can provide fuelwood and has the potential to expand into charcoal production. This system provides a basis for a nation-wide system to meet demand for fuelwood and lift smallholder income.

The orange-fleshed sweetpotato is a nutritionally-enhanced staple containing among the highest concentrations of beta-carotene (the major pro-vitamin A carotenoid) of any food—as little as 100 grams each day can prevent vitamin A deficiency. **New high-yielding lines** with an acceptable flavour, texture, and resistance to pests and diseases are rapidly gaining popularity. Farmers in both Papua New Guinea and Solomon Islands now grow the new varieties, and are finding a ready market for their surplus produce.

ACIAR has pioneered the mobile card payment mechanism to mobilise labour in smallholder oil palm production by guaranteeing payment of family and hired labour. In West New Britain growers are finding **new ways to adapt the payment mechanism** to meet their needs. Elderly growers reluctant to hand over block management to their sons because of potential loss of income have adopted the card to guarantee an income in their retirement. This move has lessened the generational conflict and disruption of production often associated with the transfer of block management from fathers to sons. Growers have named this the 'papa levy'.

The Cocoa Pod Borer (CPB) has spread to eight provinces. By the end of 2010, cocoa production in East New Britain Province—the worst affected province—had fallen by 80 per cent, causing severe financial hardship to smallholder families. However an ACIAR collaborator, NGIP–Agmark, has achieved remarkable results working with 200 farmers participating in a 'Training by Association' model. Many of these farmers now practice high-input farming, with most achieving yields well above levels of pre-CPB times. Better practices mean far less pod rot and Black Pod (around 30 per cent of pods in pre-CPB times), and losses to CPB average less than one pod per tree.

Understanding and managing invasive and exotic fish species in Papua New Guinea has been boosted through a preliminary assessment that focused on three species of air-breathing fish originating in South-East Asia.

Assessors concluded that once the invasion has commenced, little can be done to stop it. They made recommendations on how to best utilise the species in the absence of a strategy to control them.

Tasmania grows 80 per cent of the world pyrethrum crop, but it was once a thriving industry in Papua New Guinea (around 80,000 growers in the 1980s). The industry ground to a halt in the 1990s and the Mt Hagen factory closed. Now after a four-year collaboration between Botanical Resources Australia Pty Ltd, ACIAR, the University of Tasmania and Papua New Guinea's National Agricultural Research Institute (NARI) there is **new hope for the pyrethrum industry**. Already more than 2,000 farmers grow pyrethrum in the Enga province and the trend is gradually expanding to Chimbu and the Western Highlands provinces. Pyrethrum, an all-year-round crop in Papua New Guinea's fertile high altitudes, provides farmers with good yields and fortnightly harvests. This regular cash income, only a short period after planting, is benefiting women farmers and their children. The success has also led to renewed interest and investment by the Papua New Guinea Government.

PACIFIC ISLAND COUNTRIES

Highlights

- The Pacific Agribusiness Research for Development Initiative (PARDI) embarks on a wide range of initiatives to develop high-value agriculture, fisheries and forestry across the Pacific Island countries.
- A highly productive strain of giant freshwater prawn originally from Vietnam, promises to revitalise Fiji's local prawn aquaculture industry and increase financial returns for local farmers.
- Development of floricultural activities and enterprises is opening up opportunities to improve livelihoods in Pacific Island and Australian Indigenous communities.
- A Women-in-Fisheries 'train the trainers' workshop toolbox in Solomon Islands has been used as model for a wider project on strengthening community-based management towards gender equity.

Overview

ACIAR's program in the Pacific Island countries, (which embraces Solomon Islands, Samoa, Tonga, Vanuatu, Fiji and Kiribati,) 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, and 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.

In 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 AusAID 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), designed to provide (among other objectives) research and technical underpinning for the AusAID-funded PHAMA, an initiative to assist Pacific Island countries to gain and maintain access to key markets for selected high-value Pacific products.

In line with a strong emphasis on building R&D capacity within the region, ACIAR partners with the University of the South Pacific (USP) to implement a postgraduate training program implemented through scholarships for research associated with relevant ACIAR projects.

Research achievements

The Pacific Agribusiness Research for Development Initiative (PARDI) has undertaken nine rapid **reviews of supply chains** covering taro, cassava, breadfruit, coconut, pearls, sea cucumber, canarium nut, value-added fisheries, and high value timber during the past year. Partial reviews have also been completed for virgin coconut oil, sweetpotato, vegetables, yam, cocoa, coffee, vanilla, ginger, teak and mahogany. In an effort to integrate consumer and market demands impacting on these chains, researchers have also undertaken surveys of Fiji municipal markets and consumer households, taro consumer preference studies in the Sydney and Auckland markets, and a Vanuatu tourist consumer study on cocoa and canarium nut products. PARDI has also completed three training and development initiatives—a pearl farmer training workshop in Tonga in November 2010, survey training for USP students in December 2010, and a value chain analysis teaching workshop in Vanuatu in May 2011.

Marex Mareka is trialling integrated pest and disease management options in his cocoa block. Reviews of supply chains have been conducted for commodities such as cocoa. (Photograph courtesy of Chris Fidelis)

Efforts to improve the **culture stock quality and nutrition of freshwater prawns** for aquaculture in Fiji have seen the successful introduction into Fiji, under strict quarantine, of three high-performing culture lines from different genetic backgrounds in Asia. Trials of the three strains confirmed that the best performing line for Fijian conditions comes from Vietnam, with potential to either reduce the time taken for prawns to reach regular harvest size or to allow larger, higher-value prawns to be produced during the normal cycle employed. Efforts are also underway to develop feed formulations based on low-cost local ingredients.

A major impediment to the development of the pearl industry in Tonga has been a reliable and adequate supply of oysters. A project has helped to **develop hatcheries to supply juvenile oysters**. This has led to a 40 per cent increase in the number of pearl farmers in the Vava'u island group and the area farmed for pearl culture has expanded around 30–40 per cent. Much of the growth has resulted from ex-pearl farmers returning to the industry now that oysters are again available.

In Solomon Islands a project is **strengthening the livelihood resilience of fishery-dependent communities** by adopting participatory adaptive management frameworks. One successful outcome is the development and testing of a Women-in-Fisheries 'train the trainers' workshop toolbox, which has been used as a model for all the project communities and community clusters and now forms the basis of a wider project on strengthening community-based management towards gender equity.

Stocks of high-value sea cucumber species have been chronically over-exploited throughout the Asia-Pacific. While efforts are underway to introduce better management of the fishery, certain species can be cultured in the interim to take pressure off wild stocks and generate income. Such is the case with **a major initiative into breeding the sandfish** (a type of sea cucumber) for pens, ranching and ponds. In February 2011 a major symposium was held in Noumea to focus on recent research, and ACIAR now intends to develop a program for sandfish culture and release in the Asia-Pacific over the next 7–10 years.

Development of **floricultural activities and enterprises** opens up opportunities to improve livelihoods in Pacific Island and Australian indigenous communities. A project has the objectives of characterising under-realised and novel floriculture business potential for these groups. In May–June 2011 project-related workshops conducted in Darwin and surrounding areas to introduce floristry were enthusiastically embraced by indigenous women participants. Similar workshops are now in the planning stages for Fiji, Solomon Islands and Papua New Guinea.

ACIAR has assisted Samoa in **rebuilding its taro production** after devastation from the fungal disease taro blight in 1993. The taro varieties growing in Samoa, as in other Pacific countries, had a narrow genetic base, and the only solution was to develop new blight-resistant taro varieties suited to Samoan conditions. A project lasting 10 years involved over 100 farmers testing several thousand different taro plants. The answer was to cross preferred Samoan varieties with others from outside the region, largely varieties from Indonesia and Malaysia. ACIAR-funded research also led to tests to identify each known taro virus, so that germplasm can be moved between countries without inadvertently spreading disease.

INDONESIA, EAST TIMOR AND THE PHILIPPINES

Indonesia

Changes in development cooperation between Australia and Indonesia reflect that country's growing regional and economic status. Increasingly aid is delivered through partnerships and support for Indonesian government agencies and systems. ACIAR focuses on research activities within value chains and at the farming community level, with researchers integrated where necessary with a wide range of stakeholders—including farmers, the private sector, non-government organisations (NGOs), extension services and policymakers.

East Timor

ACIAR focuses largely on the second of the four objectives in the Australia–East Timor Country Strategy (2009–14): to increase employment by investing in increasing agricultural productivity, improving infrastructure, promoting vocational education and developing the private sector. ACIAR projects seek to improve productivity and resilience of livestock and fishery systems, transform smallholder and community livelihoods, and raise individual and institutional R&D capacity.

Philippines

ACIAR continues to support Philippine research for development to improve market competitiveness of products from aquaculture, horticulture and livestock enterprises. Underpinning this improved competitiveness is the need to enhance agricultural productivity through more effective extension processes and greater responsiveness to market opportunities. There is a strong emphasis on land and water resource management for profitable and sustainable agriculture.

INDONESIA

Highlights

- In Aceh rice trials reveal net incomes of farmers can be significantly improved by better management practices, choice of varieties and crops, and management of fertiliser application.
- Demonstration lobster growout farms are now operating in Lombok and Kupang, with two more under construction in South Sulawesi and Bima.
- Four mango export shipments to Hong Kong, Singapore and Kuala Lumpur have confirmed the viability of Indonesian mango exports.
- In Nusa Tenggara Timur introduction of a new growers' cooperatives model has attracted micro-financing from local banks and policy support from Government and marketing entities.

Overview

The Indonesia program is ACIAR's largest, due to the country's proximity and strategic importance to Australia, and to the imperative for reducing the large number of its population living in poverty. The Australia–Indonesia Partnership (AIP 2008–13) is a comprehensive plan that reflects these priorities. ACIAR directly supports the AIP (Pillar 1) through a focus on 'sustainable growth and economic management', especially in improving rural growth and livelihoods.

The geographic focus of the Indonesia program encompasses some of the poorest regions—including six provinces in eastern Indonesia and two in Sumatra—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 possible, ACIAR implements its Indonesian research program as part of a whole-of-government approach involving AusAID and the Department of Agriculture,

Forestry and Fisheries (DAFF). The program also delivers by partnering with international development agencies such as the International Fund for Agricultural Development (IFAD) in the provinces of Papua and West Papua. ACIAR projects are increasingly involving major private-sector partners.

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

Research achievements

Following the devastation of the tsunami in 2004 there has been a sustained effort to build **more profitable and resilient farming systems** in Aceh. Results from rice trials show net incomes of farmers can be significantly improved by management practices, choice of varieties and crops, and management of fertiliser application rates and practices. The ACIAR project has encouraged the establishment of 26 women's farming groups, involving 610 members.

Capture of seed lobsters and their growout to market size involves simple technology and minimal capital, making it ideally suited to village-based enterprises in Indonesia (and also Vietnam). Demonstration growout farms are now operating in Lombok and Kupang, with

Aceh women farmers unite

An initiative supporting women farmer groups in Aceh, Indonesia, is reaping economic, health and social rewards. Established in 2009, the Kelompok Wanita Tani project has so far helped more than 600 women to form 26 women farmer groups in five of Aceh's provinces. The project supports the groups of women to grow vegetables and other crops for income, and works closely with extension staff to provide capacity-building activities such as farm training and women-in-agriculture forums.

The women's farming groups operate as informal cooperatives, sharing the income from selling produce among members. They set aside some money for a group savings fund and for investment in the next crop cycle. This allows the women to supplement their household income and gives them some financial independence.

Most groups allow members to take home some produce from each harvest, which can have a direct impact on household vegetable consumption. Improving nutrition in Aceh is important, as recent studies have shown that some 25 per cent of children in Aceh are malnourished.

Anna Strempel visiting a women farmer group at Naga Umbang Aceh Besar, Aceh Indonesia.

Australian Youth Ambassador Anna Strempel has worked with women and local agricultural services in Aceh to identify how the women's farmer groups can become independent. Surveys show they are keen to learn about leadership skills, group management, postharvest processing, new crops and soil management.

two more under construction in South Sulawesi and Bima. Trials are underway to refine nursery techniques and improve survival of seed lobsters.

Expansion of inland aquaculture (where fish are cultured in reservoir cages or in ponds) has often been at the expense of poor fishers relying on wild stocks. In some instances poor practices have led to kills of both wild and cultured stocks. One project is devising management plans to **harmonise both culture and wild capture**, and also to ensure overall environmental integrity. Strategies include stocking reservoirs with fast-growing milk fish to support the capture industry and implementation of a co-management plan to reduce intensity and stocking density for cage culture. Already nutrient levels in the reservoirs are down, and catch per fisher has risen from 8.6–11.1 kilograms per day.

Better quality management will make **supply chains for mangoes and rambutans** in Nusa Tenggara Barat more effective. Four mango export shipments to Hong Kong, Singapore and Kuala Lumpur have confirmed the viability of Indonesian mango export, with good market response to the Arumanis variety. The project is now testing technologies for cheaper transport, incorporating road freight to Surabaya from Lombok using refrigerated container space that returns to Java empty.

In a project to study **productivity and profitability enhancement of tropical pulses** in Nusa Tenggara Timur the team has established a new growers' cooperatives model to improve the visibility and effectiveness of the mungbean production technology transfer to smallholders. In the Belu District 25 growers implemented a Best Management Package using the new mungbean variety 'Vima'. Introduction of the model attracted micro-financing from local banks and policy support from Government and marketing entities.

Efforts are in place to enhance farmer engagement with **specialty coffee chains in eastern Indonesia**. Initial social research has provided a baseline of livelihood strategies for coffee growers and value chain structures across six districts of Sulawesi and Flores. Key findings revealed both the potential and limitations of buyer-driven rural development in Indonesia. Now the project is conducting a series of action-research activities involving buyer linkages to farmers. Policy engagement with coffee development at the national level is another ongoing feature of the project.

ACIAR continues its long-term investment to **improve reproductive performance of cows** and to fatten cattle in low-input systems of Indonesia. The project team has completed surveys of feed resources, farming systems, fattening operations and marketing chains. Surveys revealed that farmers mostly sold their animals to meet household needs for cash; farmers in lowland areas of East Java tended to sell their calves at weaning, while farmers in upland areas often kept the calves for longer.

EAST TIMOR

Highlights

- At the request of the East Timor Government ACIAR brokers trilateral relationships between East Timor, Indonesia and Australia, to work together on common problems.
- Commencement of a 5-year third phase of the Seeds of Life program, designed to maintain the focus on increasing the yields of staple food crops by selecting and distributing improved varieties of superior genetic quality.
- A National Plan of Action for Aquaculture will form the basis for a strategy to guide investments in inshore fisheries management and production.

Overview

Agriculture provides livelihoods for more than 80 per cent of the East Timorese population and accounts for 30 per cent of GDP. Opportunities for ACIAR assistance in East Timor 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. Livestock production is almost totally managed by individual households, very few of which are specialist livestock raisers. Pigs and poultry survive largely by scavenging; grazing animals rely on native pastures, crop margins and crop stubbles. While East Timor 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.

ACIAR's research agenda supports the Australia–East Timor Country Strategy (2009–14), developed in parallel with the East Timor Government's medium-term strategic development plan. ACIAR focuses largely on the second of its four objectives, with a view to increase employment by investing in increasing agricultural productivity, improving infrastructure, promoting vocational education and developing the private sector. ACIAR does this through projects that improve productivity and resilience of livestock and fishery systems, transform smallholder and community livelihoods, and raise individual and institutional R&D capacity.

Research achievements

At the request of the East Timor Government ACIAR is brokering trilateral relationships between East Timor, Indonesia and Australia, to work together on common problems. As a first step ACIAR has contracted the University of Mataram to implement a new project on smallholder cattle production systems. Other early work includes initiatives to control mealybug in papaya, cross-border control of brucellosis, legume crop development, and sharing of expertise on aflatoxin control in legume and maize systems.

The Ministry of Agriculture and Fisheries (MAF) is receiving support for its medium-term livestock research-for-development program. The program has a 10-year vision and a strategy consisting of on-station testing and on-farm adaptation of small-scale livestock production and health management technologies (especially cattle, goats and pigs) developed in similar biophysical conditions and farming systems in South-East Asia (especially Indonesia). Two new projects are introducing simple approaches for improving productivity and profitability of Bali cattle, using strategies already proven in villages in eastern Indonesia.

Seeds of Life I and II have made considerable progress in introducing new varieties, but the task is far from complete. In 2011 AusAID, ACIAR and MAF jointly sponsored a 5-year, $27.3 million third phase of Seeds of Life (SoLIII), which maintains the focus on increasing the yields of staple food crops by selecting and distributing improved varieties of superior genetic quality. Another aim is to establish the foundations of a national seed system.

A new project is developing a **National Plan of Action for Aquaculture** to form the basis for a strategy to guide investments in inshore fisheries management and production.

PHILIPPINES

Highlights

- Low-cost protected cropping systems that enable farmers to produce vegetable crops during the wet season have proven their worth in the trials, and both public and private investors are now committing funds to replicate the designs and systems in other locations.
- ACIAR work on tree seedling quality supports the recently announced National Greening Program (NGP), which will reforest 1.5 million hectares over the coming five years.
- A sandfish sea ranching project demonstrates that it can provide a supplemental source of income for poor coastal communities, while also functioning as a reproductive reserve to replenish stocks.

Overview

ACIAR's support for the Philippines comes through the third objective in the Australia–Philippines Development Assistance Strategy 2007–11: *Improved economic opportunity for rural people through increases in productivity, access to markets, better infrastructure and growth of small-to-medium enterprises in target provinces*. Specifically, ACIAR seeks to assist in increasing productivity, marketability and international competitiveness for Philippine agricultural products. Underpinning this improved competitiveness is the need to enhance agricultural productivity through more effective extension processes and greater responsiveness to market opportunities.

In 2008 the Philippines became a net food importer for the first time since the early 1980s. Being a mountainous country, 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 two per cent per year (expected population will rise from 94 million to 101 million over the next eight years). While rice production remains a dominant national focus, there is increasing pressure to diversify and produce a range of other food, livestock, fisheries and income crops on increasingly marginal land in the uplands.

The following are the lead priorities for the Philippines under ACIAR's medium-term research strategy: 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; addressing policy and technical constraints to improving returns from low-input pig production systems. 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

ACIAR's two mega projects on fruits and vegetables are performing well, with excellent interaction between the two. One component seeks to alleviate the damage of winds and rain that make local vegetable production difficult and expensive in the Central Philippines (Visayas). Researchers have developed and evaluated low-cost protected cropping systems so that farmers can produce vegetable crops during the wet season. The structures have proven their worth in the trials, and now both public and private investors are committing funds to replicate the designs and systems in other locations.

Twenty-four clusters of smallholder farmers are now involved in a vegetable supply chain project, and the system is being tested with mango and protected cropping components. This initiative links smallholder farmers into higher-value markets and applies the concept of a value-chain approach.

There is also good synergy between these projects and the **ongoing landcare work**. This includes special cross visits of landcare farmers from South Cotabato and Bohol to Leyte to study the protected cropping systems for vegetables. The cross visits were instrumental in setting up farmer-to-farmer networks for future interchange on topics such as agro-enterprise and cluster marketing.

High-quality seedlings are fundamental to the successful establishment of forests, both for timber production and reforestation of degraded land. To overcome a history of poor-quality seedlings, a project has sought to **lift seedling quality** by developing best practice guidelines suited to the Philippines and introducing a quality accredited 'Q-Seedling' brand. Demonstration nurseries are now operating at the Visayas State University and with a large private company. Pilot seed centres elsewhere are also supplying quality germplasm for common timber species.

The project also developed a **mother tree program** to identify sources of germplasm for both common timber species and hard-to-find native species. The work ties in with February 2011 announcement by President Aquino of the National Greening Program, which will reforest 1.5 million hectares over the coming five years. There will be around 1.6 billion seedlings required for that program.

A **sandfish sea ranching** project has recently demonstrated that aside from providing a supplemental source of income for poor coastal communities, a properly managed sea ranch can also function as a reproductive reserve to replenish stocks.

Allan Siano, from the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, participated in the Australian mango study tour in November 2010.

MEKONG COUNTRIES AND CHINA

This program comprises Vietnam, Lao People's Democratic Republic, Cambodia, Thailand, Burma and China

Vietnam

ACIAR's program in Vietnam supports technical and agribusiness 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 the agricultural natural resource base is vulnerable.

Lao People's Democratic Republic

Lao People's Democratic Republic is one of four countries involved in a new initiative on safeguarding food security in rice-based farming systems. There is a particular need for research to improve food security from rice-based and other farming systems in both lowland and upland districts of southern Laos, with ACIAR placing special emphasis there.

Cambodia

Agriculture remains a significant part of the Cambodian economy. ACIAR supports research to lift the productivity of rice-based farming systems, increase agricultural diversification (particularly into non-rice field and horticultural crops and ruminant livestock) and adapt to climate change at the farm scale.

Thailand

ACIAR and Thailand increasingly co-invest in their partnership. ACIAR is investing in implementation of the results of earlier projects (with relevance to the poorest farming communities), biosecurity systems implementation, and regional partnering with Lao People's Democratic Republic and Indonesia on sustainable fisheries and basin fisheries management.

Burma

ACIAR's aim in Burma is to work predominantly through international organisations and NGOs (including Australian-accredited organisations) that have a longstanding presence on the ground. The main aim of the program is to develop a small number of multilateral collaborative research projects that can improve nutrition and food security.

China

ACIAR's program in China over the past decade has shifted its focus towards the western region, with emphasis on the following themes: improved water-use efficiency; improved land and water use; wheat breeding for dryland conditions and conservation farming systems; improved integrated crop-livestock systems in favourable areas of Tibet Autonomous Region and rangelands of north-western China.

VIETNAM

Highlights

- In the north-western region new non-astringent persimmon varieties are fetching an average price of 26,000 VND (AUD $1.18) per kilogram, in contrast with the 2,000 VND or less per kilogram for traditional astringent persimmons.
- Oyster production in northern Vietnam has grown at a rapid rate—within three years of a project commencement production has lifted from 100 to 2000 tonnes per annum, and growth is projected to continue.

Overview

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. 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 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 regions of opportunity to employ Australian agricultural technical skills to assist in development.

Where appropriate ACIAR's projects link with programs of AusAID 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 northern and north-western highlands; development of high-value aquaculture industries in the Mekong Delta, central coast and north-eastern regions; and developing higher-value plantation forestry products in northern, central and southern Vietnam.

Research achievements

Salinity and other adverse environmental factors affect the rice paddies in the lower reaches of the Mekong Delta at certain times of the year. One project is introducing improved rice varieties with higher tolerance to stagnant flooding, salinity stress and anaerobic conditions during germination. Researchers are also developing technologies to determine soil nutrient cycling and to measure the emissions of greenhouse gases from rice fields.

ACIAR has assisted Vietnam to develop a substantial industry of acacia and eucalypt plantations. Much of the harvest is used for the production of low-value pulpwood, so a new project has been developed to encourage use of this **plantation timber in veneer production** for the furniture industry, which presently sources much of its timber from overseas at a very substantial cost. The project complements work in Australia on production of veneers from some plantation eucalypts.

Current fisheries projects in Vietnam cover hatchery production of molluscs, development of improved feeds for farmed marine fish and crustaceans, sea cucumber culture, and spiny lobster growout and management of disease. Significant interest in the **expansion of bivalve culture** in Vietnam has led to the rapid introduction of oyster farms, and an increasing number of small farmers are starting to produce oysters for local markets (see box below for more on this story).

Oyster farmers prosper in Vietnam's north

An ACIAR project to produce oysters from hatchery seed has progressed in leaps and bounds. In the space of three years production of cultured oysters rose from virtually zero to 100 tonnes in 2007, then grew annually to 1,000 then 2,000 tonnes. Production for 2010 was estimated to be about 5,000 tonnes. Scientists at the National Marine Broodstock Centre hatchery on Cat Ba Island in Ha Long Bay have been instrumental in this progress, currently producing in excess of 100 million seed oysters annually.

Asset-poor farmers have adopted the new technology at a rate that has astonished the ACIAR team. Initially, just one of the island's larger farmers was working with the scientists to help establish the new cultivation technology. After observing the results about 200 smallholders plus three larger farmers started cultivating oysters using the hatchery seed.

Among the smallholders who have adopted the new technology is Pham Thi Lieu. Her efforts with oyster farming have proved worthwhile. Oysters are easier to manage than some other species as they do not need feeding, which cuts input costs; and they earn a farm-gate price in Vietnam of about $1.40 a kilogram. 'We have been able to afford a new house, which we built two years ago,' Pham Thi Lieu says. 'Now we're using our profits to expand our farm. If I have any extra money I will save it for my children and grandchildren.'

Most are growing their oysters on culch—recycled shells that are tied to a line and slung beneath rafts. Locals say the filter feeders thrive in the warm nutrient-rich waters, growing from a spat (juvenile) to a commercially acceptable mollusc in less than 12 months. Around 10,000 poor families in the Ha Long Bay area could benefit by diversifying into oyster farming.

Pacific oyster cultivation using hatchery seed at Cat Ba island, Vietnam.

The ethnic minority groups in the north-west region of Vietnam are involved in a project to enhance the productivity, yield and the **fruit quality aspects of persimmon**. Farmers are now harvesting fruit from new non-astringent varieties, which they are selling for an average price of 26,000 VND (A$1.18) per kilogram (by contrast the 2010 price for traditional astringent persimmons was 2,000 VND or less per kilogram). This encouraging outcome demonstrates that farmers from ethnic-minority groups can grow and deliver to market a product highly sought after by the Vietnamese consumer.

A project is undertaking production trials and value chain **analyses of six traditionally grown vegetables** in northern Vietnam. Women growers have been asked to prioritise production and marketing issues and put forward ideas for types of marketing interventions for further study. One suggestion was an indigenous vegetable restaurant challenge—where restaurants competed in a cook-off designed to showcase the three indigenous vegetables produced in the northern province of Lao Cai.

LAO PEOPLE'S DEMOCRATIC REPUBLIC

Highlights

- Farmer participatory rice variety selection trials, conducted over four growing seasons, have led to identification of several promising lines that appear to exceed the yield of standard variety TDK1.
- The furniture industry has benefited from work to increase the range, quality and value of products produced from timber out of plantations of eucalypts and teak grown in parts of Laos.

Overview

ACIAR's program in Lao People's Democratic Republic is directly aligned with the rural development initiative, as outlined in the Australia–Lao 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. ACIAR research aims to increase the productivity of these systems, and to foster cooperation with Consultative Group on International Agricultural Research (CGIAR) centres to fast-track development of new crop varieties through advanced informatics and biotechnology.

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: market-driven alternatives to shifting cultivation in upland regions; improved food security and profitability of farming systems through diversification; rice and other field crops; horticulture; agricultural water resource management; livestock and fisheries; agribusiness, marketing, policy and social issues; and adapting Lao farming systems to climate change.

Research achievements

Farmer participatory **rice variety selection trials**, conducted over four growing seasons, have led to identification of several promising lines that appear to exceed the yield of standard variety TDK1. In the mother trial, about 20 farmers have examined about 20 varieties planted at each of six sites, and from these selected their preferred agronomic characters and grain and eating quality. In another trial farmers are growing and testing three of their preferred varieties on their own farms, while in the third trial another group of more than 40 farmers are comparing the performance of the best four varieties identified by the Lao rice breeding group.

Systems research has commenced around several hubs in Savannakhet and Champassak provinces, with **adaptive on-farm research** taking place on approximately 300 farms in 10 villages. These adaptive research trials are focused on resource management, direct seeding, short-duration post-rice crops such as pulses, vegetables and forages, and the integration of ruminant livestock.

Pigs are one of the few income-generating opportunities for Lao farmers, but currently pig production is not meeting domestic or export demands. Opportunities exist for supplementing income through importing piglets from Thailand, and selling fattened pigs to Vietnam. ACIAR project work is addressing the limitations of current village-based systems through two components—the first addresses aspects of animal and human health, and the second addresses animal production. The work should **improve pig productivity** by increasing output per sow, piglet survival and growth performance.

A project team has worked to increase the range, quality and value of products produced from timber out of **plantations of eucalypts and teak** grown in parts of Laos. Improvements in production efficiency are already evident through new factory layouts, better sanding methods, more efficient drying systems that decrease timber degrade and distortion, and improved utilisation of waste timber. Steaming equipment for wood bending, which can lead to a 100 per cent higher yield in comparison to the traditional techniques such as sawing for shaping wood, is being introduced.

CAMBODIA

Highlights

- Two non-government organisations, Care international and the Maddox Jolie-Pitt foundation, have partnered with an ACIAR project to help implement integrated pest management in north-western Cambodia.
- Farmers in upland areas of north-western Cambodia are benefiting by moves from an exclusively maize-based cropping system into one that includes nitrogen-fixing legumes such as soybean, mungbean and peanut.

Overview

Agriculture remains a significant part of the Cambodian economy, with about 80 per cent of Cambodia's population relying on agriculture for their livelihoods. ACIAR's strategy is to support rural development in line with Cambodia's National Strategic Development Plan (NSDP) 2006–2013 and its priorities for poverty reduction.

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. First, it supports research to increase and secure the productivity of rice-based farming systems. Second, it supports applied R&D that underpins agricultural diversification, particularly into non-rice field and horticultural crops and ruminant livestock. The third thrust recognises the vulnerability of Cambodian agriculture, particularly rainfed cropping, to climate variability and change.

ACIAR is also co-funding with AusAID the research and extension component of a 5-year, $42 million program, the Cambodia Agricultural Value Chain (CAVAC) program, which commenced in early 2009. It integrates with other CAVAC components to address agribusiness development, water management and irrigation, and the furthering of a business enabling environment.

Research achievements

Research in Cambodia, as well as Lao People's Democratic Republic, Bangladesh and India seeks to develop **multi-scale climate change adaptation strategies** for farming communities. So far results from all four countries illustrate major, rapid change in rural communities, driven more by other drivers of global change (markets, urban migration, resource depletion) than climate change per se. Two of the many facets of this dynamic are the increasing 'feminisation' of agriculture and the increasing shortage of labour in rural communities—factors that will have a significant influence for the research group in choosing the type of farming households for further study, and in defining feasible adaptation options.

Efforts to **strengthen the Cambodian vegetable industry** have targeted the southern provinces of Kampot and Takeo, where the good soil and water resources in the target districts underpin capacity for expansion. Researchers identified constraints to vegetable production such as lack of quality seeds and locally adapted varieties, irrigation water and transport infrastructure. Field days in the two provinces have instructed

Stephanie Belfield in Cambodia helping farmers with pest management issues.

local farmers on how to grow tomatoes, chilli and Chinese kale. This work, a prelude for the commencement of a project focused on production, irrigation, pest and disease management and supply chain management in solanaceous and leafy vegetable crops, is strongly connected with CAVAC program.

In north-western Cambodia farmers have been encouraged to diversify from an exclusively maize-based cropping system into one that includes **nitrogen-fixing legumes** such as soybean, mungbean and peanut. The project work has also introduced farmers to integrated pest management (IPM) as a means of producing healthy crops without the need for excessive application of chemicals to control insect pests and weeds. Two non-government organisations, CARE International and the Maddox Jolie-Pitt Foundation, have taken key extension roles in implementing the IPM programs.

THAILAND

Highlights

- Thailand is now considered a centre of excellence in biosecurity for the region, and that expertise is being shared for the benefit of neighbouring countries.
- Thailand is assisting Cambodia and Lao People's Democratic Republic to improve the profitability of their crop-livestock systems.

Overview

As Thailand's economic and research capacities continue to increase, the ACIAR–Thai relationship has shifted towards co-investment in the partnership. In line with the Memorandum of Understanding signed in July 2007, ACIAR continues to foster opportunities for partnering with Thailand on a regional basis. In this context the new thrust is to improve the synergy and communication of regional research programs, with particular attention to Cambodia, Lao People's Democratic Republic and Vietnam.

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.

ACIAR's current program focuses on three issues: implementation of the results of earlier projects, with relevance to the poorest farming communities; biosecurity systems implementation; and regional partnering with Lao People's Democratic Republic and Indonesia on sustainable fisheries and basin fisheries management.

Research achievements

Thailand has increased its expertise in biosecurity, and is now a **centre of excellence** for the region. This is being put to use for the benefit of neighbouring countries and a project under development will advance biosecurity R&D in Thailand, Lao People's Democratic Republic and Cambodia.

Another project under development seeks to determine alternative technologies to alleviate some of the current production constraints to increasing **the profitability of rice-based farming and cattle production** systems in rainfed lowland environments. Thai expertise will be employed for farmers in the country's north-east, and also Cambodia and Lao People's Democratic Republic.

BURMA

Highlights

- Successful completion of a project to increase food security and farmer livelihoods through enhanced legume cultivation in the central dry zone of Burma leads to a new ACIAR partnership to extend the work.

Overview

Australia is providing support to activities in Burma (Myanmar) that target immediate needs in the health, education, and livelihoods and food security sectors. The focus is on strengthening the capacity of people and organisations in these sectors, as well as supporting vulnerable populations across Burma and on the borders with Thailand and Bangladesh. ACIAR's program is fully aligned with the above approach of the Australian Government, targeting vulnerable

populations to improve nutrition and food security.

ACIAR's aim is to continue to work predominantly through 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. Therefore ACIAR will develop a small number of multilateral collaborative research projects that impact either directly through tangible improvements to the welfare of communities or indirectly through increases in farmers' cash incomes. Projects are based in similar agroecological zones to those in Australia—the central dry zone and the tropical lowlands. There is a strong need for training given the isolation of many of Burma's agricultural scientists over many years.

Research achievements

A project is under development to Improve food security and farmer livelihoods through **enhanced legume cultivation** in the central dry zone of Burma. The project is gathering strength through an excellent partnership with Thailand to train Burmese scientists.

ACIAR has submitted a concept note to AusAID for funding of $12 million over four years. The money will support a program with multiple facets for resource management, fisheries, livestock and socioeconomics. Capacity building will be a key issue.

CHINA

Highlights

- Australian wheat variety is a standout in trials in the dry rainfed region of north-western China.
- In the Tibet Autonomous Region trials have demonstrated the fodder-producing ability of winter-sown triticale.

Overview

The ACIAR program in China emphasises the country's north-western region and the Tibet Autonomous Region. In the north-west the projects focus on the sustainability aspects of agricultural production—expressed largely in policy and technical projects on better management of land and water resources. In Tibet Autonomous Region there is an ongoing related, but broader, emphasis on maintaining

Cultivating fields in the central dry zone of Burma. (Photograph courtesy of David Herridge)

efforts to improve agricultural productivity. Both regions confront significant environmental challenges, which need to be addressed through strategies that also foster income growth for smallholder farmers.

In view of the significant 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 require significant co-investment by the Chinese partners.

The priorities for ACIAR's China program in the medium term are: selection of technologies for improved water-use efficiency, with an emphasis on dryland agriculture; development of policies and institutions for improved land and water use and associated climate-change influences; wheat breeding for dryland conditions and conservation farming systems; integrated crop–livestock systems in favourable areas of Tibet Autonomous Region and rangelands of north-western China.

Research achievements

A project in north-western China aims to improve and stabilise farmer returns from **growing wheat in dry, rainfed environments**. Scientists are undertaking a breeding program to select traits that will enhance yields in such environments. An unexpected 'bonus' in Chinese trials was the good performance of one Australian variety that may find its way into commercial production. The search for root traits for more effective water use has been helped by the development of a screening process using 'cigars' of rolled germination paper. The technique has enabled the scientists to identify useful genotypic variation in root elongation and root number.

Another project in western China seeks to improve farmer livelihoods through efficient use of resources in crop–livestock farming systems. A feed-demand analysis undertaken to determine if current farming systems can support increased livestock numbers found there was a need to **lift livestock forage resources.** A series of forage agronomy experiments over the past two years is helping project members to decide how to influence livestock feed availability, and hence household livelihoods, through better management of current crops and the adoption of alternative crops.

A crucial aspect of a project in the Tibet Autonomous Region is the emphasis on **extension of technology to farmers on mixed crop–livestock farms.** Trials have demonstrated the fodder-producing ability of winter-sown triticale, and zero-till sown wheat crops have also been established. Information gained from interviews conducted in a number of communities has helped to develop a model of household crop-livestock. The model is now at an advanced stage and will be employed to examine the impacts on households of the innovations identified elsewhere in the project.

Triumph for oilseed breeders

Australia, India and China have exchanged brassica oilseed breeding material, including canola, in a collaboration that sets a valuable precedent for research cooperation and the sharing of Chinese and Indian plant genetic resources. The ACIAR-sponsored collaboration enabled unprecedented interchange among the three countries, giving breeders, farmers and the oilseed industries access to a larger gene pool from which to select for advanced traits.

The researchers focused on germplasm from two brassica species—*Brassica napus* (the main species used in Australia for canola production) and *B. juncea* (an oilseed species developed for its greater drought tolerance). Researchers selected lines from national collections to exchange in the first and third year of the project. These were the basis for selecting and enhancing traits including resistance to diseases such as sclerotinia rot, white rust and blackleg, quality traits such as reduced levels of erucic acid and glucosinolates (substances with known toxicity to humans and livestock), and drought tolerance.

ACIAR's Australian project leader Associate Professor Phil Salisbury from the University of Melbourne says that historically China and India have been reluctant to allow access to their genetic resources. 'It took a lot of negotiating to set up the exchange and it only happened when each partner could see mutual benefits,' he says. 'So the level of exchange we got was a real first. Ultimately, it has been very successful, not only in exchanging germplasm but also working on screening techniques and ways to test for diseases such as sclerotinia rot, which is particularly difficult to detect.'

The project ran for five years, culminating recently in the final exchange of breeding populations. These lines are now in the final evaluation and bulking stage before they are handed over, with no strings attached, to breeding programs responsible for developing more resilient, better-performing oilseed varieties for farmers in all three countries.

Associate Professor **Phil Salisbury** who oversaw the exchange of oilseed brassica germplasm between India, China and Australia. (Photograph courtesy of Paul Jones)

SOUTH AND WEST ASIA

The south and west Asia region includes India, Bangladesh, Pakistan, Afghanistan, Iraq and Bhutan.

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.

Bangladesh

ACIAR's program in Bangladesh focuses on constraints to broadacre crop production (especially the rice–wheat system) and the potential for adopting legumes into cropping systems. The program addresses issues facing those areas particularly impacted by seasonal climate variability and climate change.

Pakistan

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

Afghanistan

ACIAR's collaboration with Afghanistan provides support to 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.

Iraq

ACIAR-managed and AusAID-funded projects in Iraq seek to facilitate the development of modern and sustainable agricultural production and marketing systems. A two-year scoping project focuses on understanding salinisation processes and water management.

Bhutan

In Bhutan ACIAR has already contributed to develop Newcastle vaccine for village chickens; 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

Highlights

- Farmers learn to use bi-weekly customised weather forecasts to adjust their farming operations and take the guesswork out of activities such as when to harvest rice or apply insecticides.
- Successful exchange of wheat lines between India and Australia helps the search for plants with deeper, faster-growing root systems to capture more water and boost the harvest in dry conditions.
- Broad bed and furrow trials to combat waterlogging show that this practice combined with balanced fertilisation produces 40–50 per cent higher soybean yield compared with a flat field using the same regime.

Overview

ACIAR has supported a program of collaborative agricultural research with India since 1983. Australia and India share many of the same agricultural and natural resource management problems, as well as key commodity crops like wheat, resulting in researchable issues of mutual relevance to both countries. Most ACIAR programs in India consist of bilateral projects, in which Australian research organisations collaborate with one or more Indian research institutions such as the Indian Council of Agricultural Research (ICAR), state agricultural universities, independent research organisations and NGOs. Multilateral programs are delivered in conjunction with the five IARCs that are active in India.

An in-country consultation held in India in February 2011 has helped ACIAR to formulate its medium-term strategy for 2011–16. The strategy focuses on joint partnerships with

increasing co-investment by ICAR and other partners. The large and well-developed national agricultural research system led by ICAR is a cornerstone of ACIAR's program, which emphasises collaboration in four areas, or clusters, of Australian and Indian expertise. Research themes reflect strong common interests and point to areas with potential for positive impacts at both field and national levels in both countries.

The four major clusters focus on: research to improve agricultural water management, particularly in rainfed areas; sustainable intensification of zero-tillage cropping systems that incorporate pulses; faster breeding of crops to target (in the case of wheat) product quality aligned with emerging demands for better quality chapattis, bread and biscuits from India's 200-million-strong middle class; and assisting policy development in relation to agricultural adjustment, water management and climate change.

Research achievements

Farmers from three villages in three districts of Andhra Pradesh are testing the use of bi-weekly **customised weather forecasts** to adjust their farming operations. Some have used the forecasts to determine the right time to harvest rice, while others have followed them to schedule the application of insecticides to control pests. Farmer groups meet twice a month to discuss the seasonal affects on crops and provide feedback on the advisories and the accuracy of weather forecasts. The study is part of a five-year initiative developing climate change adaptation strategies for rainfed, rice-based farming communities in India; Bangladesh, Cambodia and Laos farming communities are also involved.

ACIAR is funding a project to improve **post-rainy season sorghum varieties** to meet the growing grain and fodder demand in India. Post-flowering drought adaptation in sorghum is associated with the 'staygreen' phenotype, and interest is centred on the development of lines that best express this trait. In an effort to understand the physiological basis of the staygreen trait the scientists are testing genetic materials for water use efficiency and for possible differences in the capacity to extract water from the soil profile. In addition, the Australian team is using crop simulation modelling to characterise the types of water stress in the target regions, and to predict what effect the introduction of a given line possessing the staygreen trait would have on grain and stover yield across a range of locations.

Another project seeks to develop wheat germplasm for India and Australia with deeper, faster-growing root systems that **enable plants to capture more water and boost the grain harvest** in dry conditions. Australian and Indian wheat research groups are exchanging germplasm, and an important achievement in the project was the arrival of Indian varieties in Australia where they are currently being grown in quarantine. The material comprises of 40 lines selected by the Indian team from long-running high yields in the central and peninsular water-limiting regions. In exchange Australian varieties have been sent to India where they are being grown to provide enough seed for trials at three sites to assess their water use and water use efficiency.

In the second year of a project on **waterlogging, salinity and element tolerance of wheat**, Indian and Australian project scientists have successfully conducted experiments in pot, microplot, field station and farmers' fields. They have exchanged, developed and initiated new crosses, identified in detail some of the element constraints (deficiencies and toxicities) of soils from their target environments, and begun to confirm how certain wheat varieties deal with individual constraints—through traits such as bicarbonate/carbonate tolerance—and how these affect grain yield in the field.

Farmer livelihoods in rain-fed areas of the Indian Central Plateau (particularly Andhra Pradesh) could be enhanced through improvements to **institutional performance of watershed development** (WSD) programs. A project seeks to increase capacity for various Indian agencies to improve institutional design for WSD and other resource management activities. The project is also setting rules and coordinating mechanisms to ensure that the development and extraction of groundwater remain within sustainable limits. An extensive data set comprising over 500 beneficiary households has now been assembled. The sample covers three districts in Andhra Pradesh and 18 villages in total. Targeted sampling has ensured that the data cover differing WSD programs.

Waterlogging leaves large areas of arable land in Madhya Pradesh uncultivated during the kharif season (e.g. 20–25 per cent in Vidisha district). Some waterlogged fields are sown with soybean but yields are low due to poor establishment. A project team has made a preliminary evaluation of broad bed and furrow (BBF) as an agronomic strategy to **overcome some of the adverse effects of waterlogging**. Integrating BBF with balanced fertilisation (BF) produced 40–50 per cent higher soybean yield compared with a flat field using the same fertiliser regime. In the same project farmers have participated in trials to determine the right levels of nutrient input for better yields (more in the box below).

New fertiliser practices address nutrient shortfall

Farmers in Madhya Pradesh have participated in trials to learn how to overcome nutritional limitations in the soybean–wheat cropping system used on Vertisol soils in a monsoonal environment. A project has developed two fertiliser management strategies to help the farmers deal with the nutrient shortfall. The first involved an integrated nutrient management (INM) approach, combining application of farm yard manures (FYM) with inorganic fertiliser.

While the traditional practice has been infrequent application of a large amount of manure (20 tonnes per hectare), project trials showed that substantial benefits could be gained from a smaller application (5 tonnes per hectare), permitting farmers to treat a larger area with manure each year.

But the second management strategy was developed because even at a rate of five tonnes per hectare there was insufficient FYM for application to all of the cropped area; this strategy comprises an inorganic fertiliser regime termed balanced fertilisation (BF).

Farmers attended field days to increase their knowledge and also to gain a perception of the work. Then the newly developed methods were evaluated using a 'Baby Trial' strategy, with 95 trials distributed across 10 villages in three districts. The farmers conducted these baby trials, comparing INM, BF and their own long-standing practice.

John Dixon, ACIAR cropping systems and economics program leader and regional coordinator for south Asia and Africa, inspects a wheat research trial in India.

The karif (monsoon season) soybean crop under the BF regime produced yields 23 per cent greater than the farmer's practice while the INM approach produced yields 46 per cent higher. The mean wheat grain yield showed that the INM produced 24 per cent more than the farmers' practice, while balanced fertilisation increased the wheat grain yield by 30 per cent over the farmers' practice.

BANGLADESH

Highlights

- Introduction of new super-short-duration cultivars and the use of relay cropping help to reinvigorate national pulse production.
- Maize crops perform better under reduced tillage, strip tillage, and raised beds compared with farmers' practice.

Overview

ACIAR's focus in Bangladesh has been on food grain crops, and its strategy addresses one of Bangladesh's key development challenges—food availability within the context of increasing climate-change vulnerability. Thus research activities relate to agricultural food production. In addition to this challenge, Bangladesh faces the problem of inadequate nutrition, which is not just limited to food availability. It is derived from multiple factors, for example gendered consumption practices, international market variations and effectiveness of government structures.

Wheat threshing in Barisal, southern Bangladesh. Bangladesh is one of four countries involved in a project to develop multi-scale climate change adaptation strategies for farming communities.

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 increasing the productivity of rice as the main staple. 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. The major research thrusts are therefore intensification of cereal crops, diversification of rice-based systems, adaptation to climate change and alleviation of policy constraints.

Research achievements

The low-lying and rainfed cropping systems of Bangladesh are vulnerable to the effects of **seasonal climate variability and change**. Bangladesh is one of four countries involved in a project to develop multi-scale climate change adaptation strategies for farming communities. On-farm experimental plots were established in all four countries in time for the 2010 wet season and during the dry season 2010–2011. In the case of Bangladesh these plots were designed to initiate on-farm testing to establish options for adaptation.

One major objective of a joint project between the International Rice Research Institute (IRRI) and the International Maize and Wheat Improvement Center (CIMMYT) on **sustainable intensification of rice–maize production systems** is to conduct on-station and on-farm trials on rice–maize–mungbean and rice–potato–maize systems, using the principles of conservation agriculture. These trials are in progress across three project districts. On-farm adaptive trials with different tillage options in rice–maize–mungbean cropping systems conducted during 2009–10 rabi (winter) and aman (monsoon) seasons revealed that maize performed generally better under reduced tillage, strip tillage, and raised beds compared with farmers' practice. Though rice yields in farmer's practice did not differ significantly from any of the tillage practices in 2010, yields under reduced tillage and raised beds were more profitable than those from farmers' practices.

Household livelihoods and the nutrition of the Bangladeshi people can benefit from crop diversification through intensification. A newly commissioned project will contribute to the drive to **reinvigorate national pulse production** by introducing varieties of short-duration pulses (lentil, mungbean and field pea) into new cropping niches and adopting minimum tillage in western Bangladesh. This tailoring process involves introducing new super-short-duration cultivars and the use of relay cropping—a technique of sowing pulses into the aman rice crop prior to its harvest.

PAKISTAN

Highlights

- ACIAR project team gathers new and reliable hydrological data to help optimise canal and groundwater management.
- Improvements to extension services have led to management and productivity improvements on approximately 40 per cent of the farms in one well serviced region and around 15 per cent in another desert region.
- Students from Charles Sturt University contribute to workshops for students from across Pakistan.

Overview

Development challenges in Pakistan are considerable, and the floods of 2010 have exacerbated these. Increasing pressure on availability of water resources for irrigation exists due to competing demands for urban and industrial uses. Poor irrigation management practices combined with poor drainage and soil management have resulted in significant salinity. 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. Pakistan is also 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, AusAID, other donor partners, NGOs and the Pakistani private sector to provide R&D and technical capacity building, technical support and carefully targeted R&D 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 a key consideration 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 dairy and horticulture in Pakistan revolves around the Australia–Pakistan Agriculture Sector Linkages Program (ASLP). The program is moving into its second phase, and this extension will initially concentrate on the mango, citrus and dairy sectors. There will be a greater focus on gaining benefit for smallholder and poor farmers, benefits for other disadvantaged groups, greater involvement of women, dissemination of results and maximising project impacts.

Research achievements

Work is in progress to **optimise canal and groundwater management** and thereby assist water user associations to get the best from their crops and manage salinity. The Punjab Irrigation and Drainage Authority is working closely with the farmer organisations under the ongoing institutional reforms, in the command area of Lower Chenab Canal. The ACIAR project team has contributed to the process by gathering new and reliable hydrological data from 54 newly installed piezometers, three soil moisture probes and an automatic weather station at selective locations throughout the distributaries of the Lower Chenab Canal. Other hydrological parameters including water quality and groundwater extraction have been collected fortnightly.

Over 8.5 million smallholder dairy farmers throughout Pakistan depend on income from the production of their small herds of buffalo–cattle, but farmers struggle to boost on-farm efficiency because the relevant information is neither disseminated nor adopted in the farming community. One project seeks to **improve dairy production** in Pakistan through

improved extension services. Field extension workers and farmers have been introduced to the key fundamentals that contribute to high productivity from cattle and buffalo—feed and water management, cow health, calf rearing and reproductive management. Changes in productivity, carefully measured with bucket and scales, have related directly to changes in farm income. Members of the field staff have observed management and productivity improvements on approximately 40 per cent of the farms in the better serviced Okara region and around 15 per cent in the desert region of Bhakkar.

As a mark of the importance placed on working with the future generation of scientists, academics and field staff servicing the dairy industry, the project instigated **workshops for students** from across Pakistan. In 2010, students from Charles Sturt University helped to develop extension material to assist with the programs. The students focused on mastitis and milk quality, feed planning and ration formulation and breed improvement. The linkages forged through these workshops will be important in developing a cohesive and functional dairy industry for the future.

AFGHANISTAN

Highlights

- Four new wheat varieties will impart more durable rust disease resistance, minimise epidemics and remove the need for emergency fungicide applications.

Overview

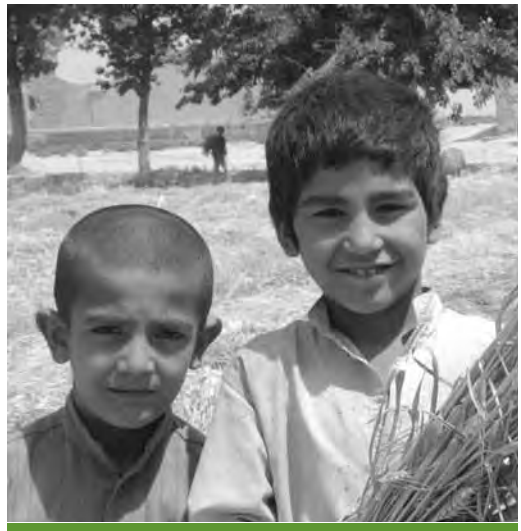
ACIAR's collaboration with Afghanistan started in 2002 and focuses support on wheat and maize production. Activity in Afghanistan continues through collaboration with CIMMYT and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The operating environment is complex as a result 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.

Future initiatives may include community-based watershed development for dryland areas, and livestock production to improve livelihoods in dryland agriculture.

Research achievements

ACIAR and AusAID have a jointly funded four-year project 'Sustainable wheat and maize production in Afghanistan' that seeks to **introduce improved wheat and maize varieties**, and thus offer farmers an alternative to poppy cultivation. The project supports the screening and release of new high-yielding varieties and quality breeder seeds, and promotes the wheat–maize cropping system through new crop management practices. Project operatives are CIMMYT, the Ministry of Agriculture, Irrigation and Livestock, the



Children holding spikes of harvested wheat from an improved variety in Afghanistan. (Photograph courtesy of ICARDA)

Agricultural Research Institute of Afghanistan, the Food and Agriculture Organization of the United Nations (FAO) and the International Center for Agricultural Research in the Dry Areas (ICARDA).

The joint effort of collaborating agencies has led to the development of nine wheat and four maize varieties that are high-yielding and disease-resistant. Four new Ug99-resistant wheat varieties will impart more durable disease resistance (especially with respect to yellow rust and stem rust race Ug99), minimise epidemics and remove the need for emergency fungicide applications (often indiscriminate blanket applications by air).

Despite hardships farmers have shown tenacity in growing food crops and receptiveness to new technologies and seeds. They are encouraged to visit on-station trials and on-farm demonstration plots, thus increasing the interchange between farmers and project staff.

IRAQ

Highlights

- High uptake of zero tillage in the drylands of northern Iraq.

Overview

ACIAR-managed and AusAID-funded projects are supporting the recovery of Iraq's agricultural sector, a key priority for the Iraq Government. Iraqi scientists have had limited access to international developments in the agricultural sector for over two decades. ACIAR's country program is designed to facilitate the development of modern and sustainable agricultural production and marketing systems in Iraq. It has two broad focuses: improved management of field crops, and identification of improved salinity management in irrigated lands.

Achieving sustainable increase in domestic production is now a national imperative. Pressures to abandon cereal–fallow rotations have exacerbated soil degradation and nutrient depletion, and now established cropping systems are in serious decline. The introduction of sustainable tillage is playing a key role in restoring these systems, and spillover benefits are expected beyond Iraq. The relevance of Australian expertise to Iraqi conditions has helped to shape the project, but lack of access to project sites in Iraq has constrained the work of Australian scientists. The project focuses on the enhancement of barley, wheat and grain legume production under dryland conditions in northern Iraq through the introduction and evaluation of appropriate modern varieties; and on the adaptation of improved management practices, including tillage, fertiliser and weed control techniques.

The 2-million-hectare central-southern irrigated zone that produces vegetables, fruit and cereals is under increased pressure from salinity, long identified as a major threat to agriculture in Iraq. Political tensions with neighbouring countries since the early 1980s have hampered efforts to improve irrigation and drainage practices. Increasing levels of salinity in irrigation water from both the Euphrates and Tigris rivers due to changed water regimes have exacerbated the problems. ACIAR's has developed a 2-year scoping project to focus on understanding salinisation processes, water management and the use of moderately saline soil for agricultural production.

Research achievements

In a project to develop conservation cropping systems in the drylands of northern Iraq the uptake of zero tillage through the project has been described by project participants as 'spectacular'. Project activity is focused in Ninevah Governorate, where there has been a **strong imperative to reduce cultivation** now that diesel fuel that was formerly highly subsidised has risen to world price parity. The demand for zero tillage (ZT) seeders has soared. Overall around 6000 ha of ZT crops were grown by 54 farmers in Ninevah in 2010. About 80 per cent of this area was actual adoption by farmers using their own or a rented/borrowed ZT seeder. In addition, significant yield improvements are being observed, a promising sign given that current yields are only about one-third of comparative crops under similar conditions in developed countries.

Work is currently underway within Iraq to explore **production gains from saline agronomy**. An ACIAR project to gather baseline information and provide a framework for the development of long-term salinity management strategies in central and southern Iraq commenced

during the year. The assessment of salt distribution and its drivers and irrigation water salinity at different scales—farm, irrigation district, and river basin—are the key features of the project. This information will be used to develop methodologies for salinity control and productivity enhancement of saline water and salt-affected soils.

BHUTAN

Highlights

- Delegation from Bhutan citrus industry learns about current production and marketing during visit to Australia.

Overview

ACIAR maintains a small tightly focused program in Bhutan. Its strategy is to work closely with the Bhutanese Government, local industry and other donors to ensure that planned R&D interventions are appropriate, consistent with the most recent government 5-year plan and complementary to the work of other donor agencies. A major initiative on improvement of citrus production (Bhutan's largest horticultural export industry) through improved planting material and integrated crop management is currently being implemented. The Bhutan Government has identified crop irrigation management, integrated crop management of vegetables (particularly chilli) and development of contract farming crops (e.g. walnut, grapes, asparagus, pomegranate) as priorities for future collaborative R&D.

Research achievements

Traditional Bhutanese mandarin producers rarely prune their trees, use few inputs, and are faced with pests and diseases such as Chinese citrus fruit fly, powdery mildew and citrus greening (Huanglongbing). As a result the fruit can be of poor quality, with average yields less than half that of Australian trees. An ACIAR project has provided a foundation for the adoption of new technologies throughout the **Bhutanese citrus industry.**

As part of the process a **Bhutanese delegation visited Australia** in April–May 2011. The group toured citrus industry groups, farms, nurseries, packing sheds, markets and research facilities in the Mildura, Sydney and Mundubbera/Gayndah areas. The Bhutanese observed how Australian citrus growers prune their trees—of interest because it is one of the main ways they are improving production in Bhutan. They also benefited from seeing the operations of Auscitrus, the industry organisation that supplies high health status budwood and seeds to the Australian industry. There is a move to introduce clean grafted citrus trees because they can fruit in 3–4 years, significantly earlier than the seedling trees in Bhutan that take on average 7–8 years to fruit.

Tenzin Drugyel and **Lhap Dorji**, members of the Bhutanese delegation, discuss fruit quality standards for export markets with **Troy Emmerton** at his farm in Mundubbera, Queensland.

AFRICA

ACIAR is helping to address the problems encountered by smallholder farmers in many countries throughout the African continent. Projects are active in Algeria, Botswana, Egypt, Ethiopia, Kenya, Malawi, Morocco, Mozambique, Tanzania, Tunisia, South Africa and Zimbabwe.

African countries

Highlights

- The Sustainable intensification of maize–legume cropping systems for food security in eastern and southern Africa (SIMLESA) program commences first trials of improved maize and legume varieties for assessment in five African countries.
- Sheep production to benefit in Eastern Cape of South Africa through the introduction of annual and perennial legumes suitable for autumn and winter forage.
- Scoping study to Botswana results in the development of a project to help livestock producers become more competitive on export markets.

Overview

ACIAR is assisting in delivery of key elements of the Australian Government's enhanced engagement with Africa through the 'Overseas Development Assistance—Food Security through Rural Development' initiative. Australian support for Africa ($100 million over four years) is aligned with the African Union's Comprehensive Africa Agriculture Development Programme.

ACIAR has supported research partnerships in eastern and southern Africa since 1983. As well as bilateral projects ACIAR has also supported IARC projects through International Livestock Research Institute (ILRI) (Kenya), World Agroforestry Centre (Kenya), International Institute of Tropical Agriculture (IITA) (Nigeria), ICRISAT and CIMMYT in a number of African countries.

Current ACIAR research activities in Africa can be grouped under two priorities: increasing the profitability and sustainability of livestock farming systems; and intensification and diversification of mixed farming systems. Project topics emphasise both income-generating livestock and cropping systems for previously disadvantaged farmers in South Africa, Botswana and Zimbabwe. Another thrust is food security in Ethiopia, Kenya, Malawi, Mozambique, Tanzania, Egypt, Tunisia, Algeria and Morocco. Future initiatives may focus on conservation agriculture in dryland cereal systems of northern Africa, (e.g. Tunisia, Algeria and Morocco,) and production and irrigation efficiency in Egypt.

Research achievements

ACIAR's current prime focus in Africa is the SIMLESA *program. The major participating and beneficiary countries are Ethiopia, Kenya, Malawi, Mozambique and Tanzania.* SIMLESA aims to increase farm-household food security and productivity, in the context of climate risk and change, through the development of **more resilient, profitable and sustainable maize–legume farming systems.** The project team has now completed baseline surveys in four of the countries and a fifth survey is currently underway in Malawi.

Different treatments of maize–legume intercrop are being demonstrated on the farmers' fields. The project team has introduced a substantial number of pre-released hybrids and open-pollinated varieties of maize and improved varieties of legumes selected for properties such as yield, early maturity, drought tolerance, pest resistance, medium height and palatability/taste. Farmers' active assessment and strong stakeholders' involvement, with special emphasis on women's roles, is key for the success of the participatory varietal selection initiative.

ACIAR has identified livestock production as an important means of diversifying certain African farming systems and lifting incomes. One project focusing on the Eastern Cape of South Africa aims to increase livestock production—by providing **improved autumn and winter forage** based upon introduced legumes and nitrogen-fixing rhizobium bacteria. The project has identified several well adapted annual and perennial legumes suited to the edaphic conditions and the grazing management of the target region. They are currently undergoing final trials, but have the potential to alleviate the autumn–winter feed gap currently limiting sheep (and wool) production.

ACIAR funded **a scoping mission to Botswana** in November 2010 to gauge the potential for increasing the competitiveness of livestock smallholders in the country. Botswana has preferential access to the European Union beef market, but its quota allocation is undersupplied because of low productivity of animals, lack of value-chain coordination, lack of market-oriented research activities and dislocation of smallholder production from the market. The findings of the mission formed the basis for phase one of a project 'Enhancing the competitiveness of livestock smallholders in Botswana'.

Kenyan farmers showcase their harvest

Maize and beans are staple crops in most of Africa. People depend on these crops for their daily food, and for cash income, but many farmers are facing low yields because of declining soil fertility, erosion and drought.

The Sustainable intensification of maize–legume cropping systems for food security in eastern and southern Africa (SIMLESA) program is helping farmers test a system change encompassing conservation agriculture, and intercropping improved varieties of maize and legumes.

Crops are sown without ploughing and straw is being kept in the field to retain soil moisture and build soil fertility. Increasing yields of maize and legumes provides more food and gives farmers and cash for family needs.

The Liganwa Womens' Group in Western Kenya have been testing the new approach to maize and bean farming for three seasons. They have more than tripled their yield using the improved techniques. Rather than ploughing their land they have been spraying herbicide and planting seeds directly into their fields. They maintain the stover on the ground as mulch to improve the soil. The farmers no longer hand plough or weed their crops.

In mid 2011 they celebrated the success of their maize and legume crop. They were keen to share their experiences with other farmers at a field day attended by hundreds of people who came to hear how these farmers are growing more and saving time.

Jane Jahenda Nyonje said the maize grew very well and she didn't have any problems with pests and disease, and the yields increased.

'The benefits of conservation agriculture is that we don't spend time and money on ploughing and it's very effective on the weeds such as striga,' she said.

John Achieng, of the Kenya Agricultural Research Institute, who has been assisting the farmers with the on-farm trials said while farmers in the areas usually get a yield of 2–3 bags of maize per acre (of 90 kilograms), with conservation agriculture they have found farmers can get up to 20 bags of maize grain.

'In the case of beans farmers are boosting their yields from about 50 kilograms of grain per acre to up to 160 kilograms of grain per acre,' he said.

In a season where drought has affected many parts of Kenya and the region, boosting yields this much is making a huge difference to these women providing food for their families. Grain prices have rocketed up, so they could also make handsome profits if they chose to sell their grain.

John Achieng, KARI (far right, top), says the farmer group from western Kenya is boosting their maize and bean yield through conservation agriculture techniques.

MULTILATERAL PROGRAM

ACIAR is responsible for funding the work of International Agricultural Research Centres (IARCs) on behalf of the Australian Government.

CGIAR and IARCs

Highlights

- In Indonesia a newly devised value-chain for production and processing now links potato farmers with urban-based retailers, enabling small farmers to prosper from adding value to their produce.
- Researchers gain insight into the physiological basis of the 'staygreen' trait associated with drought resistance in sorghum grown in the post-rainy season in India.
- Solomon Islands villagers adopt the principles of community-based adaptive management to help build resilience into near-shore fisheries zones.

Overview

The system of International Agricultural Research Centres (IARCs) comprises the institutions financed under the umbrella of the Consultative Group on International Agricultural Research (CGIAR), together with the non-associated centres that also have a global mandate. One of ACIAR's legislated functions is to fund IARC's on behalf of the Australian Government.

Funding channelled to the centres through ACIAR has contributed to reducing hunger and poverty, improving human health and nutrition, and enhancing ecosystem resilience—all of which are well documented in independent assessments. The current food security and natural resource challenges underpin the importance of ensuring increased and effective international agricultural research for development through the CGIAR.

The CGIAR is implementing a reform process that was instigated in 2008. The framework includes: a new constitution for the CGIAR Consortium; a centralised multi-donor CGIAR Fund; a Strategy and Results Framework (SRF) and associated mega-program options; and an accountability/governance framework for the CGIAR network. ACIAR has a role as a member of the Fund Council to progress and implement outstanding reform issues in the year ahead.

In the 2009–10 Budget the Australian Government announced a doubling of financial support through ACIAR to the CGIAR over the following four years, in addition to the former funding levels of $11 million per annum. Funding will be channelled through a new multi-donor Trust Fund managed by the World Bank. This Trust Fund will receive contributions through three Windows: Window 1—funding provided to the CGIAR without any earmarks; Window 2—funding earmarked for specific research areas (mega programs); and Window 3—funding earmarked for specific IARCs.

Recearch achievements

IARCs are contributing to 18 multilateral projects, with five more proposed. The **contributions of many international centres** to ACIAR projects are documented throughout the country reports. The IARC presence in countries such as Afghanistan, Iraq and Burma overcomes the hurdles of inaccessibility, enabling ACIAR to commission research to reach the poor in those countries.

In Indonesia the International Food Policy Research Institute (IFPRI) is leading a study to examine the transformation of markets for high-value commodities and the impact of this transformation on farmers, traders, and processors. The project is determining how rising incomes and urbanisation influence consumer preferences for high-value commodities (with a focus on chillies, shallots, mangoes, mangosteens and shrimp) and their choice of different types of retail outlets. The researchers also wish to know more about the restructuring of food supply chains, particularly for these high-value commodities, and the effects on farmers producing high-value commodities of their participation in modern supply chains compared with traditional market channels.

Another project in Indonesia involves the International Potato Institute (CIP). Its purpose is to improve incomes and promote sustainable livelihoods among vegetable

farming households in West and Central Java. The project team seeks to integrate farmers in profitable supply chains and enhance their capacity to adopt new technology and innovative practices that are market driven. Researchers have tested a pilot participatory market chain approach for fresh and processed potatoes in West Java. Eighty participants representing eight categories of market chain actors took part in the year-long Participatory Market Chain Approach (PMCA) process. A follow-up study five months later revealed that at least 30 of these actors had initiated/expanded potato businesses utilising the marketing innovations introduced. The box below gives a personal account of this business success.

Smallholders participate in supply-chain transformation

What happens in the retail supply chain after produce leaves the farm is just as important to food security in developing countries as is food production, according to research undertaken in the USA. In recent times the spotlight has turned onto the retail sector and the extraordinary transformation brought about by modernisation in supply chains.

ACIAR's agribusiness program has a focus on responses of each component of the supply chain in relation to how food is delivered to consumers. The findings are contributing to new schemes to help smallholders capture benefits from changes in retail, including moving into new markets that meet changing consumer expectations about food safety, quality and where or how food is produced.

Successful examples are already emerging. Ida Rosida of West Java is a key partner in a value-chain that links potato farmers and the urban-based retailers. She was among a group of smallholder farmers and processors who participated in an ACIAR project on market innovations in 2008–09 with the International Potato Center (CIP). By using the project's participatory market chain approach, Ida began experimenting with new ways to improve traditional Indonesian snackfood products while establishing relationships with potential value-chain partners.

Two years ago, Ida could only dream about augmenting her rural household income. Today, she is a full-time potato-processing entrepreneur whose products are sold in major city supermarkets. Marketing her products under the Cumelly brand, Ida specialises in potato chips with the tuber skin intact. The novel product is now available in six flavours, and with feedback from customers and retailers she continues to develop new variants.

Ida Rosida prepares potato chips for delivery to urban outlets, after taking part in a farmer business school, West Java. (Photgraph courtesy of the International Potato Center)

In a project led by the ICRISAT scientists are seeking to make the sorghum varieties grown after the rainy season in India more drought resistant. In an effort to gain a greater understanding of the physiological basis of the 'staygreen' trait associated with drought resistance they are testing genetic materials for water use efficiency and for possible differences in the capacity to extract water from the soil profile.

One major objective of an IRRI-CIMMYT joint project on sustainable intensification of rice–maize production systems in Bangladesh is to apply the principles of conservation agriculture that will lift the productivity of rice–maize–mungbean and rice–potato–maize systems. Farmers are getting the chance to observe the benefits to be had from introducing new practices such as reduced tillage, strip tillage, and raised beds compared with their own traditional practices.

In Solomon Islands, WorldFish is leading a project to improve resilience and adaptive capacity of fisheries-dependent communities. A case study approach is helping the research team to determine the best means to implement community-based adaptive management for near-shore fisheries. They are also introducing the principles of adaptive learning to address questions of broader resilience for small-scale fisheries. They are working with the communities to strengthen their livelihood resilience, and special efforts have gone into empowering women and young people to encourage their greater participation in project initiatives.

BUILDING RESEARCH CAPACITY

Overview

One of ACIAR's key priorities is to build capacity in agricultural research institutes of partner countries by providing discipline-specific and broader training opportunities. With co-funding from AusAID since 2006, ACIAR has significantly increased the number of its postgraduate awards (known as the John Allwright Fellowships). The training program focuses on specialised training activities provided through postgraduate and research management fellowships and a small number of short courses that target specific cross-program issues.

The priority of the training program is to enhance the research capacity of partner country institutions through targeting individuals who are involved in ACIAR projects. Much of this is done in individual projects managed by individual research programs, through on-the-job training, where either developing-country scientists visit Australia or Australian specialists visit partner countries to present a training program on a specific technical subject.

ACIAR training activities include the following, with the first representing the main expenditure:

- Postgraduate training, which mainly comprises John Allwright Fellowships for postgraduate study in Australia associated with specific ACIAR projects—a smaller number of awards support in-country postgraduate diploma and masters degree training associated with ACIAR projects in Papua New Guinea (at University of Technology, Lae) and the Pacific Islands (at University of the South Pacific, Suva and Apia).
- Support for small in-country research projects for Fellowship returnees.
- Research management training (John Dillon Memorial Fellowships).

Postgraduate fellowships

John Allwright Fellowships are awarded to partner-country scientists involved in ACIAR-supported collaborative research projects, enabling them to undertake postgraduate training at Australian universities at the Masters or Doctoral level. Studies focus on areas that add value to the theme of the ACIAR project in which the awardee is engaged, but do not

Department of Forestry officers **Ioan Viji** and **Mesek Sethy** with **Tony Bartlett**, ACIAR program manager, in a three-year-old whitewood spacing trial at Lorum on Espirtu Santo, Vanuatu.

directly form part of the project. If appropriate, fellows are able to spend up to 50 per cent of their research project period on fieldwork in their home country. This enables the fellows to ensure that their postgraduate research work is relevant to the project and their home country's needs, and allows them to maintain their professional and personal networks. With the increased recognition by the Australian aid program of the capacity-building benefits provided to partner countries and the impact on regional relationships through support of postgraduate training in Australia, the size of the fellowship scheme has increased significantly over recent years, from a base of only 15 scholars in 1999–2000. During 2010–11 there were 138 active fellowships at Australian universities.

During 2010–11 a total of $6.5 million was expended on the John Allwright Fellowship Scheme (including co-investment from AusAID). Thirty-nine Fellows successfully completed their studies and 25 new Fellows (from Bangladesh, Bhutan, East Timor, Ethiopia, Fiji, India, Indonesia, Laos, Malawi, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Vanuatu and Vietnam) commenced at 10 universities in Australia. All new Fellows attend a five-day meeting in Canberra, where they learn more about ACIAR and also undertake training in science communication, receive training in writing research papers and have the opportunity for meet and network together. In 2010, 25 Fellows participated.

Following approaches from Papua New Guinea and Pacific Island countries, support has been provided for a limited number of in-country postgraduate diploma and Masters degree awards linked to ACIAR projects. This scheme aims to provide a larger body of trained agricultural, forestry and fisheries researchers for these countries in an environment where taking a larger cohort of researchers out of the system for several years would potentially damage the capacity of these (smaller) national agricultural research systems. It builds linkages between government and universities in the region and helps develop the research capacity of the universities. The scheme commenced in 2005 with the University of Technology, Lae, Papua New Guinea and was followed in 2008 by the University of the South Pacific–ACIAR Postgraduate Scholarships Program.

Returnee small project awards

Small grants of up to $10,000 are available for successful John Allwright Fellows when they have completed postgraduate studies and returned to relevant employment in their home country. The follow-on funding scheme provides for an activity that continues, or is related to, the research done within an ACIAR project associated with postgraduate work. These grants for former John Allwright Fellows are primarily aimed at developing small-scale research projects in the returnee's institution, which may catalyse longer-term support. In 2010–11 five small projects, totalling $31,563 were awarded. Since 2000, a total of 58 of these awards have been made.

John Dillon Memorial Fellowship

John Dillon Fellowships provide a career development opportunity in Australia for outstanding mid-career agricultural scientists and economists from ACIAR partner countries. The aim is to develop the leadership skills of Fellows in the area of agricultural research management, agricultural policy and/or extension technologies through exposure to Australian agriculture across a range of best practice organisations involved in either research, extension or policy-making. ACIAR has awarded 65 Fellowships since the program's inception in 2002. A group of eleven Fellows (from Cambodia, Indonesia, Papua New Guinea, Philippines and Vietnam) visited Australia for a 5-week period in March–April 2011. A highlight of the visit was the presentation of plaques by the Hon. Richard Marles, Parliamentary Secretary for Pacific Island Affairs, at Parliament House, Canberra. Generous cooperation was received from all host organisations and the Fellows also appreciated the opportunity provided for networking.

John Allwright and John Dillon Alumni Association

ACIAR has an Alumni Association that maintains linkages with all former students who received support through the John Allwright Fellowship program and former research management trainees (John Dillon Fellows). Alumni are kept involved with ACIAR in several ways. Several former Fellows now lead or play key roles in ACIAR projects and ACIAR partner

organisations. Others assisted in the delivery of ACIAR-sponsored training courses and impact assessment activities in partner countries. All receive copies of ACIAR technical publications and newsletters.

Australian Youth Ambassadors for Development

Since 2000 ACIAR has provided successful assignments for over 50 Youth Ambassadors in the AusAID-funded Australian Youth Ambassadors for Development scheme. The scheme gives young Australians the opportunity to spend from 3–12 months assisting on a development activity in a partner country. During 2010–11 seven Youth Ambassadors were associated with ACIAR projects in the following countries: Cambodia, China, Indonesia, and Vietnam.

ATSE Crawford Fund fellowships, training courses and master classes

In 2010–11, total funding to the Crawford Fund included provision of an Australian Government allocation (through ACIAR) of $1,000,000, as well as $77,000 from ACIAR for joint training activities. In 2010–11 the Crawford Fund conducted 15 short-term training activities associated with ACIAR projects, as well as three Master Classes held in Ethiopia (Risk management and systems modelling), Indonesia (Huanglongbing/ Citrus Greening) and Perth, Australia (Participatory Plant Breeding).

The Crawford Fund also supported short technical training placements for developing-country scientists in Australia. In 2010–11, 10 placements were sponsored for members of ACIAR project teams.

COMMUNICATING RESEARCH RESULTS

Overview

ACIAR communicates the results of the research it funds through the Communications and Public Affairs team, as part of the Centre's legislated mandate to communicate the results of research. The Communications program targets specific audiences through the ACIAR website, printed and electronic publications, and other communication activities that raise awareness of the Centre's activities and outcomes.

Project findings are disseminated through the scientific publishing series. ACIAR's website is the primary source of information on project activities and outcomes, and offers all publications available for free download. Hard copies of publications can be purchased through the online bookshop.

Other activities focus on raising public awareness of ACIAR's work: media releases; television and radio coverage; Partners magazine communicating research outcomes; and providing support, developing and implementing communication strategies for internal and external stakeholders.

Research achievements

In 2010–11 ACIAR published and distributed 12 scientific and extension titles in its scientific series, including four translations of previous titles, and five reports in its impact assessment series (IAS). Thirty two project final reports were published online in PDF format, with in-demand available titles being printed in small numbers on request. All publications are listed in Appendix 5, together with the corporate and research awareness titles produced during the year.

A total of 44,635 hard copies of publications were distributed, of which 146 were sold to developed-world customers. Total revenue from sales and copyright payments was $8,088. Complimentary copies are distributed on request to people and institutions involved in agricultural research, development and extension in ACIAR's partner countries, as well as being available for free download from the ACIAR website.

The major publications included *Beef production in crop–livestock systems: simple approaches for complex problems* (ACIAR Monograph No. 145), a collection of case studies from Indonesia, Vietnam and China, the next publication in the series on sustainable upland cropping systems in Cambodia—an insect field guide, which covered both pest and beneficial species, translated into Khmer and printed in Cambodia (Monograph No. 143a). a second edition of *Integrated pest and disease management for sustainable cocoa production (Monograph No. 131)*, to accommodate the spread of cocoa pod borer in Papua New Guinea and associated recommended changes in integrated pest and disease management.

Corporate publications included *Adoption of ACIAR project outputs: studies of projects completed in 2006–07,* which examined extension and adoption of research outcomes from the projects that ended four years earlier. *Partners in research for development,* the flagship ACIAR magazine, reported on a range of projects across the themes of Africa, partnerships with NGOs and Australian benefits.

The ACIAR Communications team worked collaboratively with the Crawford Fund on a range of activities to generate public awareness of the Centre's activities and on the benefits of international agricultural research. The Crawford Fund sponsored journalist trips to Vietnam, East Timor, Syria, Laos, India and Aceh, Indonesia. These initiatives resulted in increased media coverage of ACIAR's activities in mainstream, specialist science and rural media within Australia; internationally on Radio Australia and Australia TV Network; and in the media of partner countries. There was also significant coverage of ACIAR projects in the magazine and websites of partner agencies, e.g. AusAID's Focus, the AYAD program's Exchange, and GRDC's Ground Cover.

Highlights of media coverage of ACIAR activities in 2010–11 include:

- Extensive media on the high returns to ACIAR-funded research following presentation at Crawford Fund QLD Parliamentary Conference.

- ABC Landline programs on ACIAR projects in Vietnam including beer-based fruit fly bait, aquaculture production of sandfish and oysters production.
- Rural Press and ABC Rural radio coverage of ACIAR projects in India, and Indian media coverage of ACIAR's 'India Week' activities.

ACIAR has continued to engage in public narrative around food security as a means of increasing public awareness of its role.

MEASURING RESEARCH IMPACTS

Overview

ACIAR places significant emphasis on assessing the difference its research investments makes to research capabilities and the livelihoods of our target groups in our partner countries and Australia. These assessments are used to support the Centre's public accountability, to provide valuable input into aggregate priority setting and to improve project development and implementation.

Emphasis is also placed on developing collaborative networks with Australian and partner country practitioners responsible for impact evaluations, and building capabilities to undertake robust analysis. These activities help improve the accuracy of the information used in assessing the impacts of the research and the effectiveness of the methodology used to quantify the returns on investment.

The impact assessment program currently commissions three types of finished project assessments. The first are primarily economic evaluations, which are published in ACIAR's Impact Assessment Series (IAS). Most of the assessments are undertaken by independent economists with special expertise in measuring the economic impact of agricultural research. These involve an in-depth analysis of the adoption and impact of research outputs in our partner countries and Australia. In addition to providing quantitative estimates of the returns to the investment in the research area of interest, a qualitative assessment of social and environmental impacts is also sought.

The second type of finished project evaluations are the set of adoption studies, primarily undertaken to provide ACIAR, and our partner organisations, with a greater understanding of the pathways to change. They are usually undertaken by the Australian project leader, 3–4 years after the completion of the project and provide ACIAR with information on the difference the project has made at the scientific and community levels in the partner countries and Australia. If uptake of the project results has not occurred, then the reasons why are sought. An increase understanding of the contextual environment in which we operate increases the likelihood that our research will have a positive impact.

A woman and her child on a farm near Maliana near Mount Kenya. She is growing a number of crops including mango as a cash crop.

In a similar vein, the third type of finished project evaluations 'impact pathway analysis'. Impact pathway studies provide an in-depth analysis 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 through completed project evaluations is used to guide project development and implementation and in research evaluation training courses funded and delivered by ACIAR.

Research achievements

This year six impact assessments were finalised and reports published. Three more have been completed and are due to be published in early 2011–12. These reports range from capturing the lessons learned from earlier analysis to an examination of methods and frameworks for assessing policy-orientated research; from analysis of components of a single project using household survey data, to large thematic studies.

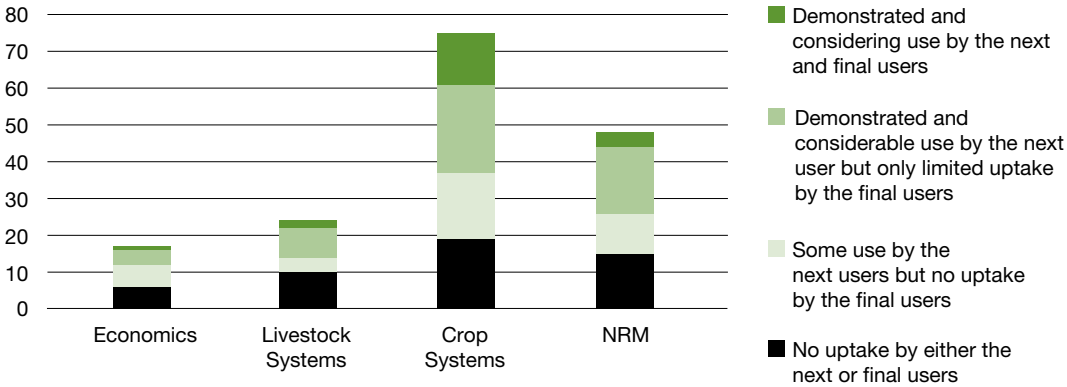
The set of adoption studies have now been undertaken for 8 years, with the adoption study portfolio now contains 76 sets of projects from which we are able to learn important lessons that can be fed back into our project development, design and implementation process. Reports in ACIAR's adoption studies series also provide an estimate of adoption for the projects covered. The qualitative assessment suggests that, in the majority of cases, the project outputs are being used by either intermediaries or the final targeted groups. While the measure of adoption provided in the studies is relatively subjective, seven projects reporting a high level of uptake were subjected to a more in-depth quantitative analysis. With one exception, each was found to have significant benefits.

Impact assessments

Lessons learned from past ACIAR impact assessments, adoption studies and experience

This report offers this retrospective evaluation as an opportunity to learn from past impact assessments, adoption studies and experience. It asks two questions: Are there regular or predictable factors that determine the relative success of projects? Are there retrospective lessons from particular projects that can subsequently be applied prospectively in the course of project planning and implementation? Based on the findings of the analysis, a framework for determining success at each stage of the project cycle is articulated. The purpose of the framework is not to micro-manage but rather to raise consciousness about the issues involved and to point to factors that need explicit consideration when undertaking ACIAR-funded projects.

Adoption indicators by research area



Extending low-chill fruits in northern Thailand: an ACIAR-World Vision collaborative project

In 2001 ACIAR invested in a collaborative program of extension projects with World Vision to enhance the adoption of research results from previous technical projects. The program encompassed six components—one in Lao People's Democratic Republic, three in Thailand, and two in Vietnam. The focus of the collaborative program was poverty alleviation and food security as World Vision focuses its development assistance on the poorest members of local communities.

This report presents an assessment of the component on low-chill fruit production in the highland areas of northern Thailand. The data used for the analysis were obtained through household-level surveys. The report discusses the reasons for the low returns to the investment in this component. Problems such as failure to adopt the new varieties, lack of sufficient technical expertise among staff, poor site selection, low fruit returns and a lack of marketing opportunities are all highlighted. However, the report concludes that project participants currently producing low-chill fruits had benefited from higher farm incomes. Hence, the poverty alleviation objective was achieved for a few farmers although the gains were much smaller than originally anticipated.

The economic impact in Indonesia and Australia of investment in plantation forestry research, 1987–2009

ACIAR has funded plantation forestry research in Indonesia since 1987 with the aim of improving the forestry sector in both Indonesia and Australia. In 1993, it also assumed responsibility for funding an ongoing project, Seeds of Australian Trees, that AusAID had previously funded. While the ACIAR program has evolved over time, the underlying themes of the 12 projects assessed in this study have been the domestication of Australian trees for agroforestry, development of forestry management to improve productivity, and control of threats to sustainable production from pests, diseases and soil degradation. This report is the first thematic study of the impact plantation forestry research based in Indonesia.

Benefits were estimated for only the Australian trees projects cluster and the multipurpose trees projects cluster. Based on conservative assumptions about the proportion of plantation area subject to uptake of project outputs, the present value of realised benefits to Indonesia from the Australian trees projects cluster was estimated to be $3.8 billion. Also, using conservative assumptions about future rates of planting of industrial pulpwood plantations, the present value of total benefits eventually could be as great as $11.1 billion.

Significant benefits are also likely to accrue to Australia from the multipurpose trees projects, which accounted for 20 per cent of the total investment by ACIAR and other agencies. These enabled the development of an irrigated sandalwood plantation industry in the Ord River Irrigation Area that should generate benefits with a present value of $766 million after commercial-scale harvesting commences in about 2013.

A review of frameworks for assessing policy research and a scoping study of ACIAR investment in Indonesian policy research from 1983 to 2007

For more than 20 years, ACIAR has invested in the work of Indonesian and Australian social scientists and policy makers as they sought to improve economic policy for primary industries in both countries. The scope of the economic policy research studies has encompassed such topics as rice self-sufficiency, rural income and employment, fertiliser subsidies, dairy policy, growth and stabilisation policies, linkages between Indonesia's agricultural, production trade and environment, contract farming for smallholders, microfinance for agricultural producers in West Nusa Tenggara, resource use efficiency in the coconut industry of North Sulawesi, and social capital and rural development in eastern Indonesia.

The primary aim of this study was to add to the body of literature on developing methodological frameworks and tools to assess the benefits of policy-orientated research. In addition, the study sought to determine the likely uptake of the outputs from ACIAR's investment in policy research in Indonesia.

Forestry in Papua New Guinea: a review of ACIAR's program

The forestry industry in Papua New Guinea—comprising a large log-export industry (largely operated by foreign companies), a small plantation sector and widespread agroforestry systems—has made a substantial contribution to the country's economic and social development. Nevertheless, the industry faces significant constraints with the rapid depletion of the accessible primary forest resource. As part of the move to address these constraints, ACIAR has made a significant investment in forestry research in Papua New Guinea.

This report provides an overview of ACIAR's Papua New Guinea forestry program and a more in-depth analysis of the cluster of projects relating to nuts produced by the *Canarium indicum tree (galip nut). The analyst concludes that increased planting of galip is likely to provide good returns to smallholder farmers. The potential value of benefits to Papua New Guinea is estimated to be $163 million. After subtracting the research costs of $7.2 million the estimated net present value is $155.8 million—a benefit of around $22.60 for every dollar invested.*

IRRI's contribution to rice variety yield improvement in South-East Asia

ACIAR is committed to the ongoing process of mapping the impacts of its funding for international research. In this instance a study was undertaken to assess the impact of IRRI on rice production in ACIAR's mandate regions, concentrating solely on variety improvement. Three countries in South-East Asia covered in this study are the Philippines, Indonesia and Vietnam.

The study involved individual in-depth impact assessments of IRRI's germplasm improvements for each of these countries between 1985 and 2009. It revealed that since 1985 significant and sustained yield gains have flowed to countries in South-East Asia from IRRI's work on varietal improvement. The gains between 1985 and 2009 ranged from 1.8 per cent in northern Vietnam to 9.8 per cent in southern Vietnam, 6.7 per cent in the Philippines and 13 per cent in Indonesia, and in 2009 averaged 11.2 per cent across the three countries studied.

An economic analysis based on IRRI's total costs and only the benefits from varietal yield improvement in the three selected countries reveals a benefit:cost ratio of 21.7:1 and a net present value of US$97 billion.

CORPORATE GOVERNANCE

ACIAR's Governance Framework

MINISTER FOR FOREIGN AFFAIRS

PARLIAMENTARY SECRETARIES

PORTFOLIO SECRETARY/AUSAID DIRECTOR-GENERAL

ACIAR COMMISSION FUNCTIONS

- to provide advice to the Minister in relation to the formulation of programs of the kind referred to in the CEO's functions
- to provide advice to the Minister in relation to the funding of things referred to in the CEO's functions
- to provide advice to the Minister on program and funding priorities
- to provide advice to the Minister, on the Minister's request, on any other matter relating to the Act

ACIAR CHIEF EXECUTIVE OFFICER FUNCTIONS

- 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
- 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
- to communicate to persons and institutions the results of such agricultural research
- to establich and fund training schemes related to the research programs
- to conduct and fund development activities related to those research programs
- to fund International Agricultural Research Centres

POLICY ADVISORY COUNCIL FUNCTIONS

- to provide advice to the Minister in relation to the agricultural problems of developing countries
- to provide advice to the Minister in relation to the programs and policies with respect to agricultural research for either or both of the following:
  (i) identifying agricultural problems of developing countries
  (ii) finding solutions to agricultural problems of developing countries

CHIEF EXECUTIVE OFFICER

Sections 4A and 5 of the *Australian Centre for International Agricultural Research Act 1982* (ACIAR Act) establish the office and role of the Chief Executive Officer (CEO). 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:

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 above

e) to conduct and fund development activities related to those research programs

f) to fund international agricultural research centres.

The CEO is appointed by the Governor-General for a term of up to seven years and 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.

ACIAR's CEO has Head of Agency responsibilities as set out in Part 7 of the *Financial Management and Accountability Act 1997* 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 2010–11 financial year. Dr Austin commenced a 5-year term on 31 July 2009.

The 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. As Agency Head, he/she is also responsible for managing the agency with direct accountability to the Australian Government.

CEO remuneration

The CEO's remuneration 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 2005/19.

The CEO's remuneration package at 30 June 2011 consisted of:

- base salary of $223,504
- Superannuation with an employer contribution of 12 per cent of base salary
- other benefits, consisting of car and spouse travel.

ACIAR Commission

Section 7 of the *ACIAR Act* establishes the Commission for International Agricultural Research to provide 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
- to provide advice to the Minister in relation to the funding of things referred to in the CEO's functions
- to provide advice to the Minister on program and funding priorities
- to provide advice to the Minister, 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 three times during the 2009–10 financial year:

■ 13th meeting	3 September 2010	Canberra
■ 14th meeting	28 April 2011	Canberra
■ 15th meeting	13 May 2011	Canberra

Commission members as at 30 June 2011

Ms Joanna Hewitt AO
Chair

Secretary of Department of Agriculture, Fisheries and Forestry (DAFF) from October 2004 until May 2007. During that time, Ms Hewitt served on the ACIAR Board of Management from December 2005 until mid-2007. Prior to her appointment at DAFF, she was Deputy Secretary of the Department of Foreign Affairs and Trade where, amongst her other responsibilities, she was the lead negotiator for the World Trade Organization Doha round. Joanna was Australia's Ambassador in Brussels from 2000–2003 and before that Deputy Secretary of the Department of Foreign Affairs and Trade and Australia's Asia-Pacific Economic Cooperation Ambassador. Joanna has a long history and affinity with international relations along with a strong knowledge of agriculture both in Australia and overseas.

Appointed 7 April 2011for 3 years.

Meetings attended: 2

Professor Kym Anderson
Commissioner

A leading Australian economist specialising in trade policy and issues related to the World Trade Organization and has strong research interests in agricultural and environmental economics. Professor Anderson is the George Collins Professor of Economics, foundation Executive Director of the Wine Economics Research Centre, and formerly foundation Executive Director of the Centre for International Economic Studies at the University of Adelaide. He is a research fellow at Europe's London-based Centre for Economic Policy Research and a Trustee on the Board of Trustees, International Food Policy Research Institute (IFPRI). Professor Anderson brings a strong economic and trade policy perspective to the Commission as well as extensive knowledge of many of Australia's key rural industries.

Appointed 7 April 2011 for 3 years.

Meetings attended: 2

Dr Nick Austin
Commissioner–ex officio

CEO of ACIAR since 31 July 2009.

Previously from the NSW Department of Primary Industries where he was Deputy Director-General and led the Department's Agriculture, Biosecurity and Mine Safety Division. Prior to that he led the Department's Science and Research Division and undertook or managed research projects across several areas including dairy, cotton, grain, livestock and wool.

Appointed 31 July 2009 for 5 years.

Meetings attended: 3

Mr Peter Baxter
Commissioner

Director-General of AusAID. Prior to moving to AusAID, Mr Baxter headed the Department of Foreign Affairs and Trade's Consular, Public Diplomacy and Parliamentary Affairs Division. His previous Canberra assignments have included senior management roles heading the Consular and Passports (2000), Corporate Management (2000–2001), Market Development (2001–2002) and North Asia (2005–2008) Divisions with DFAT.

Appointed 6 May 2010 for 3 years.

Meetings attended: 2

Mr David Crombie
Commissioner

Mr Crombie has more than 30 years commercial and representative experience in agriculture Australia and in development assistance overseas. He served on the Board of Grainco Australia and subsequently the Boards of the Meat Industry Council and Meat and Livestock Australia where he was Chairman from 1998 to 2005.

He was Chairman of the Australian Rural Leadership Foundation, served on the Board of the Export Finance and Insurance Corporation and is immediate past President of the National Farmers Federation.

Mr Crombie operates family properties, breeding cattle and farming in southern Queensland.

Appointed 26 September 2007 for 3 years.

Meetings attended: 2

Dr Joanne Daly
Commissioner

Group Executive, Agribusiness Group, Commonwealth Scientific and Industrial Research Organisation (CSIRO), in April 2007. This Group comprises; Food Futures Flagship, Preventative Health Flagship, CSIRO Entomology, CSIRO Livestock Industries, CSIRO Plant Industries, Food Science Australia (joint venture), and Agricultural Sustainability Initiative.

Dr Daly joined CSIRO in 1983. She was appointed Chief of CSIRO Entomology in February 2003.

Appointed 29 October 2009 for 3 years.

Meetings attended: 2

Dr Conall O'Connell
Commissioner

Secretary of the Department of Agriculture, Fisheries and Forestry (DAFF) and was previously Deputy Secretary in the Department of the Environment and Water Resources. He has also held a number of high-level positions in the Department of the Prime Minister and Cabinet, including responsibility for Federal–State relations, primary industries and environmental policy. DAFF is a key ACIAR stakeholder and the agencies interact in various areas of shared interest, including food security, agricultural research and biosecurity matters.

Appointed 7 April 2011 for 3 years.

Meetings attended: 2

Commission performance

During 2010–11 major milestones for the Commission included:

- endorsement of ACIAR's Annual Operational Plan 2010–11
- input into the reform of the Consultative Group on International Agricultural Research
- strategic advice on development of a climate change initiative
- continuing strategic advice on development of a food security strategy in Africa through the Overseas Development Assistance—Food Security through Rural Development initiative
- input into the review of the Crawford Fund
- strategic advice on potential growth opportunities for ACIAR.

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

The Minister may give written directions to the CEO regarding the exercising of his powers or the performance of his functions. This includes directions with respect to the commissioning of particular research. In 2010–11 there were no directions given.

Commission costs

The direct cost of Commission operations during 2010–11 was $23,663 including fees, travel and other meeting expenses. The CEO's salary and other management costs are not included. The comparative figure for 2009–10 for the Commission was $52,941.

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 $751 and $547 respectively as at 30 June 2011.

POLICY ADVISORY COUNCIL

Established under Section 17 of the ACIAR Act, the Policy Advisory Council 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 role of the Council utilises stakeholder knowledge from partner countries 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

Membership of the Council is limited to 13, comprising a President, the Director General of AusAID or his nominee, and not fewer than nine nor more than 11 other members appointed by the Minister for Foreign Affairs and Trade. Members are appointed predominantly from stakeholder organisations in partner countries to bring a range of agricultural and development experience. The Minister is required, under the ACIAR Act, to ensure that a substantial number of the members of the Council 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.

Members of the Policy Advisory Council and ACIAR staff meet in Australia's Northern Territory.

Council meeting

Due to unforeseen circumstances surrounding the election results coinciding with the proposed timing of the Council meeting, it was not possible for the Policy Advisory Council to meet during 2010–11. A Council meeting was held on 19 September 2011. The previous Council meeting was held on 16 November 2009.

Council membership (as at 30 June 2011)

Member	Term of appointment
Professor Beth Woods OAM Chief Scientific Officer Science, Agriculture, Food and Regional Services Department of Employment, Economic Development and Innovation Brisbane QUEENSLAND	President 1 October 2007–30 September 2010 22 March 2011–21 March 2014
Mr Ian Kershaw Nominee of the Director General AusAID Canberra AUSTRALIAN CAPITAL TERRITORY	Ex-officio member
Mr 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*
Dr Monthathip Chanphengxay Director General National Agriculture and Forestry Research Institute Vientiane LAO PEOPLE'S DEMOCRATIC REPUBLIC	Appointed member 15 May 2008–14 May 2011*
Dr Patricio Faylon Executive Director Philippine Council for Agriculture, Forestry and Natural Resources Research and Development Los Baños THE PHILIPPINES	Appointed member 10 March 2003–9 March 2005 10 March 2005–9 March 2008 15 May 2008–14 May 2011*
Mr Jimmie Rodgers Director General Secretariat of the Pacific Community Noumea NEW CALEDONIA	Proposed New Appointment
Dr IR Haryono Indonesian Agency for Agricultural Research and Development Jakarta INDONESIA	Proposed New Appointment
Mr Jia Jingdun Director General Department of Rural Science and Technology Ministry of Science and Technology Beijing CHINA	Appointed member 10 March 2003–9 March 2006 10 March 2006–9 March 2009 18 September 2009–17 September 2011
Dr Men Sarom Vice Rector Royal University of Agriculture Phnom Penh CAMBODIA	Appointed member 15 May 2008–14 May 2011
Dr Nguyen Van Bo President Vietnamese Academy of Agricultural Sciences Hanoi VIETNAM	Appointed member 19 July 2010–19 July 2013

Member	Term of appointment
Dr Subbanna Ayyappan Director General Indian Council of Agricultural Research Secretary Department of Agricultural Research and Education New Delhi INDIA	Appointed member 19 July 2010–19 July 2013
Dr Muhammad Tusneem Chair National Agricultural Education Accreditation Council Islamabad PAKISTAN	Appointed member 15 May 2008–14 May 2011
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 2010–7 July 2013

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* (ACIAR Act). Financial powers and duties are also drawn from the *Financial Management and Accountability Act 1997* (FMA Act) and subordinate Regulations and Orders, and from the *Public Service Act 1999* in the case of staffing.

The Centre follows accounting practices in accordance with the *FMA Act,* other related legislation, and recognised accounting standards. ACIAR's financial statements are presented in accrual accounting format on pages 71–123 of the 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 officer's liability, property loss and damage, personal accident and official overseas travel. The insurance premium for 2010–11 was $49,902 (excluding GST). The premium paid for 2009–10 was $46,722.

Liability and professional indemnity insurances were not invoked in 2010–11.

Risk management and business continuity planning

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

The Audit Committee completed a comprehensive review of business continuity management and planning in 2010–11.

In the latter part of 2010–11, the Committee commenced a review of the risk management plan in order to enhance corporate governance and assurance processes and to ensure that current and emerging risks are appropriately identified and addressed. The Committee also provided a submission to the annual Comcover risk management benchmarking survey.

Audit Committee

ACIAR's Audit Committee is established in accordance with Section 46 of the *Financial Management and Accountability Act 1997.* The committee's objectives are:

- to provide advice to the CEO that ACIAR's control framework is in place and working effectively
- to ensure the objectivity and reliability of externally published financial information
- to ensure the CEO that adequate systems are in place to ensure that ACIAR complies with all legislative and other requirements
- to promote and facilitate communication between the ACIAR's auditors (both internal and external) and management.

Four Audit Committee meetings were held in 2010–11. Audit Committee membership and attendance during the year were as follows:

Member		Meetings attended
Ms Glenys Roper	Chair/External Member	4
Dr Simon Hearn	ACIAR, Principal Adviser, Strategy and Policy (appointed 28 April 2005)	4
Dr Caroline Lemerle	ACIAR, Research Program Manager, Agricultural Systems Management (appointed 1 July 2009)	4
Mr Albert Blair	ACIAR, Chief Finance Officer (ex-officio, commenced 23 May, 2010)	4

Past Member		Meetings attended
Ms Lisa Wright	ACIAR, Director, Corporate Programs (until 8 February 2011)	2 (of 2 eligible to attend)

Each committee meeting was supported by advisers from ACIAR external auditors (Australian National Audit Office), internal auditors (RSM Bird Cameron) 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 2010–11, internal audit activity consisted of a review of ACIAR's project selection policy and processes. Additionally external reviews on agency security and agency IT security were considered by the Audit Committee.

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.

Certification of Compliance

Australian Centre for International Agricultural Research

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 2010–11, 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.

Signed.....

Nick Austin
Chief Executive Officer

11 October 2011

CHIEF FINANCE OFFICER'S REVIEW

ACIAR's operations are split between administered and departmental activity. 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 oversight by ACIAR, on behalf of the Government, of items controlled or incurred by the Government (program delivery).

The Agency's departmental and administered activity is segregated in the financial statements.

Departmental Activity

The net operating result (pre a change to the asset revaluation reserve) for 2010–11 was a deficit of $0.213 million (2009–11: surplus $0.799 million). The deficit arises due to the fact that funds appropriated for capital purposes ($0.315 million) are credited directly to reserves. Formally capital funding formed part of the ordinary annual appropriation. Had capital funding been credited to income, as in prior years, a surplus of $0.102 million would have been reported.

Revenue was mainly a direct appropriation of $9.538 million (2009–10: $9.808 million (including a capital component of $0.315 million) supplemented by a small amount of other income. The main components of department expenditure were staff costs $6.135 million, operating expenses (e.g. property expenses, travel, IT, communications, etc), $3.392 million and depreciation/amortisation or write-down of assets of $0.256 million.

A revaluation of the Agency's fixed assets resulted in a credit of $0.383 million to the asset revaluation reserve.

Administered Activity

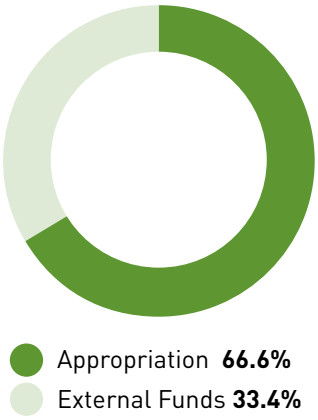
Total administered funds appropriated to ACIAR for 2010–11 was $61.035 million. This amount was fully utilised in the financial year. In 2009–10 $53.982 million appropriation funding was expended.

Total program expenditure for 2010–11 was $96.940 million (2009–10: $69.921 million). This included $35,909 million (2009–10: $15.940 million) expenditure of monies received under separate agreements of records of understanding with external parties (mainly AusAID).

The pie charts below present a summary picture of total departmental and administered revenue and expenditure for 2010–11 compared to 2009–10. Administered revenue for 2010–11 (included in appropriation revenue) is the non-lapsing portion of the total available administered appropriation as approved by Government.

Of particular note is the fact that international development assistance has increased from 2009–10 in both real and percentage terms with a corresponding reduction in support costs.

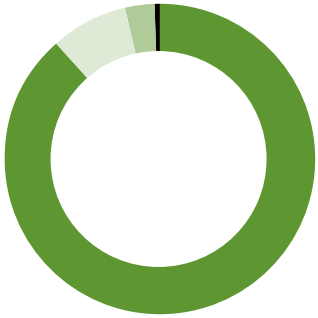
ACIAR revenue 2010–11



ACIAR revenue 2009–10

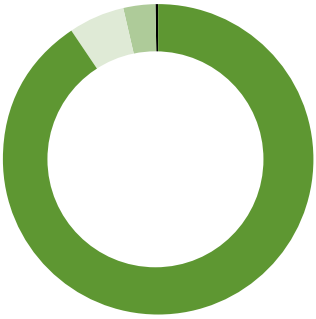
- Appropriation **79.9%**
- External Funds **20.0%**
- Other **0.1%**

ACIAR expenditure 2009–10



- International development assistance **88.5%**
- Employees **7.9%**
- Suppliers **3.3%**
- Depreciation **0.3%**

ACIAR expenditure 2010–11

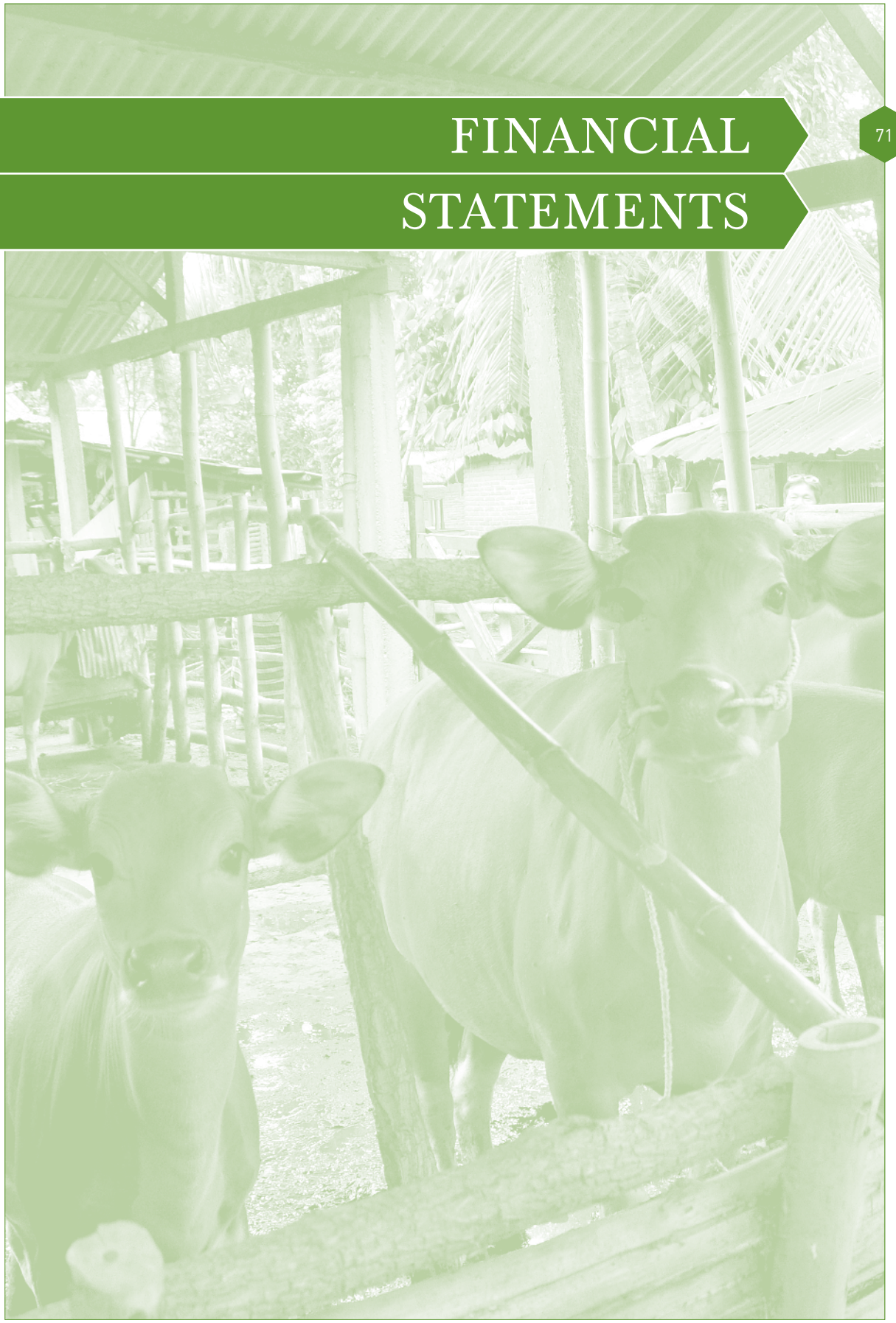


- International development assistance **90.8%**
- Employees **5.8%**
- Suppliers **3.2%**
- Depreciation **0.2%**

Accounting policies

ACIAR complies with relevant accounting standards, legislation and the Finance Minister's Orders.

FINANCIAL STATEMENTS



Certification of Compliance

Australian Centre for International Agricultural Research

Statement by the Chief Executive Officer and the Chief Finance Officer

In our opinion, the attached financial statements for the year ended 30 June 2011 are based on properly maintained financial records and give a true and fair view of the matters required by the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997*, as amended.

Signed.....

Nick Austin
Chief Executive Officer

20 September 2011

Signed.....

Albert Blair
Chief Finance Officer

20 September 2011

Australian National Audit Office

INDEPENDENT AUDITOR'S REPORT

To the Minister for Foreign Affairs

Report on the Financial Statements

I have audited the accompanying financial statements of the Australian Centre for International Agricultural Research for the year ended 30 June 2011, which comprise: a Statement by the Chief Executive and Chief Financial Officer; Statement of Comprehensive Income; Balance Sheet; Statement of Changes in Equity; Cash Flow Statement; Schedule of Commitments; Schedule of Contingencies; Schedule of Asset Additions; Schedule of Administered Items; and Notes comprising a Summary of Significant Accounting Policies and other explanatory information.

Chief Executive's Responsibility for the Financial Statements

The Australian Centre for International Agricultural Research is responsible for the preparation of financial statements that give a true and fair view in accordance with the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997*, including the Australian Accounting Standards, and for such internal control as the Chief Executive determines is necessary to enable the preparation of the 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 Australian Centre for International Agricultural Research's preparation of the financial statements that give a true and fair view 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 Australian Centre for International Agricultural Research's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the

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Chief Executive of the Australian Centre for International Agricultural Research, 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) have been prepared in accordance with the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997,* including the Australian Accounting Standards; and

(b) give a true and fair view of the matters required by the Finance Minister's Orders including ACIAR's financial position as at 30 June 2011 and of its financial performance and cash flows for the year then ended.

Report on Other Legal and Regulatory Requirements

As described in Note 20 to the financial statements, the Australian Centre for International Agricultural Research has recently become aware that there is a risk of a breach of section 83 of the Constitution where payments are made from the special account in circumstances where the payments do not accord with conditions included in the relevant legislation, and has advised that these circumstances will be investigated.

Australian National Audit Office

Kristian Gage
Audit Principal

Delegate of the Auditor-General
Canberra

20 September 2011

Australian Centre for International Agricultural Research

Statement of Comprehensive Income

for the period ended 30 June 2011

STATEMENT OF COMPREHENSIVE INCOME
for the period ended 30 June 2011

	Notes	2011 $'000	2010 $'000
EXPENSES			
Employee benefits	3A	**6,135**	6,229
Supplier expenses	3B	**3,392**	2,589
Depreciation and amortisation	3C	**240**	249
Write-down of assets	3D	**16**	-
Total expenses		**9,783**	9,067
LESS:			
OWN-SOURCE INCOME			
Own-source revenue			
Sale of goods and rendering of services	4A	**9**	22
Other revenue	4B	-	4
Total own-source revenue		**9**	26
Gains			
Sale of assets	4C	**2**	11
Other	4D	**21**	21
Total gains		**23**	32
Total own-source income		**32**	58
Net cost of services		**9,751**	9,009
Revenue from Government	4E	**9,538**	9,808
(Deficit)/Surplus		**(213)**	799
OTHER COMPREHENSIVE INCOME			
Changes in asset revaluation reserve		**383**	-
Total other comprehensive income		**383**	-
Total comprehensive income attributable to the Australian Government		**170**	799

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

Australian Centre for International Agricultural Research

Balance Sheet

as at 30 June 2011

	Notes	2011 $'000	2010 $'000
ASSETS			
Financial Assets			
Cash and cash equivalents	5A	**52**	218
Trade and other receivables	5B	**3,021**	2,616
Total financial assets		**3,073**	2,834
Non-Financial Assets			
Land and buildings	6A,C	**471**	207
Property, plant and equipment	6B,C	**420**	249
Intangibles	6D,E	**84**	91
Other non-financial assets	6F	**206**	74
Total non-financial assets		**1,181**	621
Total assets		**4,254**	3,455
LIABILITIES			
Payables			
Suppliers	7A	**452**	265
Other	7B	**354**	352
Total payables		**806**	617
Provisions			
Employee provisions	8A	**1,420**	1,295
Total provisions		**1,420**	1,295
Total liabilities		**2,226**	1,912
Net assets		**2,028**	1,543
EQUITY			
Parent Entity Interest			
Retained earnings		**1,005**	1,218
Reserves		**708**	325
Contributed equity		**315**	-
Total equity		**2,028**	1,543

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

Australian Centre for International Agricultural Research

Statement of Changes in Equity

for the period ended 30 June 2011

	Notes	Retained earnings		Asset revaluation reserve		Contributed equity/capital		Total equity	
		2011	2010	**2011**	2010	**2011**	2010	**2011**	2010
		$'000	$'000	**$'000**	$'000	**$'000**	$'000	**$'000**	$'000
Opening balance									
Balance carried forward from previous period		**1,218**	419	**325**	325	**-**	**-**	**1,543**	744
Adjustment for errors		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Adjustment for changes in accounting policies		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Adjusted opening balance		**1,218**	419	**325**	325	**-**	**-**	**1,543**	744
Comprehensive income									
Other comprehensive income		**-**	**-**	**383**	**-**	**-**	**-**	**383**	**-**
(Deficit)/Surplus for the period		**(213)**	799	**n/a**	n/a	**n/a**	n/a	**(213)**	799
Total comprehensive income		**(213)**	799	**383**	**-**	**-**	**-**	**170**	799
Transactions with owners									
Contributions by owners									
Departmental capital budget		**-**	**-**	**-**	**-**	**315**	**-**	**315**	**-**
Closing balance as at 30 June		**1,005**	1,218	**708**	325	**315**	**-**	**2,028**	1,543
Closing balance attributable to the Australian Government		**1,005**	1,218	**708**	325	**315**	**-**	**2,028**	1,543

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

Australian Centre for International Agricultural Research

Cash Flow Statement

for the period ended 30 June 2011

	Notes	2011 $'000	2010 $'000
OPERATING ACTIVITIES			
Cash received			
Appropriations		**8,979**	10,259
Goods and services		**9**	22
Net GST received		**233**	1,010
Other		**240**	4
Total cash received		**9,461**	11,295
Cash used			
Employees		**5,975**	6,115
Suppliers		**3,658**	2,391
International development assistance		-	2,658
Transfer to special account (administered)		-	4,938
Total cash used		**9,633**	16,102
Net cash (used by) operating activities	9	**(172)**	(4,807)
INVESTING ACTIVITIES			
Cash received			
Appropriations - departmental capital budget		**226**	-
Proceeds from sales of property, plant and equipment		**6**	18
Total cash received		**232**	18
Cash used			
Purchase of property, plant and equipment		**207**	128
Purchase of intangibles		**19**	-
Total cash used		**226**	128
Net cash (used by) investing activities		**6**	(110)
Net (decrease) in cash held		**(166)**	(4,917)
Cash and cash equivalents at the beginning of the reporting period		**218**	5,135
Cash and cash equivalents at the end of the reporting period	5A	**52**	218

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

Australian Centre for International Agricultural Research

Schedule of Commitments

as at 30 June 2011

	2011	2010
BY TYPE	**$'000**	$'000
Commitments receivable		
Net GST recoverable on commitments	**(126)**	(192)
Total commitments receivable	**(126)**	(192)
Commitments payable		
Capital commitments [1]		
Property, plant and equipment	-	87
Total capital commitments	-	87
Other commitments		
Operating leases[2]	**2,728**	2,928
Other[3]	-	73
Total other commitments	**2,728**	3,001
Net commitments by type	**2,602**	2,896
BY MATURITY		
Commitments receivable		
Other commitments receivable		
One year or less	**(54)**	(68)
From one to five years	**(72)**	(124)
Total other commitments receivable	**(126)**	(192)
Commitments payable		
Capital commitments		
One year or less	-	87
Total capital commitments	-	87
Operating lease commitments		
One year or less	**647**	754
From one to five years	**1,802**	1,809
Over five years	**279**	365
Total operating lease commitments	**2,728**	2,928
Other Commitments		
One year or less	-	73
Total other commitments	-	73
Net commitments by maturity	**2,602**	2,896

Note: Commitments are GST inclusive where relevant.

[1]Capital commitments are commitments relating to the purchase of IT equipment.

[2]Operating leases are effectively non-cancellable and comprise:
- lease of office accommodation in Canberra and overseas, and
- lease of a motor vehicle.

[3]Other commitments include commitments relating to the purchase IT services and general office services.

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

Australian Centre for International Agricultural Research

Schedule of Contingencies

as at 30 June 2011

There are no quantifiable contingent assets or contingent liabilities as at 30 June 2011 (30 June 2010: $nil).

There are no unquantifiable or remote contingencies at 30 June 2011 (30 June 2010: $nil).

Australian Centre for International Agricultural Research

Schedule of Asset Additions

for the period ended 30 June 2011

The following non-financial non-current assets were added in 2010–11:

	Land and buildings $'000	**Property, plant and equipment $'000**	**Intangibles $'000**	**Total $'000**
Additions funded in the current year				
By purchase—appropriation ordinary annual services				
Departmental capital budget	**13**	**273**	**19**	**305**
Total additions	**13**	**273**	**19**	**305**

The following non-financial non-current assets were added in 2009–10:

	Land and buildings $'000	Property, plant and equipment $'000	Intangibles $'000	Total $'000
Additions funded in the current year				
By purchase—appropriation ordinary annual services				
Ordinary operating costs	2	126	-	128
Total additions	2	126	-	128

Australian Centre for International Agricultural Research

Schedule of Administered Items

for the period ended 30 June 2011

SCHEDULE OF ADMINISTERED ITEMS

	Notes	2011 $'000	2010 $'000
Income administered on behalf of Government			
Revenue			
Non-taxation revenue			
External funds	13A	**35,909**	15,940
Other	13B	-	452
Total non-taxation revenue		**35,909**	16,392
Total revenues administered on behalf of Government		**35,909**	16,392
Total income administered on behalf of Government		**35,909**	16,392
Expenses administered on behalf of Government *for the period ended 30 June 2011*			
International development assistance	14	**96,940**	69,921
Total expenses administered on behalf of Government		**96,940**	69,921

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

Australian Centre for International Agricultural Research

Schedule of Administered Items

as at 30 June 2011

SCHEDULE OF ADMINISTERED ITEMS			
		2011	2010
	Notes	**$'000**	$'000
Assets administered on behalf of Government			
Financial assets			
Cash and cash equivalents	15A	**10,866**	28,159
Trade and other receivables	15B	**1,558**	1,143
Total financial assets		**12,424**	29,302
Non-financial assets			
Other	15C	**27**	125
Total non-financial assets		**27**	125
Total assets administered on behalf of Government		**12,451**	29,427
Liabilities administered on behalf of Government *as at 30 June 2011*			
Payables			
Suppliers	16A	**1,617**	773
Other	16B	**11,925**	29,343
Total payables		**13,542**	30,116
Provisions			
Employee provisions	16C	**3**	-
Total provisions		**3**	-
Total liabilities administered on behalf of Government		**13,545**	30,116

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

Australian Centre for International Agricultural Research

Schedule of Administered Items

for the period ended 30 June 2011

SCHEDULE OF ADMINISTERED ITEMS			
		2011	2010
	Notes	**$'000**	$'000
Administered Cash Flows			
OPERATING ACTIVITIES			
Cash received			
Special account (departmental) transfer		-	4,938
External funds		**18,361**	39,154
Net GST received		**4,315**	3,027
Other		-	428
Total cash received		**22,676**	47,547
Cash used			
International development assistance		**100,371**	73,144
Total cash used		**100,371**	73,144
Net cash flows from (used by) operating activities		**(77,695)**	(25,597)
Cash and cash equivalents at the beginning of the reporting period		**28,159**	-
Cash from Official Public Account for:			
— Appropriations		**64,721**	57,261
		64,721	57,261
Cash to Official Public Account for:			
— Appropriations		**(4,319)**	(3,505)
		(4,319)	(3,505)
Cash and cash equivalents at the end of the reporting period	15A	**10,866**	28,159
This schedule should be read in conjunction with the accompanying notes.			

Australian Centre for International Agricultural Research

Schedule of Administered Items

as at 30 June 2011

SCHEDULE OF ADMINISTERED ITEMS	2011 $'000	2010 $'000
Administered Commitments		
BY TYPE		
Commitments receivable		
Net GST recoverable on commitments	**(8,112)**	(6,123)
Total commitments receivable	**(8,112)**	(6,123)
Other commitments		
International development assistance	**117,451**	90,973
Total other commitments	**117,451**	90,973
Net commitments by type	**109,339**	84,850
BY MATURITY		
Other commitments receivable		
One year or less	**(3,319)**	(2,671)
From one to five years	**(4,793)**	(3,452)
Total other commitments receivable	**(8,112)**	(6,123)
Commitments payable		
Other commitments		
One year or less	**51,269**	38,296
From one to five years	**66,182**	52,677
Total other commitments	**117,451**	90,973
Net commitments by maturity	**109,339**	84,850

NB: Commitments are GST inclusive where relevant.

International development assistance commitments comprise amounts payable under research and development and associated support agreements in respect of which the engaged party is yet to perform the services required.

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

Administered Contingencies
as at 30 June 2011

There are no quantifiable contingent assets or contingent liabilities as at 30 June 2011 (30 June 2010: $nil).

There are no unquantifiable or remote contingencies as at 30 June 2011 (30 June 2010: $nil).

Administered Asset Additions
for the period ended 30 June 2011

There were no administered asset additions in the year ending 30 June 2011 (30 June 2010: $nil).

ACIAR administers international agricultural research and development on behalf of the Government.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

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's mission 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 goal, 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 49 of the *Financial Management and Accountability Act 1997.*

The financial statements have been prepared in accordance with:

a) Finance Minister's Orders (FMOs) for reporting periods ending on or after 1 July 2010; 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 FMOs, assets and liabilities are recognised in the balance sheet 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 schedule of contingencies.

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.

Administered revenues, expenses, assets and liabilities and cash flows reported in the Schedule of Administered Items and related notes are accounted for on the same basis and using the same policies as for departmental items, except where otherwise stated at Note 1.18.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

1.3 Significant Accounting Judgements and Estimates

In the process of applying the accounting policies listed in this note, the entity 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 have been revalued at 30 June 2011 to estimated fair value.

No 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

No accounting standard has been adopted earlier than the application date as stated in the standard.

New standards/revised standards/interpretations/amending standards that were issued prior to the sign-off date and are applicable to the current reporting period did not have a financial impact, and are not expected to have a future financial impact on ACIAR.

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, are not expected to have a financial impact on ACIAR for future reporting periods.

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 end of reporting period. Allowances are made when collectability of the debt is no longer probable.

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 ACIAR 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.

Parental Leave Payments Scheme

The entity offsets amounts received under Parental Leave Payments Scheme (for payment to employees) by amounts paid to employees under that scheme, because these transactions are only incidental to the main revenue-generating activities of ACIAR. Amounts received by ACIAR not yet paid to employees would be presented gross as cash and a liability (payable). $nil was received under this scheme in 2010–11.

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 (Refer to Note 1.7).

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.

Restructuring of Administrative Arrangements

Net assets received from or relinquished to another Government entity under a restructuring of administrative arrangements are adjusted at their book value directly against contributed equity.

Other Distributions to Owners

The FMOs require that distributions to owners be debited to contributed equity unless in the nature of a dividend. ACIAR had no such distributions in 2010–11 (2009–10: $nil).

1.8 Employee Benefits

Liabilities for 'short-term employee benefits' (as defined in AASB 119 *Employee Benefits*), including those payable on resignation or retirement under employment contracts of overseas staff, 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 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 those employees affected that it will carry out the terminations.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Superannuation

Staff of ACIAR are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS) or 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 by the Department of Finance and Deregulation as an administered item.

For CSS and PSS 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 PSSap and all other approved superannuation schemes, ACIAR, as employer, contributes a minimum of 9% of superannuable salaries.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the period between employees' final pay in 2010–11 and 30 June 2011.

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 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.

1.11 Financial Assets

ACIAR classifies its financial assets in the following categories and currently only has assets in the 'loans and receivables' category:

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.

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.

1.12 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).

1.13 Contingent Liabilities and Contingent Assets

Contingent liabilities and contingent assets are not recognised in the balance sheet but are reported in the relevant schedules and notes. They may arise from uncertainty as to the existence of a liability or asset or represent an asset or 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.

1.14 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.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

1.15 Property, Plant and Equipment

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the balance sheet, 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

Fair values for each class of asset are determined as shown below:

Asset Class	**Fair value measured as:**
Leasehold improvements	Depreciated replacement cost
Plant and equipment	Market selling price

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 improvement, plant and equipment assets were revalued at 30 June 2011. The revaluation process was performed by the Australian Valuation Office.

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.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

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:

	2011	2010
Leasehold improvements	**Lease Term**	Lease term
Plant and equipment	**5 to 10 years**	5 to 10 years
Computer equipment	**3 to 5 years**	3 to 5 years

Impairment

All assets were assessed for impairment at 30 June 2011. 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.

1.16 Intangibles

ACIAR's intangibles comprise internally developed 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 5 to 10 years (2009–10: 5 to 10 years).

All software assets were assessed for indications of impairment as at 30 June 2011.

1.17 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.

Competitive Neutrality

ACIAR provides services on a not for-profit basis. Under Competitive Neutrality arrangements, ACIAR is not required to make Australian Income Tax Equivalent payments to the Government.

1.18 Reporting of Administered Activities

Administered revenues, expenses, assets, liabilities and cash flows are disclosed in the schedule of administered items 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 and Deregulation. 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 statement of cash flows in the schedule of administered items and in the administered reconciliation table in Note 17.

Revenue

All administered revenues are revenues relating to the course of ordinary activities performed by ACIAR on behalf of the Australian Government.

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.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 2: Events After the Reporting Period

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

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 3: Expenses

	2011 $'000	2010 $'000
Note 3A: Employee Benefits		
Wages and salaries	**5,111**	4,941
Superannuation:		
Defined contribution plans	**171**	156
Defined benefit plans	**541**	562
Leave and other entitlements	**312**	522
Separation and redundancies	**-**	48
Total employee benefits	**6,135**	6,229
Note 3B: Suppliers		
Goods and services		
Travel	**315**	403
Property	**135**	130
Information technology and management	**709**	282
Other	**1,288**	1,022
Total goods and services	**2,447**	1,837
Goods and services are made up of:		
Provision of goods—external parties	**434**	119
Rendering of services—related entities	**259**	375
Rendering of services—external parties	**1,754**	1,343
Total goods and services	**2,447**	1,837
Other supplier expenses		
Operating lease rentals—external parties:		
Minimum lease payments	**901**	720
Workers compensation expenses	**44**	32
Total other supplier expenses	**945**	752
Total supplier expenses	**3,392**	2,589
Note 3C: Depreciation and Amortisation		
Depreciation:		
Property, plant and equipment	**120**	106
Land and buildings	**94**	108
Total depreciation	**214**	214
Amortisation:		
Intangibles:		
Computer software	**26**	35
Total amortisation	**26**	35
Total depreciation and amortisation	**240**	249
Note 3D: Write-Down of Assets		
Asset write-downs from:		
Revaluation decrement—computer equipment	**16**	**-**
Total write-down of assets	**16**	**-**

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 4: Income

	2011 $'000	2010 $'000
REVENUE		
Note 4A: Sale of Goods and Rendering of Services		
Provision of goods—external parties	**9**	22
Total sale of goods and rendering of services	**9**	22
Note 4B: Other Revenue		
Miscellaneous revenue	-	4
Total other revenue	-	4
GAINS		
Note 4C: Sale of Assets		
Property, plant and equipment:		
Proceeds from sale	**6**	18
Carrying value of assets sold	**(4)**	(7)
Net gain from sale of assets	**2**	11
Note 4D: Other Gains		
Resources received free of charge	**21**	21
Total other gains	**21**	21
REVENUE FROM GOVERNMENT		
Note 4E: Revenue from Government		
Appropriations		
Departmental appropriation	**9,538**	9,808
Total revenue from Government	**9,538**	9,808

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 5: Financial Assets

	2011 $'000	2010 $'000
Note 5A: Cash and Cash Equivalents		
Cash on hand or on deposit	**52**	218
Total cash and cash equivalents	**52**	218
Note 5B: Trade and Other Receivables		
Good and Services:		
Goods and services—related entities	-	30
Total receivables for goods and services	-	30
Appropriations receivable		
For existing programs	**2,954**	2,306
Total appropriations receivable	**2,954**	2,306
Other receivables:		
GST receivable from the Australian Taxation Office	**64**	40
Other	**3**	240
Total other receivables	**67**	280
Total trade and other receivables	**3,021**	2,616
Receivables are expected to be recovered in:		
No more than 12 months	**3,021**	2,616
More than 12 months	-	-
Total trade and other receivables	**3,021**	2,616
Receivables are aged as follows:		
Not overdue	**3,021**	2,586
Overdue by:		
0 to 30 days	-	-
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	-	30
Total receivables	**3,021**	2,616

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

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 6: Non-Financial Assets

	2011 $'000	2010 $'000
Note 6A: Land and Buildings		
Leasehold improvements:		
Fair value	**471**	651
Accumulated depreciation	-	(444)
Total leasehold improvements	**471**	207
Total land and buildings	**471**	207

Revaluations are conducted in accordance with the revaluation policy stated at Note 1. Land and buildings were revalued as at 30 June 2011 by an independent qualified valuer from the Australian Valuation Office.

In the year ended 30 June 2011 a revaluation increment of $344,481 (2010: $nil) for leasehold improvements was credited to the asset revaluation reserve and included in the equity section of the balance sheet.

No indicators of impairment were found for land and buildings.

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

Note 6B: Property, Plant and Equipment		
Property, plant and equipment:		
Fair value	**420**	911
Accumulated depreciation	**-**	(662)
Total property, plant and equipment	**420**	249

Revaluations are conducted in accordance with the revaluation policy stated at Note 1. Property, plant and equipment were revalued as at 30 June 2011 by an independent qualified valuer from the Australian Valuation Office.

A revaluation increment of $37,481 (2010: $nil) for motor vehicles was credited to the asset revaluation reserve and included in the equity section of the balance sheet.

A revaluation increment of $658 (2010: $nil) for office equipment was credited to the asset revaluation reserve and included in the equity section of the balance sheet.

A revaluation decrement of $16,006 (2010: $nil) for computer equipment was expensed.

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.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

	Land and buildings $'000	Property, plant & equipment $'000	Total $'000
As at 1 July 2010			
Gross book value	**651**	**911**	**1,562**
Accumulated depreciation and impairment	**(444)**	**(662)**	**(1,106)**
Net book value 1 July 2010	**207**	**249**	**456**
Additions*	**13**	**273**	**286**
Revaluations and impairments recognised in other comprehensive income	**345**	**38**	**383**
Revaluations recognised in the operating result	**-**	**(16)**	**(16)**
Depreciation expense	**(94)**	**(120)**	**(214)**
Disposals:			
Other	**-**	**(4)**	**(4)**
Net book value 30 June 2011	**471**	**420**	**891**
Net book value as of 30 June 2011 represented by:			
Gross book value	**471**	**420**	**891**
Accumulated depreciation and impairment	**-**	**-**	**-**
	471	**420**	**891**

*Disaggregated additions information are disclosed in the Schedule of Asset Additions.

Note 6C: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment (2009–10)

	Land and buildings $'000	Property, plant & equipment $'000	Total $'000
As at 1 July 2009			
Gross book value	649	923	1,572
Accumulated depreciation and impairment	(336)	(687)	(1,023)
Net book value 1 July 2009	313	236	549
Additions*	2	126	128
Depreciation expense	(108)	(106)	(214)
Disposals:			
Other	-	(7)	(7)
Net book value 30 June 2010	207	249	456
Net book value as of 30 June 2010 represented by:			
Gross book value	651	911	1,562
Accumulated depreciation and impairment	(444)	(662)	(1,106)
	207	249	456

*Disaggregated additions information are disclosed in the Schedule of Asset Additions.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

	2011 $'000	2010 $'000
Note 6D: Intangibles		
Computer software:		
Purchased	**458**	439
Accumulated amortisation	**(374)**	(348)
Total computer software	**84**	91
Total intangibles	**84**	91

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 6E: Reconciliation of the Opening and Closing Balances of Intangibles (2010–11)

	Computer software purchased $'000
As at 1 July 2010	
Gross book value	**439**
Accumulated amortisation and impairment	**(348)**
Net book value 1 July 2010	**91**
Additions*	**19**
Amortisation	**(26)**
Disposals:	
Other	-
Net book value 30 June 2011	**84**
Net book value as of 30 June 2011 represented by:	
Gross book value	**458**
Accumulated amortisation and impairment	**(374)**
	84

*Disaggregated additions information are disclosed in the Schedule of Asset Additions.

Note 6E: Reconciliation of the Opening and Closing Balances of Intangibles (2009–10)

	Computer software purchased $'000
As at 1 July 2009	
Gross book value	439
Accumulated amortisation and impairment	(313)
Net book value 1 July 2009	126
Amortisation	(35)
Net book value 30 June 2010	91
Net book value as of 30 June 2010 represented by:	
Gross book value	439
Accumulated amortisation and impairment	(348)
	91

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Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

	2011 **$'000**	2010 $'000
Note 6F: Other Non-Financial Assets		
Prepayments	**206**	74
Total other non-financial assets	**206**	74
Total other non-financial assets—are expected to be recovered in:		
No more than 12 months	**206**	74
Total other non-financial assets	**206**	74

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

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 7: Payables

	2011 $'000	2010 $'000
Note 7A: Suppliers		
Trade creditors and accruals	**452**	265
Total supplier payables	**452**	265
Supplier payables expected to be settled within 12 months:		
Related entities	**79**	11
External parties	**373**	254
Total supplier payables	**452**	265
Settlement is usually made within 30 days.		
Note 7B: Other Payables		
Salaries and wages	**245**	242
Superannuation	**15**	13
Rent payable	**67**	70
Other	**27**	27
Total other payables	**354**	352
Total other payables are expected to be settled in:		
No more than 12 months	**305**	285
More than 12 months	**49**	67
Total other payables	**354**	352

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Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 8: Provisions

	2011 $'000	2010 $'000
Note 8A: Employee Provisions		
Leave	**1,210**	1,062
Other	**210**	233
Total employee provisions	**1,420**	1,295
Employee provisions are expected to be settled in:		
No more than 12 months	**426**	393
More than 12 months	**994**	902
Total employee provisions	**1,420**	1,295

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Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 9: Cash Flow Reconciliation

	2011 **$'000**	2010 $'000
Reconciliation of cash and cash equivalents as per Balance Sheet to Cash Flow Statement		
Cash and cash equivalents as per:		
Cash flow statement	**52**	218
Balance sheet	**52**	218
Difference	**-**	-
Reconciliation of net cost of services to net cash from operating activities:		
Net cost of services	**(9,751)**	(9,009)
Add revenue from Government	**9,538**	9,808
Adjustments for non-cash items		
Depreciation / amortisation	**240**	249
Gain on disposal of assets	**(2)**	(11)
Write-down of assets	**16**	-
Changes in assets / liabilities		
(Increase) / decrease in net receivables	**(316)**	1,160
(Increase) / decrease in prepayments	**(132)**	154
Increase / (decrease) in employee provisions	**125**	38
Increase / (decrease) in supplier payables	**108**	141
Increase / (decrease) in grants and other payables	**2**	(7,337)
Net cash (used by) operating activities	**(172)**	(4,807)

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 10: Senior Executive Remuneration

Note 10A: Senior Executive Remuneration Expense for the Reporting Period

	2011	2010
	$	$
Short-term employee benefits:		
Salary	**222,771**	179,926
Annual leave accrued	**13,893**	14,583
Performance bonuses	**-**	41,039
Allowances	**56,199**	47,203
Total short-term employee benefits	**292,863**	282,751
Post-employment benefits:		
Superannuation	**26,196**	19,344
Total post-employment benefits	**26,196**	19,344
Other long-term benefits:		
Long-service leave	**4,413**	4,394
Total other long-term benefits	**4,413**	4,394
Total	**323,472**	306,489

Notes:

1. Note 10A was prepared on an accrual basis (so the performance bonus expenses disclosed above differ from the cash 'Bonus paid' in Note 10B).

2. Note 10A excludes acting arrangements and part-year service where remuneration expensed was less than $150,000.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 10: Senior Executive remuneration, continued.

Note 10B: Average Annual Remuneration Packages and Bonus Paid for Substantive Senior Executives as at the end of the Reporting Period

	as at 30 June 2011					as at 30 June 2010				
		Fixed elements					Fixed elements			
Fixed Elements and Bonus Paid [1]	**Senior Executives No.**	**Salary $**	**Allowances $**	**Total $**	**Bonus paid [2] $**	**Senior Executives No.**	**Salary $**	**Allowances $**	**Total $**	**Bonus paid [2] $**
Total remuneration (including part-time arrangements):										
less than $150,000	-	-	-	-	-	-	-	-	-	-
$150,000 to $179,999	**1**	**144,560**	**22,800**	**167,360**	**2,000**	1	139,000	22,800	161,800	**2,000**
$180,000 to $209,999	-	-	-	-	-	-	-	-	-	-
$210,000 to $239,999	-	-	-	-	-	-	-	-	-	-
$240,000 to $269,999	-	-	-	-	-	1	199,721	55,894	255,615	-
$270,000 to $299,999	**1**	**223,504**	**55,846**	**279,350**	**30,778**	-	-	-	-	-
Total	**2**					2				

Notes:

1. This table reports on substantive senior executives who are employed by ACIAR as at the end of the reporting period. Fixed elements are based on the employment agreement of each individual—each row represents an average annualised figure (based on headcount) for the individuals in that remuneration package band (i.e. the 'Total' column).

2. Represents average actual bonuses paid during the reporting period. The 'Bonus paid' is excluded from the 'Total' calculation, (for the purpose of determining remuneration package bands). The 'Bonus paid' within a particular band may vary between financial years due to factors such as performance and individuals commencing with or leaving ACIAR during the financial year.

Note 10: Senior Executive remuneration, continued.

Variable Elements:

With the exception of performance bonuses, variable elements are not included in the 'Fixed Elements and Bonus Paid' table above. The following variable elements were available as part of senior executives' remuneration package:

(a) On average senior executives are entitled to the following leave entitlements:

- Annual Leave (AL): entitled to 20 days (2010: 20 days) each full year worked (pro-rata for part-time SES);
- Personal Leave (PL): entitled to 18 days (2010: 18 days) or part-time equivalent; and
- Long Service Leave (LSL): in accordance with Long Service Leave (Commonwealth Employees) Act 1976.

(b) Senior executives are members of one of the following superannuation funds:

- Public Sector Superannuation Accumulation Plan (PSSAP): employer contributions were set at 15.4 percent (2010: 15.4 per cent), and the fund has been in operation since July 2005. More information on PSSAP can be found at http://www.pssap.gov.au; or
- Other: for senior executives who have made their own superannuation arrangements (employer contribution is variable (2010: variable)). This group includes employees who self manage their superannuation.

(c) Various salary sacrifice arrangements are available to senior executives including super, motor vehicle and expense payment fringe benefits.

Note 10C: Other Highly Paid Staff

During the reporting period, there were 10 employees whose salary plus performance bonus was $150,000 or more (2010: nil). These employees did not have a role as senior executive and are therefore not disclosed as senior executive in Note 10A and Note 10B.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 11: Remuneration of Auditors

	2011 **$'000**	2010 $'000
Financial statement audit services were provided free of charge to ACIAR.		
The fair value of the services provided was:		
Audit fee	**21**	21
	21	21

No other services were provided by the auditors of the financial statements.

Note 12: Financial Instruments

	2011	2010
	$'000	$'000
Note 12A: Categories of Financial Instruments		
Financial Assets		
Cash	**52**	218
Loans and receivables:		
Trade and other receivables	**3**	270
Carrying amount of financial assets	**55**	488
Financial Liabilities		
At amortised cost:		
Trade creditors	**452**	265
Other payables	**94**	97
Carrying amount of financial liabilities	**546**	362

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 (2010: $nil).

Note 12B: 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 (2011: $3,000 and 2010: $270,000). 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
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Trade and other receivables	**3**	240	-	30
Total	**3**	240	-	30

No financial assets were past due but not impaired for 2011.

Ageing of financial assets that were past due but not impaired for 2010

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

No assets have been individually assessed as impaired.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 12: Financial Instruments, continued.

Note 12C: 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.

This is highly unlikely 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 2011

	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	-	**452**	-	-	-	**452**
Other payables	-	**45**	**34**	**15**	-	**94**
Total	-	**497**	**34**	**15**	-	**546**

Maturities for non-derivative financial liabilities 2010

	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	-	265	-	-	-	265
Other payables	-	30	18	49	-	97
Total	-	295	18	49	-	362

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

Note 12D: 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.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 13: Income Administered on Behalf of Government

	2011 $'000	2010 $'000
REVENUE		
Non-Taxation Revenue		
Note 13A: External Funds		
External funds—related entities	**35,876**	15,940
External funds—external parties	**33**	-
Total external funds	**35,909**	15,940
Note 13B: Other Revenue		
Project returns	-	452
Total other revenue	-	452

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 14: Expenses Administered on Behalf of Government

	2011	2010
	$'000	$'000
EXPENSES		
Note 14: International Development Assistance		
Research program	**59,320**	51,661
Multilateral program	**28,994**	10,599
Education and training	**7,958**	7,068
Communicating research results	**668**	593
Total international development assistance	**96,940**	69,921
International Development Assistance is made up of:		
Employee benefits	**44**	-
Supplier expenses	**96,896**	69,921
	96,940	69,921

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 15: Assets Administered on Behalf of Government

	2011 $'000	2010 $'000
FINANCIAL ASSETS		
Note 15A: Cash and Cash Equivalents		
Special Account	**10,866**	28,159
Total cash and cash equivalents	**10,866**	28,159
Note 15B: Trade and other Receivables		
External funds:		
External funds receivable—related entities	**600**	171
External funds receivable—external parties	**117**	51
Total receivables for external funds	**717**	222
Other receivables:		
GST receivable from Australian Taxation Office	**829**	921
Other	**12**	-
Total other receivables	**841**	921
Total trade and other receivables	**1,558**	1,143
Receivables are expected to be recovered in:		
No more than 12 months	**1,558**	1,143
More than 12 months	-	-
Total trade and other receivables	**1,558**	1,143
Receivables were aged as follows:		
Not overdue	**1,470**	-
Overdue by:		
0 to 30 days	**88**	1,143
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	-	-
Total trade and other receivables	**1,558**	1,143

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

Trade and other receivables credit terms were within 30 days (2010: 30 days).

NON-FINANCIAL ASSETS		
Note 15C: Other Non-Financial Assets		
Prepayments	**27**	125
Total other non-financial assets	**27**	125
Total other non-financial assets are expected to be recovered in:		
No more than 12 months	**27**	125
Total other non-financial assets	**27**	125

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

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 16: Liabilities Administered on Behalf of Government

	2011 $'000	2010 $'000
PAYABLES		
Note 16A: Suppliers		
Trade creditors and accruals	**1,617**	773
Total suppliers	**1,617**	773
Supplier payables expected to be settled within 12 months:		
Related entities	**171**	7
External parties	**1,446**	766
Total suppliers	**1,617**	773
Settlement is usually made within 30 days.		
Note 16B: Other Payables		
Unearned income	**11,224**	28,287
GST payable to OPA	**698**	892
Salaries and wages	**3**	-
Other	-	164
Total other payables	**11,925**	29,343
Total other payables are expected to be settled in:		
No more than 12 months	**11,925**	29,343
Total other payables	**11,925**	29,343
PROVISIONS		
Note 16C: Employee Provisions		
Leave	**3**	-
Total employee provisions	**3**	-
Employee provisions are expected to be settled in:		
No more than 12 months	**3**	-
Total employee provisions	**3**	-

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 17: Administered Reconciliation Table

	2011 $'000	2010 $'000
Opening administered assets less administered liabilities as at 1 July	**(689)**	**-**
Adjustment for change in accounting policies	-	-
Adjustment for errors	-	-
Adjusted opening administered assets less administered liabilities	**(689)**	**-**
Plus: Administered income	**35,909**	16,392
Less: Administered expenses	**(96,940)**	(69,921)
Administered transfers to/from Australian Government:		
Appropriation transfers from OPA:		
Annual appropriations for administered expenses	**60,626**	53,292
Transfers to OPA	-	(452)
Closing administered assets less administered liabilities as at 30 June	**(1,094)**	(689)

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 18: Administered Financial Instruments

	2011	2010
	$'000	$'000
Note 18A: Categories of Financial Instruments		
Financial Assets		
Cash	**10,866**	28,159
Loans and receivables:		
Trade and other receivables	**729**	222
Carrying amount of financial assets	**11,595**	28,381
Financial Liabilities		
Other liabilities:		
Trade creditors	**1,617**	773
Other payables	**-**	164
Carrying amount of financial liabilities	**1,617**	937

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 (2010:$nil).

Note 18B: 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 (2011:$729,102 and 2010: $222,238). 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 2011 $'000	Not Past Due Nor Impaired 2010 $'000	**Past due or impaired 2011 $'000**	Past due or impaired 2010 $'000
Loans and receivables				
Trade and other receivables	**729**	222	-	-
Total	**729**	222	-	-

No financial assets were past due but not impaired for 2011 (2010:$nil).

No assets have been individually assessed as impaired.

Note 18: Administered Financial Instruments, continued.

Note 18C: 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.

This is highly unlikely 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 2011

	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	-	**1,617**	-	-	-	**1,617**
Total	-	**1,617**	-	-	-	**1,617**

Maturities for non-derivative financial liabilities 2010

	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	-	773	-	-	-	773
Other payables	-	164	-	-	-	164
Total	-	937	-	-	-	937

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

Note 18D: 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.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note19: Appropriations

Table A: Annual Appropriations ('Recoverable GST exclusive')

	2011 Appropriations				Appropriation applied in 2011 (current and prior years)	Variance
	Appropriation Act		*FMA Act*			
	Annual Appropriation	Appropriations reduced[a]	Section 31	Total appropriation		
	$'000	$'000	$'000	$'000	$'000	$'000
DEPARTMENTAL						
Ordinary annual services	**9,853**	**-**	**15**	**9,868**	**(9,562)**	**306**
Other services						
Equity	-	-		-	-	-
Total departmental	**9,853**	**-**	**15**	**9,868**	**(9,562)**	**306**
ADMINISTERED						
Ordinary annual services						
Administered items	**61,035**	**-**		**61,035**	**(60,626)**	**409**
Total administered	**61,035**	**-**		**61,035**	**(60,626)**	**409**

Notes:

(a) Appropriations reduced under Appropriation Acts (No. 1,3,5) 2010–11: sections 10, 11, 12 and 15 and under Appropriation Acts (No. 2,4,6) 2010–11: sections 12, 13, 14 and 17. 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 appropriations in 2010-11.

Note 19: Appropriations, continued.

	2010 Appropriations				Appropriation applied in 2010 (current and prior years)	Variance[b]
	Appropriation Act		*FMA Act*			
	Annual Appropriation	Appropriations reduced[a]	Section 31	Total appropriation		
	$'000	$'000	$'000	$'000	$'000	$'000
DEPARTMENTAL						
Ordinary annual services	9,808	-	44	9,852	(15,180)	(5,328)
Other services						
Equity	-	-		-	-	-
Previous years' outputs	-	-		-	-	-
Total departmental	9,808	-	44	9,852	(15,180)	(5,328)
ADMINISTERED						
Ordinary annual services						
Administered items	54,081	(99)		53,982	(53,292)	690
Total administered	54,081	(99)		53,982	(53,292)	690

Notes:

(a) Appropriations reduced under Appropriation Acts (No. 1,3) 2009–10: sections 10, 11 and 12 and under Appropriation Acts (No. 2,4) 2009–10: sections 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 appropriations in 2009–10.

(b) Ordinary annual service variance includes a one-off $4.938m transfer to administered special account as a result of administrative arrangement, whereby research expenditure items were reclassifed from departmental items to administered items with effect from 1 July 2009.

Note 19: Appropriations, continued.

Table B: Unspent Departmental Annual Appropriations ('Recoverable GST exclusive')

	2011	2010
Authority	**$'000**	$'000
Appropriation Act 1 2009-2010 as passed	**2,546**	2,524
Appropriation Act 1 2010-2011 as passed	**460**	-
Total	**3,006**	2,524

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 19: Appropriations, continued.

Table C: Reduction in Administered Items ('Recoverable GST exclusive')

2011	Amount required[1,2] — by Appropriation Act		Amount required[2] — as represented by:		Total amount required[2]	Total amount appropriated[3]	Total reduction[4]
Ordinary Annual Services	**Act (No.1)**	**Act (No.3)**	**Spent**	**Retention**			
Outcome 1	**61,034,841.84**	**0.00**	**59,949,962.57**	**1,084,879.27**	**61,034,841.84**	**61,035,000.00**	**158.16**

Notes:

1. Administered items for 2010–11 were reduced to these amounts when these financial statements were tabled in Parliament as part of ACIAR's 2010–11 annual report. This reduction is effective in 2011–12 , but the amounts are reflected in Table A in the 2010–11 financial statements in the column 'Appropriations reduced' as they are adjustments to 2010–11 appropriations.
2. Amount required as per Appropriation Act (Act 1 s. 11; Act 2 s. 12).
3. Total amount appropriated in 2010–11.
4. Total reduction effective in 2011–12.

2010	Amount required[1,2] — by Appropriation Act		Amount required [2] — as represented by:		Total amount required[2]	Total amount appropriated [3]	Total reduction[4]
Ordinary Annual Services	Act (No.1)	Act (No.3)	Spent	Retention			
Outcome 1	53,731,777.07	250,000.00	53,292,040.05	689,737.02	53,981,777.07	54,081,000.00	99,222.93

Notes:

1. Administered items for 2009–10 were reduced to these amounts when these financial statements were tabled in Parliament as part of ACIAR's 2009–10 annual report. This reduction is effective in 2010–11, but the amounts are reflected in Table A in the 2009–10 financial statements in the column 'Appropriations reduced' as they are adjustments to 2009–10 appropriations.
2. Amount required as per Appropriation Act (Act 1 s. 11; Act 2 s. 12).
3. Total amount appropriated in 2009–10.
4. Total reduction effective in 2010–11.

Note 20: Special Accounts

ACIAR has recently become aware that there is an increased risk of non-compliance with Section 83 of the *Constitution* where payments are made from special appropriations and special accounts in circumstances where the payments do not accord with conditions included in the relevant legislation.

ACIAR will investigate these circumstances and any impact on its special account shown below, seeking legal advice as appropriate.

ACIAR Special Account (Administered)	**2011 $'000**	2010 $'000
Appropriation: *Financial Management and Accountability Act 1997* section 21		
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.		
Balance brought forward from previous period	**28,159**	-
Transfer from ACIAR Special Account (Departmental)	-	4,938
Other receipts	**18,361**	39,154
Total increase	**18,361**	44,092
Available for payments	**46,520**	44,092
Payments made to suppliers	**(35,654)**	(15,933)
Repayments	-	-
Total decrease	**(35,654)**	(15,933)
Total balance carried to the next period	**10,866**	28,159

ACIAR Special Account (Departmental)	**2011 $'000**	2010 $'000
Appropriation: *Financial Management and Accountability Act 1997* section 21		
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.		
Balance brought forward from previous period	-	4,938
Appropriation for reporting period	-	-
Total increase	-	4,938
Available for payments	-	-
Transfer to ACIAR Special Account (Administered)	-	(4,938)
Total decrease	-	(4,938)
Total balance carried to the next period	-	-

ACIAR had an Other Trust Monies Special Account established under section 20 of the *Financial Management and Accountability Act 1997* (FMA Act). This account was abolished on 19 October 2010. For the period to 1 July 2010 to 19 October 2010, there were no transactions debited or credited to it, and on the 19 October 2010 the account had a $nil balance.

The purpose of the *Other Trust Monies Special Account* was for expenditure of monies temporarily held on trust or otherwise for the benefit of a person other than the Commonwealth.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 21: Compensation and Debt Relief

Compensation and Debt Relief - Departmental

No 'Act of Grace' expenses were incurred during the reporting period (2010: No expenses).

No waivers of amounts owing to the Australian Government were made pursuant to subsection 34(1) of the *Financial Management and Accountability Act 1997*(2010: No waivers).

No payments were provided under the Compensation for Detriment caused by Defective Administration (CDDA) Scheme during the reporting period (2010: No payments).

No ex-gratia payments were provided for during the reporting period (2010:No payments).

No payments were provided in special circumstances relating to APS employment pursuant to section 73 of the *Public Service Act 1999* (PS Act) during the reporting period (2010: No payments).

Compensation and Debt Relief - Administered

No 'Act of Grace' expenses were incurred during the reporting period (2010: No expenses).

No waivers of amounts owing to the Australian Government were made pursuant to subsection 34(1) of the *Financial Management and Accountability Act 1997*(2010: No waivers).

No payments were provided under the Compensation for Detriment caused by Defective Administration (CDDA) Scheme during the reporting period (2010: No payments).

No ex-gratia payments were provided for during the reporting period (2010:No payments).

No payments were provided in special circumstances relating to APS employment pursuant to section 73 of the *Public Service Act 1999* (PS Act) during the reporting period (2010: No payments).

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 22: Reporting of Outcomes

Note 22A: Net Cost of Outcome Delivery

	Outcome 1		Total	
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Expenses				
Administered	**96,940**	69,921	**96,940**	69,921
Departmental	**9,783**	9,067	**9,783**	9,067
Total	**106,723**	78,988	**106,723**	78,988
Income from non-government sector				
Administered				
Other	-	(452)	-	(452)
Total administered	-	(452)	-	(452)
Departmental				
Other	**(9)**	(22)	**(9)**	(22)
Total departmental	**(9)**	(22)	**(9)**	(22)
Total	**(9)**	(474)	**(9)**	(474)
Other own-source income				
Administered	**(35,909)**	(15,940)	**(35,909)**	(15,940)
Departmental	**(23)**	(36)	**(23)**	(36)
Total	**(35,932)**	(15,976)	**(35,932)**	(15,976)
Net cost of outcome delivery	**70,782**	62,538	**70,782**	62,538

Outcome 1 is described in Note 1.1. Net costs shown include intra-government costs that are eliminated in calculating the actual Budget Outcome.

ACIAR had no activities subject to competitive neutrality.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

for the period ended 30 June 2011

Note 22: Reporting of Outcomes, continued.

Note 22B: Major Classes of Departmental Expense, Income, Assets and Liabilities by Outcome

	Outcome 1		Total	
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Departmental Expenses				
Employees	**6,135**	6,229	**6,135**	6,229
Suppliers	**3,392**	2,589	**3,392**	2,589
Depreciation and amortisation	**240**	249	**240**	249
Write-down of assets	**16**	-	**16**	-
Total	**9,783**	9,067	**9,783**	9,067
Departmental Income				
Revenues from Government	**9,538**	9,808	**9,538**	9,808
Sales of goods and services	**9**	22	**9**	22
Other non-taxation revenue	**23**	36	**23**	36
Total	**9,570**	9,866	**9,570**	9,866
Departmental Assets				
Cash and cash equivalents	**52**	218	**52**	218
Trade and other receivables	**3,021**	2,616	**3,021**	2,616
Land and buildings	**471**	207	**471**	207
Property, plant and equipment	**420**	249	**420**	249
Intangibles	**84**	91	**84**	91
Other non-financial assets	**206**	74	**206**	74
Total	**4,254**	3,455	**4,254**	3,455
Departmental Liabilities				
Suppliers	**452**	265	**452**	265
Other payables	**354**	352	**354**	352
Employee provisions	**1,420**	1,295	**1,420**	1,295
Total	**2,226**	1,912	**2,226**	1,912

Outcome 1 is described in Note 1.1. Net costs shown include intra-government costs that were eliminated in calculating the actual Budget outcome.

Note 22: Reporting of Outcomes, continued.

Note 22C: Major Classes of Administered Expenses, Income, Assets and Liabilities by Outcome

	Outcome 1		Total	
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Administered expenses				
International development assistance	**96,940**	69,921	**96,940**	69,921
Total	**96,940**	69,921	**96,940**	69,921
Administered income				
External funds	**35,909**	15,940	**35,909**	15,940
Other revenue	**-**	452	**-**	452
Total	**35,909**	16,392	**35,909**	16,392
Administered assets				
Cash and cash equivalents	**10,866**	28,159	**10,866**	28,159
Receivables	**1,558**	1,143	**1,558**	1,143
Other non-financial assets	**27**	125	**27**	125
Total	**12,451**	29,427	**12,451**	29,427
Administered liabilities				
Suppliers	**1,617**	773	**1,617**	773
Other	**11,925**	29,343	**11,925**	29,343
Employee provisions	**3**	**-**	**3**	**-**
Total	**13,545**	30,116	**13,545**	30,116

Outcome 1 is described in Note 1.1.

Australian Centre for International Agricultural Research

Notes to and Forming Part of the Financial Statements

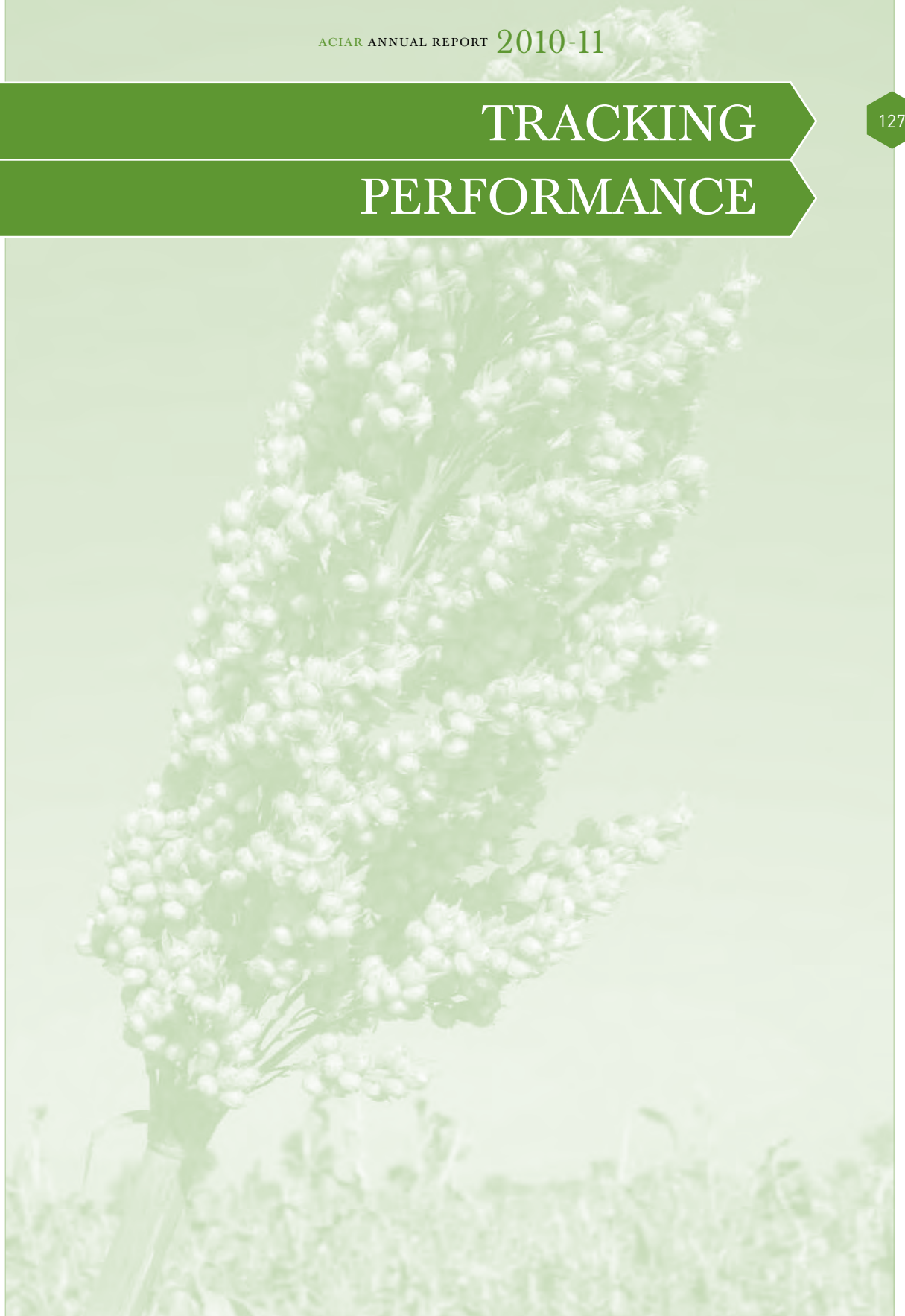
for the period ended 30 June 2011

Note 23: Comprehensive Income (loss) Attributable to ACIAR

	2011 $'000	2010 $'000
Total Comprehensive Income (loss) Attributable to ACIAR		
Total comprehensive income attributable to the Australian Government[1]	**170**	799
Plus: non-appropriated expenses		
Depreciation and amortisation expenses	**240**	-
Total comprehensive income attributable to ACIAR	**410**	799

[1]As per the Statement of Comprehensive Income.

TRACKING PERFORMANCE



TRACKING PERFORMANCE AGAINST THE 2010–11 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

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

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: International agricultural research for development for more productive and sustainable agriculture. The table below links administered program objectives, as outlined in the 2010–11 Portfolio Budget Statement, to deliverables and key performance indicators. ACIAR's administered program is delivered through a number of initiatives, including those closely aligned with the Overseas Development Assistance—*Food Security through Rural Development* Initiative.

Administered Program

Program Objective	Deliverables	Key Performance Indicators: Indicator/performance
Safeguarding food security in rice-based farming systems of Mekong countries and south Asia	Increased uptake and application of existing technologies to achieve early improvement in the productivity of key crops in partner countries	Feasibility and profitability of post-rice and legume cropping in three Provinces of Cambodia assessed. **Achieved**—assessments concluded and incorporated into relevant project activities
Adaptation to climate change for rice-based farming systems in the Mekong Delta	Utilisation of seasonal climate forecasting, crop modeling and water resource management in rice-based farming systems in the Mekong, with an additional focus on the Mekong Delta of Vietnam	Field surveys evaluated and field trials established to identify profitable crop and livestock systems for south central coastal Vietnam. **Achieved**—Field surveys completed and evaluated. Field trails are in progress to identify promising resource management practices for sustainable and profitable crop and livestock production systems best suited to local conditions that enable market engagement.

Program Objective	Deliverables	Key Performance Indicators: Indicator/performance
Developing high-value agriculture, forestry and fishery products in the Pacific	Identification of markets and supply chains with potential to deliver substantial livelihood benefits to Pacific Island communities	New market-driven product opportunities (in high-value agriculture, fisheries and forestry sectors) identified addressing constraints in at least four supply chains within the *Pacific Agribusiness Research for Development* Initiative. **Achieved**—Nine rapid supply chain reviews have been completed to identify new market driven product opportunities. A further ten partial reviews have been completed.
Sustainable intensification of maize–legume cropping systems in sub-Saharan Africa	Increased farm-level food security and productivity by sustainably intensifying maize–legume cropping systems through characterizing input and output value chain systems to identify constraints and options for field testing in partner countries of East Africa	Assessment of best bet conservation agriculture technologies in exploratory trials in five eastern and southern African countries undertaken. **Achieved**—assessments completed in all five project partner countries in East Africa.
Increasing financial support to CGIAR	New funding allocated to the CGIAR system primarily on an unrestricted basis, while respecting previous restricted funding allocations	CGIAR funding allocations within specified Annual Operational Plan parameters. **Achieved**—funding allocations match specified parameters within Annual Operational Plan.
Support for whole-of-Government and Australian aid program initiatives	Contribution to whole-of-Government programs including: managing the research and extension component of the Cambodia Agricultural Value Chain (CAVAC) program, funded on behalf of the Australian Government, through AusAID Enhancing grain production under dryland conditions in northern Iraq through the introduction and evaluation of appropriate modern varieties and improved management techniques Improving the livelihoods of smallholder farmers in Papua New Guinea through increasing the productivity of coffee-based systems and development of aquaculture systems	Whole-of-Government programs: In collaboration with CAVAC, a new project on farm-scale water management in three Cambodian provinces implemented. **In progress**—implementation delayed due to unforeseen circumstances involving key staff. Policy options to enhance farmer uptake of project technologies in northern Iraq identified. **Achieved**—project is furthering extension of zero tillage technologies in Ninevah Governorate in northern Iraq, with uptake at around 6,000 hectares, with 80 per cent of this by farmers using their own. Inception workshop and socio-economic surveys conducted of the new Papua New Guinea initiative commenced on improving livelihoods of highlands smallholders through increased productivity of coffee-based farming systems. **Achieved**—Inception meeting was successfully held, followed by the establishment of four project sites, two easily accessible, and two inaccessible sites. Preliminary household surveys have been undertaken.
	Ensure administered costs are maintained within agreed budget parameters	Administered costs within specified budget parameters. **Achieved**—administered costs were within specified budget parameters.

Departmental program

ACIAR has a 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.

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	Ensure departmental costs are maintained within agreed budget parameters	Departmental costs within specified budget parameters **Achieved**—departmental costs were within specified budget parameters.

TRACKING PERFORMANCE AGAINST THE 2010–11 ANNUAL OPERATIONAL PLAN

ACIAR's 2010–11 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 Portfolio Budget Statement and the broader Australian aid program.

Key performance indicators in each country

ACIAR measures it progress in each country through a series of key performance indicators (KPIs), reported against the 'Regional achievements' section at the beginning of each country report. 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.

Key Performance Indicator	Country	Comment
Afghanistan, Iraq and Bhutan		
Research gaps related to watershed management in Afghanistan scoped and identified	Iraq, Afghanistan, Bhutan	Scoping and identification of research gaps completed to inform current and future research projects in Afghanistan. Information shared with relevant project partners.
Elite wheat lines with Ug99 stem-rust resistance identified for agroecological zones of Afghanistan	Iraq, Afghanistan, Bhutan	Screening of elite lines matched to agro-ecological zones of Afghanistan completed.
Best practice integrated production management practices implemented by commercial citrus growers and smallholders	Iraq, Afghanistan, Bhutan	Integrated production management guidelines and information produced by the project combining best-practice aspects of plant propagation, tree selection, tree training and management, integrated pest management and nutrition. Manuals have been produced and are being distributed to commercial and small-scale growers who are implementing these recommendations.

Key Performance Indicator	Country	Comment
Bangladesh		
Effective characterisation of salinisation processes in central and southern Bhutan undertaken	Iraq, Afghanistan, Bhutan	Work is in progress, however the project was delayed in the development cycle, allowing insufficient time to finalise the characterisation of salinisation processes.
New food security emphasis achieved through research on farm production intensification with incorporation of pulses	Bangladesh	A new project was commissioned with the aim of working to introduce varieties of short-growing duration pulses, which will contribute to reinvigorating the national pulse production system. Work is underway examining these varieties within new cultivation management regimes, that will help intensify production to further food security.
Increased ability to enhance food security demonstrated through an improved understanding of cropping and water management adaptive capacity in rice-based farming systems at the local level	Bangladesh	Trials have begun for using on-farm experimental plots, established in time for the 2010 wet season, with follow-on trial during the 2010–11 dry season, with the aim of establishing options for adaptation to water availability in rice based systems.
Burma		
Results of the project on increasing food security and farmer livelihoods through enhanced legume cultivation in the central dry zone reviewed, and future research needs identified for initiation of a new program if the international situation permits	Burma	The project review highlighted significant productivity gains in three economically important legume crops (groundnut, chickpea and pigeonpea) in the central dry zone through the use of improved varieties with appropriate agronomic practices best suited to the local conditions and strengthening institutional and human resource capacity. Future research needs in food legumes were identified and built into a multidisciplinary program involving crop, livestock, fisheries and socio-economic sectors with the overall aim of improving food security and farmer livelihoods in Burma.
Cambodia		
Livestock trader networks identified and protocols for tracking cattle and buffalo movements, and for investigation of foot and mouth disease outbreaks, developed with traders and government agencies	Cambodia	Livestock traders have supplied information on networks, allowing for the identification of the movement of cattle and buffalo through these networks. Workshops bringing together key stakeholders, to develop strategies to manage risk from animal movements have been held, informing ongoing research into optimal management practices.
Potential profit improvements from alternative farm management methods and technologies investigated for maize-based cropping systems in north-western Cambodia	Cambodia	External end of project review indicated potential of maize–legume based systems in north-west Cambodia, including financial returns. Collaboration with local NGOs was hugely successful in disseminating research outputs to participant farming communities in the two focus regions.
Feasibility and profitability of post ricelegume cropping assessed in three provinces	Cambodia	Assessments have been made in three major lowland rice growing provinces of Kampong Thom, Kampong Cham and Takeo, with work now concentrating on two provinces, to develop 'best-bet' scenarios for cropping legumes such as peanuts and mungbeans.
Technical crop management practices for leafy vegetables, chilli and tomato developed and pilot tested on commercial farms in Kampot, Takeo and Kampong Thom provinces	Cambodia	New cultivars, low cost drip irrigation, mulching, optimising soil nutrition and low cost-cooling management practices for leafy brassicas, chilli and tomato have been developed and are being tested on commercial farms and government research stations in Kampot, Takeo and Kampong Thom. This work has been underpinned by the development of farmer fact sheets on key best practice management strategies.

Key Performance Indicator	Country	Comment
Cambodia (continued)		
Farming systems typologies at local and provincial (Svay Rieng province) levels identified that are amenable to adaptation strategies based on cropping and water management	Cambodia	Work is in progress, however the project was delayed in the development cycle
In collaboration with CAVAC, a new project on farm-scale water management in three Cambodian provinces implemented	Cambodia	The project was delayed in the development cycle.
China		
Viability of alternative frameworks for production and trade-related responses to climate change impacts and projections assessed	China	A scoping study was completed on climate change and agriculture which is now being used to establish a significant regional climate change adjustment policy project with Chinese partners.
Scoping studies to enhance linkages on environmental policy and program research platforms undertaken at bilateral and regional levels	China	A land use change policy research project in China (Sichuan province) has been successfully completed and provided to Chinese central and provisional government authorities. A successful end of project symposium in China was undertaken, including senior Chinese Government research and advisory officials. China proposes to continue this work.
Improved understanding of wheat breeding potential to address dryland wheat production and related conservation farming systems in north-western China	China	Trials, undertaken as part of a breeding program, assessing traits of wheat, for optimal performance in dryland growing conditions have identified root elongation and root number genotypic variations. These are helping to select varieties expected to improve yields, boosting farmer incomes.
Mineral status surveys and trials on mineral supplementation of yaks and sheep in Tibet Autonomous Region completed, providing the foundation for recommendations on future mineral supplementation management	China	Surveys have been completed, allowing progress on the development of recommendations on future mineral supplementation regimes. A key focal point will be the low levels of some major and trace minerals in animals, which may be key factors limiting livestock productivity.
Case-study farms established in four villages in northern China to monitor, test and demonstrate more-sustainable livestock grazing systems on Chinese temperate grasslands	China	Work is in progress, however this was delayed following research that revealed a need to lift livestock forage resources. As a result project timelines have been adapted, resulting in some work, anticipated to occur earlier in the project cycle, being pushed back, affecting the establishment of some of the case-study farms.
East Timor		
A new phase of Seeds of Life (SOL3) designed and commenced with East Timor partners	East Timor	The third phase of Seed of Life has commenced, with the East Timorese Ministry of Agriculture, Forestry and Fisheries as a major partner.
One research station (Loes) rehabilitated and activated, together with capacity building results	East Timor	The Loes station is now active, and taking a role in building capacity of East Timorese scientists.

Key Performance Indicator	Country	Comment
East Timor (continued)		
Implementation of 10-year livestock R&D strategy commenced, with initial research project on pig and cattle production systems	East Timor	The R&D strategy was implemented, with support from East Timorese stakeholders. Initial research is focused on pig and cattle production. The project involves a tripartite agreement with East Timor, Indonesia and Australia, the first time Indonesian and East Timorese researchers have collaborated since East Timorese independence.
India		
Provision of evidence-based policy options on competition and market reform for the Indian agricultural economy	India	Joint study on domestic market regulation and competition undertaken with Indian policy and R&D agencies. Expressed interest by Government advisers and the Chief Economic Adviser (CEA) of India indicate policy impact. Follow up case study on Indian onion market instigated at request of CEA.
Dissemination of applicable genetic information for quality and phenology in Indian wheat-breeding programs	India	Progress in the wheat-breeding programs continues, with a focus on developing wheat germplasm for deeper, faster growing root systems. This enables increased water capture, boosting grain levels. A key component of the program is germplasm exchange between India and Australia, with both countries benefiting from access to new lines.
Identification of weed management strategies for direct seeded rice in the rice–wheat farming system	India	Excellent progress continues in testing and demonstrating the use of zero-tillage with retention of crop residues, leading to the development of optimal management strategies across several Indian environments.
Improved understanding of the impact of climate change on water resources in the Krishna Basin	India	Work has concentrated on understanding the constraints on farmers, and their resource options to manage climate variability. This links to crop modelling programs to demonstrate yield potential based on climate data and likely scenarios.
Indonesia		
Analysis of factors affecting competitiveness of key high-valued products of relevance to other R&D projects (e.g. mango and mangosteen)	Indonesia	Factors affecting competitiveness have been identifying through project activities related to agribusiness, horticulture, agricultural development policy and support for market-driven adaptive research.
Constraints to improved market integration for high-value vegetable production systems in Indonesia analysed and documented	Indonesia	Constraints have been identified through project activities. Subsequent project development has also analysed limitations to improved market integration and designed research activities to overcome these limitations. Limited documentation of constraints achieved.
Support provided for the long-term extension needs of Papua and West Papua provinces in sweetpotato–pig production systems	Indonesia	An Extension Officer from the Provincial Extension Service who is located in participating villages has been employed to support the project, with an Arfak University student from UNIPA as a liaison officer between the project and local communities.

Key Performance Indicator	Country	Comment
Indonesia (continued)		
A diagnostic test to differentiate poultry infected with highly pathogenic avian influenza from those immunised with commercial vaccines validated in small commercial broiler and layer flocks	Indonesia	A methodology and test are in development, with modifications to this being made to produce a robust and simple test for routine diagnostic applications in Indonesia.
Reconstruction and capacity building of Brackishwater Aquaculture Development Centre (BADC) Ujung Batee completed and the centre actively supporting diversification of coastal aquaculture farming in Aceh	Indonesia	Ponds constructed under ACIAR projects have been used to successfully demonstrate production techniques for shrimp, milkfish and tilapia. These trials were also used to build extension capacity for staff. Considerable additional training in fields such as laboratory techniques, animal health, hatchery systems, and general workforce skills has greatly increased the capacity of staff to service the local aquaculture industry.
Extension, by catchment-based sets of farmer groups, of shrimp production packages to address local catchment biosecurity production consistency, product quality and food safety	Indonesia	There is enthusiastic farmer involvement in the project and the development of shrimp production systems. However, several difficulties have resulted in initial goals being only partially met. These have included: lack of uniformity of group action—necessary when water supplies, which are a major source of disease ingress, are shared; complexity of some essential biosecurity practices; lack of animal health and extension services for small-scale shrimp farmers.
Improved assessment and management of capture fisheries through innovative policy development and reductions in Illegal, Unregulated and Unreported (IUU) fishing	Indonesia	Management plans for three fisheries are being developed; training on stock assessment and enumeration processes for various types of fisheries has been provided to Indonesian counterpart staff; a highly successful training course was provided on bioeconomics, fishing capacity and risk assessment was delivered; and a book detailing more than 900 species of fishes found in markets in Indonesia is being prepared. An initial investigation and review of IUU fishing in south-eastern Indonesian has been completed—further work will then lead to recommendations for measures to address IUU fishing.
Implementation of improvements in production, pest and disease management, quality and marketability for banana, citrus, mango and mangosteen	Indonesia	Field testing of management practices for improvements in production, pest and disease management, quality and marketability of banana, citrus, mango and mangosteen has continued in Sumatra and Java with more progressive growers starting to implement these practices on a commercial basis. Examples of these practices include the use of pheromones and lures for fruit fly control in mango, pre- and post-harvest management of physiological disorders of mangosteen (e.g. reduced latex and skin and flesh hardening by reducing physical impact), use of disease-free planting material and agronomic practices for disease control in bananas.
Priorities identified for improving the profitability of small to medium enterprises processing teak and mahogany into furniture in Jepara	Indonesia	The priorities to improve profitability have been identified and action undertaken to address the highest priorities, including development of a 'furniture industry roadmap', training of manufacturers in product certification and development of an on line marketing system.

Key Performance Indicator	Country	Comment
Indonesia (continued)		
New initiative designed on enhancement of the productivity of acacia plantations, integrating site selection and management with approaches to disease management	Indonesia	A new project (FST/2009/051) was finalised and Indonesian approvals obtained in June. The inception workshop for this project was held in mid June. The project addresses plantation productivity, root rot control and socio-economic research questions.
Constraints to profitability of smallholder beef cattle production and supply systems in East Java characterised	Indonesia	Surveys of feed resources, farming systems, fattening operations and marketing chains in East Java revealed the drivers of farmer decision making, and differences in those decisions across different environments. This has revealed the key constraints in smallholder production and supply chains.
Between 5 and 10 forage legume varieties with appropriate traits for inclusion in eastern Indonesian and East Timor farming systems identified and field tested	Indonesia	Field testing of a number of legume varieties has identified four outstanding candidate species, to undergo more extensive trialling, with several more species of value also identified.
An agricultural value chains research program for eastern Indonesia designed and implemented under the umbrella of AIPD-AVA.	Indonesia	The project has been delayed in the development cycle.
Eight representative sites in Aceh established for increasing productivity of rice-based cropping systems	Indonesia	On-farm field trials have been established in eight representative sites in Aceh to evaluate integrated crop and soil management practices to increase the productivity and to sustain soil fertility of rice based cropping systems.
Lao People's Democratic Republic		
Learning alliance for smallholder pig production expanded in scope to include pig health and pig-associated human disease, and expanded geographically to include provinces in southern Laos	Laos	Two projects, linking increased productivity and reduced risk in pig production and market chains are underway, with formal and informal linkages, designed to pass on information and outcomes between project personnel, incorporated.
Livestock extension approaches adapted to targeted poor districts in northern Laos, resulting in demonstrated improvements to management processes	Laos	This project extended the application of locally adapted extension techniques to upland areas in North Laos, particularly with a focus on marginalised groups, women and ethnic groups, resulting in changes in management practices.
Farm and marketing systems research extended to southern Laos	Laos	Systems research extended to two provinces in southern Laos (Savannakhet and Champassak) with adaptive trials covering resource management, cropping and animal husbandry.
Extent of flood-plain barriers determined in at least two catchments, and baseline ecological socioeconomic studies undertaken in catchments selected for fish passage construction	Laos	The project commenced in September 2010, and has had a six month inception phase. Detailed mapping of fish barriers in one river system has been completed, along with initial baseline socio-economic studies.

Key Performance Indicator	Country	Comment
Lao People's Democratic Republic (continued)		
Options assessed for potential new whole-of-value-chain work on the teak industry of northern Laos, integrating the silvicultural and processing approaches of previous projects with broader issues such as harvesting, transport and new products	Laos	The scoping mission for this new project was conducted in May 2011, along with scoping work for a second project on payments for environmental services. A draft report has been received and commented on and is due for submission to ACIAR by 30 June. Two new projects commenced development in July 2011.
Pacific Island countries		
New market-driven product opportunities (in high-value agriculture, fisheries and forestry sectors) identified, and Pacific Agribusiness Research for Development Initiative (PARDI) addressing constraints in at least four supply chains	Pacific Island countries	Nine rapid supply chain reviews have been completed to identify new market driven product opportunities. A further ten partial reviews have been completed. Four PARDI-funded research projects were commenced in late 2010 and early 2011. PARDI now has project-based activities across all target Pacific countries (Fiji [3], Samoa [1], Tonga [3], Solomon Islands [1], Vanuatu [1] and Kiribati [1]).
New work commenced on product development and marketing of at least two new forestry-related products	Fiji	The cocowood project has been completed. A new engineered flooring product using thinly sawn cocowood has been developed for markets identified in Australia and Europe for the product. A solid wood flooring product was also developed and is being produced in Fiji.
Increased capability to supply high-performing seedstock to support expansion of at least two aquaculture industries in the Pacific region	Fiji, Solomon Islands	Superior performing strains of the giant freshwater prawn identified through production trials in Fiji; performance under aquaculture of two tilapia species (a freshwater fish) tested in Solomon Islands, showing one species to be vastly superior to the other. Similar preliminary trials are also being undertaken for pearl oysters in several Pacific Island countries.
Pilot sites established in at least two countries for evaluating and promoting strategies to improve soil health	Fiji, Samoa	Trials are already under way to evaluate soil health improvement strategies at a pilot site on Taveuni island in Fiji. A similar site will be established on Upolu island of Samoa during the second half of 2011. The delay in establishing the second pilot site resulted from the development and review process for the project taking longer than anticipated.
Integrated management packages for vegetable crops being used commercially in at least three Pacific Island countries	Fiji, Samoa, Solomon Islands	Integrated management packages are in use by small-scale commercial growers of solanaceous vegetables (tomatoes, egg plant and peppers) in Solomon Islands and by cabbage growers in Fiji and Samoa. Wider adoption is anticipated only when a more adequate supply of environmentally friendly pesticides are available, combined with regulatory and economic incentives to promote their use.

Key Performance Indicator	Country	Comment
Pakistan		
Commercial production of disease-free mango and citrus planting material with resistance to environmental stresses established, and distribution to growers commenced	Pakistan	23 cultivars including mandarin, sweet, lemon and grapefruit have been sent to Pakistan, with trials established at the University of Agriculture, Faisalabad. The establishment of the Faiz-a-Azam commercial mango nursery in the Multan district with technical support and assistance from the project has been completed. This nursery has a capacity of producing more than 20,000 seedlings per annum. The nursery is producing disease-free mango planting material with some resistance/tolerance to drought and salinity, and sold to growers at affordable prices.
Integrated crop management recommendations developed, and implementation commenced, for mango and citrus growers	Pakistan	Integrated crop management recommendations that focus on improved tree pruning and general tree husbandry, timely nutrient applications and judicious use of pesticides against target pests and diseases, have been developed. Brochures of these integrated crop management recommendations have been produced and distributed to different stakeholders. The integrated crop management recommended practices are being implemented in model/demonstration blocks at five sites in the Multan and 10 in the Rahim Yar Khan Districts of Punjab Province and 17 sites in the Mirpurkhas and Hyderabad Districts of Sindh Province.
Preliminary mango market R&D completed for at least one new export market	Pakistan	Preliminary market research has been completed in China and Malaysia, two emerging export markets for Pakistan mango. The research has shown that the market window in China is late in the Pakistan mango season, during which time there is little competition and high prices can be achieved for premium product.
Best-practice demonstration value chain established for at least one existing export market	Pakistan	The Malaysian market represents a smaller opportunity but one that is available throughout the Pakistan mango season. An exporter working with the project, sent two trial shipments and conducted evaluations. Results point to this being a small but profitable market.
Feed base for smallholder dairy farmers optimised and profitable feeding strategies for calf rearing trialled in new regions of Punjab and Sindh	Pakistan	Work on the extension chain for smallholder dairy farmers, a key component of optimising profitable calf rearing has progressed at a slower rate than expected, largely due to the impacts of the flooding in Pakistan in July 2010.
Papua New Guinea		
Analysis of Papua New Guinea's fuelwood economy completed	Papua New Guinea	The data from this comprehensive survey of 4000 users has been analysed and a summary report prepared. Final edits are being made by project leader, but it will be available on the website in the near future.
Initiatives commenced to improve the international competitiveness of the balsa growing and processing industry of East New Britain	Papua New Guinea	This new project was finalised in January, final approvals from Papua New Guinea occurred in June and the first project activities will occur in July 2011.

Key Performance Indicator	Country	Comment
Papua New Guinea (continued)		
Potential high-return vegetable products and related value chains identified for planning interventions for future expansion of vegetable production and marketing in Central province of Papua New Guinea	Papua New Guinea	Interviews with smallholders and other stakeholders completed and best practice value chain management models identified and appropriate participants arranged. Research trials for integrated chain improvement and management of resources for expansion of vegetable production and marketing in Central province of Papua New Guinea designed.
On-farm field trials provided of valuable management practices for effective and sustainable management of resources to increase productivity of sweetpotato-based cropping systems	Papua New Guinea	On-farm field trials provided various management options for using available organic residues with appropriate soil management practices for increasing overall productivity of sweetpotato-based cropping systems. Soil analytical data of long term field trials were useful for monitoring soil fertility status affected by various management practices.
Inception workshop and socioeconomic surveys conducted of the new initiative commenced on improving livelihoods of highlands smallholder farmers through increased productivity of coffee-based farming systems	Papua New Guinea	Inception meeting was successfully held, followed by the establishment of four project sites, two easily accessible, and two inaccessible sites. Preliminary household surveys have been undertaken.
Integrated approaches for managing cocoa pod borer infestation, based on improved crop husbandry crop sanitation and targeted pod spraying, trialled on farm by growers in existing areas of infestation, and measures to contain spread to new areas implemented	Papua New Guinea	Integrated pest management approaches have been trialled by growers in East New Britain (the province first affected) and shown to be effective in reducing losses to sustainable levels—at which cocoa can once more be produced profitably by smallholders and on plantations. However, measures to contain the spread of cocoa pod borer are no longer being implemented because the pest has effectively spread throughout cocoa-producing provinces of Papua New Guinea.
Smallholder cocoa growers trained in practical options for managing cocoa pod borer and evaluating these options on their farms	Papua New Guinea	More than 300 farmers have so far graduated from Farmer Field Schools in which they have learned about options for managing cocoa pod borer and how to evaluate them on-farm. This approached is regarded as having proved its value at this pilot level and is now ready to be scaled up.
Philippines		
Strategies for the management of key pest, disease and nutrition constraints to mango, papaya, jackfruit and durian production developed and tested in small-scale farmer trials	Philippines	Mango integrated pest management strategies; papaya bacterial crown rot, phytophthora, choco spot and mite control strategies; and chemical and agronomic management for control of phytophthora in durina and jackfruit have now been developed and being tested under commercial conditions in Leyte (jackfruit) and Mindanao (papaya, mango and durian).
Representative domestic papaya supply chain and domestic and export mango value chains mapped and evaluated using product-based, financial and relational information systems and institutional criteria	Philippines	Value chain analysis of papaya chain in Philippines successfully undertaken.

Key Performance Indicator	Country	Comment
Philippines (continued)		
At least four vegetable and fruit enterprise and gross margin analyses completed and disseminated	Philippines	Gross margin analysis undertaken.
Commercial-sector protected cropping systems field sites established based on previous R&D trials and activities in Leyte	Philippines	Twenty-three new commercial protected cropping sites across 12 Barangays in Ormoc, Maasin, Bontoc and Bato have now been established as a result of the ACIAR protected cropping R&D component. In addition, the German Development Agency GIZ has provided funding to Barabgays in Leyte for the construction of an additional 48 protected cropping structures based on designs developed by the ACIAR project.
Fertiliser management strategies with a lower cost, field-specific, fertiliser program tested	Philippines	The field trials conducted under different agro-ecological conditions such as on steeply sloping uplands in two upper watersheds in Bohol provided low-cost resource management practices in corn–cassava cropping systems to improve fertiliser use efficiency and overall crop productivity with the main focus on enhancing farmer livelihoods.
Nutrient budgeting evaluated for identification of promising agronomic management practices for vegetable production in southern Philippines	Philippines	Nutrient budgeting studies conducted in five different sites in southern Philippines demonstrated the potential of using organic residues in combination with mineral fertilisers to enhance soil fertility and crop growth of a range of vegetables. These results were used in identification of promising agronomic management practices for cost-effective production of vegetables.
African countries		
Assessment of best-bet conservation agriculture technologies undertaken in exploratory trials in five eastern and southern African countries	Ethiopia, Kenya, Malawi, Mozambique, Tanzania	Trials of potential best-bet options for maize–legume intercropping have been undertaken across the five countries involved in the SIMLESA project, with good results emerging that are shaping future activities to refine and finalise recommended options.
Working linkages established between the eastern and southern African food security program (supported by ACIAR) and the West African food security program (supported by AusAID)	African countries	Linkages have been established between the two programs, allowing exploration of commonalities and project foci.
An analysis provided of the South African beef production and market quality and standards requirements for wider application	South Africa	A small pilot aimed at identifying if segmentation occurred for beef in the South Africa market was undertaken to analyse production and market quality standards. Results were published as an ACIAR technical report, and will be incorporated into the design of future research initiatives.
An applied beef production value-chain project designed and operational in Botswana	South Africa	A scoping study to Botswana late in 2010 informing development of the project on the beef production value chain. The design phase is completed, with implementation delayed.

Key Performance Indicator	Country	Comment
Thailand		
Dissemination of research outputs to meet country needs within the region emphasising farmer participatory approaches, including increasing knowledge and skills, on rice-based lowland cropping systems in Lao People's Democratic Republic	Thailand	Thailand is now a centre of excellence in several areas in the region, with applicable research initiatives flowing to Mekong countries. One ACIAR-funded project is utilising some of this expertise to develop alternative technologies to alleviate some production constraints in rice-based farming and cattle production systems. This expertise is being employed in Laos, as well as Cambodia and northern Thailand.
Molecular plant diagnostic techniques for quarantinable fruit and vegetable plant diseases developed and in routine use	Thailand	Six Thai scientists were trained in Australian molecular diagnostic laboratories to be proficient in routine molecular methods used for plant pest diagnostics. These methods included techniques for the extraction of DNA and RNA, PCR, RT-PCR, gel electrophoresis, DNA sequencing, sequence analysis and cloning, primer design and ELISA. These techniques were taught in relation to several targets, including the identification of virus diseases, plant parasitic nematodes, bacteria, fruit flies, citrus diseases and for a range of seed pathogens. These techniques are now used routinely in the DOA Plant Quarantine laboratory in Bangkok in the application of diagnostic protocols for the detection specific pests. In particular when issuing phytosanitary certificates and for seed pathology and in testing fruit and vegetable produce for import and export.
Measurement of benefits of low-chill fruit component of ACIAR–World Vision project on facilitating farmer uptake of technical research	Thailand	Impact assessment of the returns to investment in the low-chill fruit component of the ACIAR–World Vision project on facilitating farmer uptake of technical research completed and published
Participating farmers obtaining faster cattle-fattening rates through increased production of improved forage varieties and production of forages on non-cropping land	Thailand	On-farm trails evaluated a range of forage grasses and identified appropriate varieties to be planted in north-eastern Thailand. The work conducted on livestock health and on cattle fattening techniques demonstrated the benefits of improved technologies compared to traditional practices.
Vietnam		
Implementation of a project to support counter-seasonal supply into the Hanoi market as part of ACIAR's continued support of poverty reduction through market engagement for smallholder farmers in the north-western highlands of Vietnam	Vietnam	A project has been implemented to support counter-seasonal supply into the Hanoi market as part of ACIAR's continued support of poverty reduction through market engagement for smallholder farmers in the north-western highlands of Vietnam
Increased knowledge and capability on nutritional requirements, ingredient use and diet-processing technology for high-value aquaculture species	Vietnam	Successfully completed through a series of workshops, industry training sessions and growth trials in Vietnam. Determined key growth parameters and diet composition requirements for five marine aquaculture species.
Hatchery and nursery production techniques adapted to enable more than 10 million single-seed oysters to be distributed to farmers	Vietnam	Production of oyster seed has reached 100 million in northern Vietnam, with a corresponding rapid increase in production of large, edible oysters. The industry continues to grow, largely due to the inputs from the ACIAR project.

Key Performance Indicator	Country	Comment
Vietnam (continued)		
New project commenced on production of high-quality veneers from plantation eucalypts and acacias	Vietnam	The technical content of the new project was finalised in January but in country approvals were not received until 10 June, despite considerable effort from project partners and the country office. The inception workshop was held in August.
Field surveys evaluated and field trials established to identify profitable crop and livestock systems for south-central coastal Vietnam	Vietnam	Field surveys completed and evaluated. Field trails are in progress to identify promising resource management practices for sustainable and profitable crop and livestock production systems best suited to local conditions that enable market engagement.
Participatory research trials established in two provinces of south-central Vietnam to evaluate the biophysical and socioeconomic impacts of cattle management interventions on smallholder farms	Vietnam	Detailed benchmarking of cattle management factors has focused on five households from two villages in each study commune, a total of 30 households. Collection of available cattle nutrition information has commenced to assess gaps and develop an experimental plan. Preliminary market mapping and value chains of selected agricultural products, including beef cattle has been completed. The gathering of data and information on grain legume (peanut) markets and value chain has started. The farm and household economic structure and systems have been identified and will be included in the market chain analysis. The benchmarking process involved group discussions and interviews, including farmers, DARD representatives and commune leaders.

Key performance indicators in research programs

Communicating research	
Information on program and project achievements and impacts is widely available in print and web-based media	All project annual report excerpts and final reports on web. Impact assessment publications on website. Partners articles on key program achievements, along with key impact assessments. Five new impact assessment publications and more than 12 scientific publications produced. Contributions to AusAID's Focus magazine also made.
Evidence is available of continuing demand for and appreciation of ACIAR's scientific and corporate publications	Demand for hard copy publications has risen, with short print runs of highly demanded publications, such as on Cocoa in Pacific. Hard copy sales remain at levels consistent with past years. Copies of both scientific and corporate publications remain amongst most downloaded pages on ACIAR website, with Partners magazine now regularly featured on homepage. Partners print run and distribution levels rising slowly, consistent with trends in previous years.
Targeted stakeholder groups have received information that meets their identified needs	AOP distributed to more than 1,500 stakeholders in Australia and partner countries. Partners magazine provided to stakeholders in Australia, partner countries and beyond. Support for CEO in appearances to promote ACIAR. Contributions to a range of other activities by senior staff to promote ACIAR to stakeholder groups.

ACIAR's use of information and communication methods and technologies for disseminating agricultural research information for development is consistent with current Australian Government better practice guides	ACIAR's website was redesigned and meets Australian Government standards. The site has had improvements relating to accessibility, in response to an accessibility audit. Upgrades have been made to searching, introducing faceted search functionality. The Communications team has piloted a new methodology for developing more robust in-project communication strategies.
Building capacity	
At least 35 students successfully completed postgraduate awards in 2010–11 including two from East Timor.	39 ACIAR-managed postgraduate students successfully completed postgraduate awards in 2010–11 including two from East Timor.
Management of the John Allwright Fellowship program effectively maintained following significant increase in number of postgraduate students.	There were 138 postgraduate students active during 2010–11
High quality of applicants for research management training programs in Australia continued, with at least eight John Dillon Fellowships awarded.	11 John Dillon fellowship awardees received research management training in Australia.
Impact assessment program	
At least five impact assessment studies of completed projects published	Seven impact assessments published with a further four completed
Impact assessment review completed of at least one program in Papua New Guinea	Impact assessment of ACIAR's investment in forestry in Papua New Guinea completed, revealing potential benefits from research into galip nuts of $163 million, a benefit of $22.60 for every dollar invested.
Pathway analysis undertaken of ACIAR's animal health program	Pathway analysis of AH rodent control program undertaken. Analysis of other clusters of research postponed.
Impact of IARC activities in ACIAR's mandated regions assessed	Impact assessment of IRRI' investment in rice germplasm improvement in three countries in ACIAR's Mandate region completed, revealing: an internal rate of return of 28 per cent on Australia's investment; a benefit cost ratio of 21:7:1; a net present value of US$96.5 billion in past and future benefits; and a net present value of US$47 billion in past benefits. Average benefits from this research to Vietnam, Philippines and Indonesia are $1.46 billion a year. In effect this means that each Australian aid dollar contributed to IRRI can be said to return 28 per cent on the original investment.
2010–11 Project Leader Adoption Studies published	11 Adoption studies completed for publication in ACIAR's Adoption Study Series, examining levels of adoption for project outcomes three years after the conclusion of the project. Findings are incorporated into ACIAR's research project evaluation and monitoring.
Improved working links established with partner country, international centre and Australian impact assessment groups	Working links with other evaluation specialists maintained through networking at workshops and conferences and co-facilitating and co-delivering research evaluation and impact assessment training workshops.
A pathway analysis of ACIAR's research investment in rodent controls in South–East Asia delivered	Pathway analysis of ACIAR's research investment in rodent controls in South–East Asia completed

Key performance indicators for portfolio management

Key performance indicators	Performance 2010–11
Departmental and administered costs maintained within agreed budget parameters	Both departmental and administered costs were within agreed budget parameters
All legislative and reporting requirements and requests for policy advice and information met in an efficient and timely manner	ACIAR's Annual Report for 2009–10 was tabled prior to the 31 October 2010 deadline. The Centre's Portfolio Budget Statement reporting and budget reporting was timely. Reports and contributions to required compliance reporting were delivered on time, including the Ministerial Aid Statement, those to Commonwealth agencies, submissions and requests to key stakeholders and Questions on Notice.
Our corporate knowledge and information readily accessible to all staff	ACIAR complies with records management requirements, and has in place systems and processes to ensure information is available. The Intranet was upgraded, providing greater accessibility to a range of information. Records are captured and shared in our records management system.
Stakeholders have access to information on program and project outcomes, and impacts of past projects	All active projects, including project objectives and annual reports are available through the ACIAR website. Final reports of concluded projects are published on the website, along with monographs, proceedings and technical reports from selected, concluded projects where that information is otherwise unlikely to be widely disseminated. The Annual Operational Plan, Annual Report and Partners magazine, outlining the Centre's intended financial year plan, performance within that year, and stories of projects, respectively, are widely disseminated to Australian and international stakeholders.

REPORTING AGAINST OTHER STATUTORY REQUIREMENTS

MANAGEMENT OF HUMAN RESOURCES

Snapshot of ACIAR staff as at 30 June 2011

Staff employed under the PS Act	49* FTE 45.2
Median length of APS service	6 years
Median age	50
Women as % of total	63%
NESB staff as % of total	8.16%
Part-time staff as % of total	20.4%
Non-ongoing staff as % of total	30.6%
Employee turnover for 2010–11	18.36%

*excludes CEO and two inoperative employees

ACIAR four-year perspective

Staff employed under the Public Service Act 1999

	2007–2008	2008–2009	2009–2010	2010–2011
Staff at 30 June	44	47	49	49
Staff (FTE)	40.55	43.84	46.52	45.2
Base salaries	$3,628,500	$3,892,196	$4,227,052	$4,488,987
Cessations	17	8	7	9
Staff turnover	33.9%	17.2%	14.23%	18.36%
Women	61.4%	60%	67.34%	63%
Part-time	22.7%	22.2%	24.48%	20.4%
Non-ongoing	36.4%	37.8%	36.73%	30.6%
Learning and development activities	$59,489	$24,561	$47,752	$64,502

Overseas staff

	2007–2008	2008–2009	2009–2010	2010–2011
Staff (FTE)	20.5	19.5	18.5	16.25
Base salaries	$690,678	$837,659	$625,552	$562,563
Learning and development activities	$17,257	$2,130	$2,952	$1,018

Performance Management

The Australian Centre for International Agricultural Research (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 2011 there were 47 completed assessments and all were rated as 'meets expectations' or higher. Of these, 10 were advanced one salary point.

Organisation Bonuses

Employees rated as 'meets expectations' or higher in the performance cycle, who have worked for ACIAR for at least nine months and who were still employed by ACIAR on 30 June 2011 received a bonus of $2,000 in recognition of ACIAR's achievements against the 2010–11 Annual Operational Plan. Part-time employees received a prorata payment based on hours worked. Forty six (46) employees received the performance bonus with payments totaling $81,067.

Learning and Development

In 2010–11 ACIAR spent $64,502 on training and development for its Canberra-based employees. This expenditure does not include attendance of Research Program Managers at professional conferences and seminars in Australia and overseas. ACIAR offers generous assistance for formal study and in 2010–11 four employees received study assistance.

Occupational Health and Safety

There were no accidents or dangerous occurrences giving rise to issue of any formal notices or directions under the *OHS (Commonwealth Employment) Act 1991.*

ACIAR provides access to an Employee Assistance Program that provides free professional counselling and career planning services to ACIAR employees and their families. The service also includes assistance to line managers, mediation and conflict resolution services and wellbeing seminars.

ACIAR encourages and promotes a healthy lifestyle by providing access to annual health assessments, subsidies for healthy lifestyle initiatives, annual influenza injections and pre-travel assessments by the Travel Doctor for overseas travellers.

A qualified workplace assessor conducts ergonomic assessments for new employees and employees who experience discomfort at their workstation. Modifications are made to work practices and work areas as required resulting in less work-related physical ailments and increased productivity.

Workplace Diversity

ACIAR promotes a culture of professional behaviour and encourages relationships based on respect and appreciation of each others' differences. Our Workplace Diversity Program encourages and supports the importance of all employees achieving an appropriate balance of work, family and cultural responsibilities.

We continued our support and participation in APS-wide initiatives to promote workplace diversity, Indigenous training and development opportunities and we encourage people with disabilities to apply for employment opportunities within ACIAR.

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 2011, 4.1 per cent of our staff had identified as having a disability.

People seeking employment with ACIAR can find guidance and assistance on the recruitment page of ACIAR's website.

Enterprise Agreement

ACIAR negotiated a new Enterprise Agreement under the Fair Work Act 2009. The ACIAR Enterprise Agreement 2011–2014 came into effect on 29 June 2011. The agreement was made in accordance with the APS Bargaining Framework and contains non-binding standard terms and conditions and salary increases of three per cent, with an initial 2.6 per cent increase being effective on commencement.

EXTERNAL SCRUTINY AND AUDITING

Judicial decisions and decisions of administrative tribunals

No decisions were made at either the judicial or administrative tribunal level during the 2010–11 financial year that impacted on ACIAR. No impending decisions relating directly to ACIAR are outsourced or pending.

There are no significant developments relating to the increasing of, limiting of or other changes to external scrutiny arrangements.

Reports by the Auditor General and the ANAO

One ACIAR-specific audit, of the 2010–11 financial statements, was completed in 2010–11, which was unqualified.

Through its Audit Committee the Centre examines any relevant findings and recommendations of relevant Australian National Audit Office (ANAO) reports for their applicability to ACIAR.

PURCHASING AND TENDERING COMPLIANCE

Purchasing

ACIAR complies with the Commonwealth Procurement Guidelines and the objectives of Commonwealth procurement. Value for money is applied as the core principle in the procurement process, consistent with Section 4 (4.1) of the guidelines. ACIAR's Chief Executive Instructions include details on delegations, the spending of public moneys and dealing with public property. These instructions have been developed in accordance with the Commonwealth Procurement Guidelines, the Environmental Purchasing Guide and various Finance Circulars.

The majority of ACIAR's procurement falls into either: exemption 5: procurement for the direct purpose of providing foreign assistance, or exemption 6: procurement of research and development services, but not the procurement of inputs to research and development undertaken by the agency: exemptions from mandatory procurement procedures, Commonwealth Procurement Guidelines.

Those contracts and agreements under exemption 5 and 6 include: contracts for scoping and feasibility studies; appraisals relating to project design, monitoring and evaluation of programs or projects; project implementation; procurement of goods and services for projects; agreements with NGOs, other governments and international agencies; follow-up activities including workshops to disseminate project outcomes; and post-project assessments and reviews. In relation to project activities, the Centre:

- 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

One open purchase (over $80,000) involving tendering was carried out during 2010–11.

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 Chief Executive's Instruction (CEI 6.02 Procurement) relating to procurement. In accordance with the Commonwealth Procurement Guidelines, ACIAR publishes an Annual Procurement Plan on AusTender.

Consultants and contracts

The Chief Executive Instructions set out the policies and procedures for selecting consultants, and approving expenditure for them. The procurement method is determined having regard to the nature of the work involved and the broad cost thresholds set out in the Chief Executive Instructions.

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 to that outlined below.

During 2010–11 no contracts for **consultancies*** were entered into.

* The distinction between 'consultancy contracts' and 'other contracts and agreements' is in accordance with Financial Management Guideline No. 15—Guidance on Procurement Publishing Obligations.

In addition to contracts in excess of $100,000 reported under the Senate Order referred to above, ACIAR entered into an additional 156 **contracts and agreements** to acquire services mainly related to the research program. These contracts totalled $2,670,452 in 2010–11 (2009–10: $1,773,074). All contracts over $10,000 were reported in AusTender.

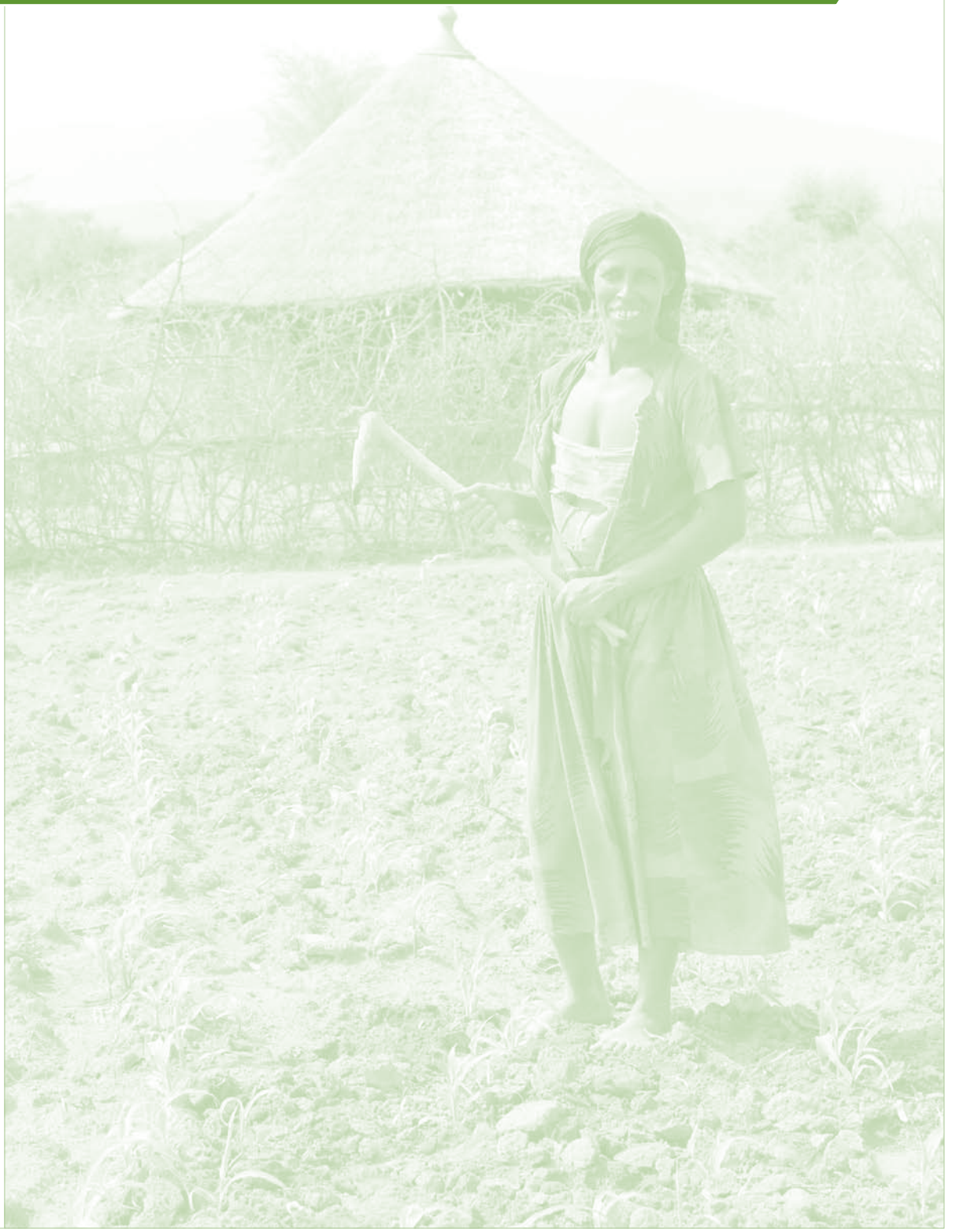
Discretionary grants

ACIAR did not issue any discretionary grants during 2010–11 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. One advertisement, promoting the World Congress on Conservation Agriculture, was placed with the Rural Press, and ran in three newspapers, *The Land, Queensland Country Life and the Farm Weekly.* ACIAR is a sponsor of the Congress, recognising the value of promoting this management regime to Australian agricultural producers. 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.

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.*

'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.

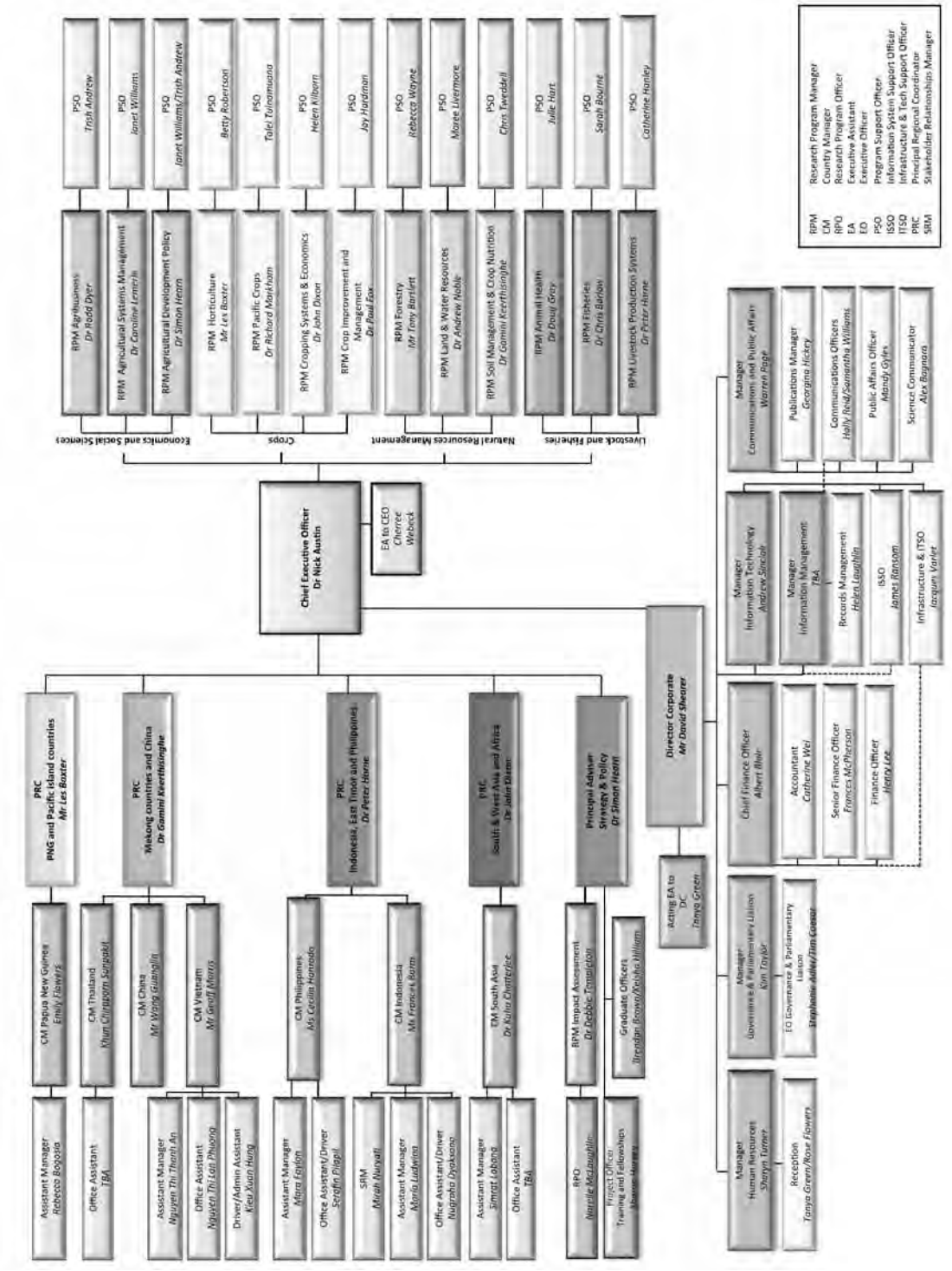
5A Power of Minister to give directions

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: ORGANISATIONAL STRUCTURE



APPENDIX 3: CORPORATE PLANNING AND RESOURCES

Corporate planning

Each financial year ACIAR publishes a formal Annual Operational Plan 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 Annual Operational Plan is covered in the section Tracking Performance against the Annual Operational Plan 2010–11 (see page 128 and the country-specific sections of the report).

Resources for outcome

Financial performance

In 2010–11 ACIAR's direct expenditure on international development assistance represented 90.8% of total expenditure.

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.*

	(1) Budget* 2010–11 $'000	(2) Actual expenses 2010–11 $'000	Variation (column 2 minus column 1) $'000	Budget** 2011–12 $'000
Administered expenses				
ordinary annual services	61,035	61,031	(4)	75,381
special account	19,329	35,909	16,580	22,894
Total administered expenses	80,364	96,940	16,576	99,271
Departmental expenses	9,927	9,783	(144)	9,991
Total for outcome 1	**90,291**	**106,723**	**16,642**	**108,266**

* Full-year budget, including additional estimates

** Budget prior to additional estimates. For more details see the ACIAR Annual Operational Plan 2010–11

APPENDIX 4: ACTIVE RESEARCH PROJECTS 2010–11

Bilateral research projects

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	
Algeria		
	CSE/2010/043	Testing equipment and crop monitoring for Conservation Agriculture in north Africa
Bangladesh		
	ASEM/2011/005	Policy constraints in rice based farming systems in Bangladesh
	ASEM/2009/039	Agricultural policies affecting rice-based farming systems in Cambodia, Lao People's Democratic Republic and Bangladesh
	CIM/2009/038	Introduction of short duration pulses into rice-based cropping systems in western Bangladesh
	LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia
	LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao People's Democratic Republic, Bangladesh and India
	LWR/2005/146	Expanding the area for Rabi-season cropping in southern Bangladesh
	LWR/2005/001	Addressing constraints to pulses in cereals-based cropping systems, with particular reference to poverty alleviation in north-western Bangladesh
Bhutan		
	HORT/2005/142	Improving mandarin production in Bhutan and Australia through the implementation of on-farm best management practices
	LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia
Botswana		
	LPS/2010/062	Botswana Livestock Research and Development: project design study
Cambodia		
	ASEM/2009/039	Agricultural policies affecting rice-based farming systems in Cambodia, Lao People's Democratic Republic and Bangladesh
	ASEM/2009/023	Developing agricultural policies for rice-based farming systems in Lao People's Democratic Republic and Cambodia
	ASEM/2006/130	Enhancing production and marketing of maize and soybean in north-western Cambodia and production of summer crops in north-eastern Australia
	ASEM/2003/007	CARF—Cambodian Agricultural Research Fund
	AH/2006/025	Understanding livestock movement and the risk of spread of transboundary animal diseases

	Project Id	
Cambodia (continued)		
	AH/2005/086	Best practice health and husbandry of cattle, Cambodia
	AH/2003/008	Improved feeding systems for more efficient beef cattle production in Cambodia
	CSE/2009/037	Improved rice establishment and productivity in Cambodia and Australia
	CSE/2006/040	Diversification and intensification of rainfed lowland cropping systems in Cambodia
	HORT/2006/107	Strengthening the Cambodian and Australian vegetable industries through adoption of improved production and postharvest practices
	LWR/2009/046	Improved irrigation water management to increase rice productivity in Cambodia
	LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao People's Democratic Republic, Bangladesh and India
China		
	ADP/2007/055	Improving the efficiency of land use change policy in China
	CIM/2005/111	More effective water use by rainfed wheat in China and Australia
	CIM/1999/072	Oilseed Brassica improvement in China, India and Australia
	LWR/2007/191	Improving farmer livelihoods through efficient use of resources in crop-livestock farming systems in western China
	LPS/2010/028	Improving the mineral nutrition of Tibetan livestock
	LPS/2006/119	Integrated crop and dairy systems in Tibet Autonomous Region, PR China
	LPS/2005/129	Mineral response in Tibetan livestock
East Timor		
	CIM/2009/049	Seeds of Life 3
	CIM/2005/079	Seeds of Life—Technical Advisory Group
	CIM/2003/014	Seeds of Life 2
	HORT/2011/006	Biological control of papaya mealybug (*Paracoccus marginatus* Hem: *Pseudcoccidae*) in East Timor and Oriental scale (*Aonidiella orientalis*, Hem: *Diaspididae*) on Papaya in Northern Territory
	LPS/2011/004	UNRAM East Timor—Cattle adaptive research
Egypt		
	CSE/2011/017	Developing a participatory framework for research adaptation and extension for Egypt, and determination of priorities and approaches for embedding this framework institutionally
Fiji		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	FIS/2005/108	Freshwater prawn aquaculture in the Pacific: improving culture stock quality and nutrition in Fiji
	HORT/2008/011	Strategies for using floriculture to improve livelihoods in indigenous Australian and Pacific Island communities

	Project Id	
Fiji (continued)		
	HORT/2007/072	Postgraduate Scholarship Scheme for University of South Pacific, Fiji
	IAP/2010/086	Testing and development of a tool for measuring capability-building among the field scientists
	PC/2010/038	Identifying pilot sites and research methods for soil health research in the Pacific
	PC/2010/032	Defining the quarantine environment for Pacific horticultural exports
	PC/2009/003	Improving soil health in support of sustainable development in the Pacific
	PC/2008/046	Rehabilitating cocoa for improving livelihoods in the South Pacific
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
	PC/2008/003	Strengthening the Fiji papaya industry through applied research and information dissemination
	PC/2007/118	Developing cleaner export pathways for Pacific agriculture commodities
	PC/2006/053	Evaluation of the impact of Dasheen mosaic virus and other viruses on taro yield
	PC/2004/064	Biological control of mile-a-minute (*Mikania micrantha*) in Papua New Guinea and Fiji
	PC/2004/063	Integrated pest management in a sustainable production system for Brassica crops in Fiji and Samoa
	PC/2004/049	Improved farming systems for managing soil-borne pathogens of ginger in Fiji and Australia
	PC/2003/046	Integrated control of powdery mildew and other disease, weed and insect problems in squash in Tonga and Australia
India		
	ADP/2011/021	An extension of research on Indian agricultural markets and competition issues
	ADP/2007/062	Facilitating efficient agricultural markets in India: an assessment of competition and regulatory reform requirements
	CIM/2010/014	Applying wheat marker quality in India
	CIM/2007/084	Molecular markers for broadening the genetic base of stem rust resistance genes effective against strain Ug99
	CIM/2006/177	Wheat improvement for waterlogging, salinity and element toxicities in Australia and India
	CIM/2006/094	Enhancing farm profitability in north-western India and South Australia by improving grain quality of wheat
	CIM/2006/071	Indo–Australian project on root and establishment traits for greater water use efficiency in wheat
	CIM/2005/020	Molecular marker technologies for faster wheat breeding in India
	CIM/1999/072	Oilseed Brassica improvement in China, India and Australia
	CSE/2011/016	Contracting options Happy Seeder, NW Punjab–India
	CSE/2006/132	Policy instruments to address air pollution issues in agriculture—Implications for Happy Seeder technology adoption in India
	CSE/2006/124	Fine-tuning the Happy Seeder technology for adoption in northwest India
	CSE/2004/033	Zero-tillage rice establishment and crop–weed dynamics in rice and wheat cropping systems in India and Australia

	Project Id	
India (continued)		
	LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia
	LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao People's Democratic Republic, Bangladesh and India
	LWR/2007/113	Impacts of climate change and watershed development on whole-of-basin agricultural water security in the Krishna and Murray-Darling Basins
	LWR/2006/158	Enhancing institutional performance in watershed management in Andhra Pradesh, India
	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
	LWR/2002/100	Water harvesting and better cropping systems for the benefit of small farmers in watersheds of the East India Plateau
Indonesia		
	AGB/2010/018	The effect of research on agricultural productivity in Indonesia
	AGB/2005/167	Optimising the productivity of the potato/Brassica cropping system in Central and West Java and potato–Brassica–Allium system in South Sulawesi and Nusa Tenggara Barat
	AH/2007/106	Improvement and sustainability of sweetpotato–pig production systems to support livelihoods in highland Papua and West Papua, Indonesia
	AH/2006/169	Cost-effective biosecurity for non-industrial commercial poultry operations in Indonesia
	AH/2006/166	Improving veterinary service delivery in a decentralised Indonesia
	AH/2006/156	Livestock movement and managing disease in eastern Indonesia and eastern Australia
	AH/2006/050	Control and characterisation of highly pathogenic avian influenza strains in poultry in Indonesia
	AH/2004/040	The epidemiology, pathogenesis and control of highly pathogenic avian influenza (HPAI) in ducks in Indonesia and Vietnam
	AH/2004/020	The development of a national surveillance system for classical swine fever, avian influenza, and foot and mouth disease in Indonesia
	FIS/2010/016	Application of aquaculture planning tools in Indonesia
	FIS/2009/035	Determinants for White Spot Disease outbreaks in Indonesian smallholder shrimp ponds—a pilot study of locality factors, White Spot Syndrome Virus genotype distributions and pond factors
	FIS/2007/124	Diversification of smallholder coastal aquaculture in Indonesia
	FIS/2006/142	Developing new assessment and policy frameworks for Indonesia's marine fisheries, including the control and management of Illegal, Unregulated and Unreported (IUU) fishing
	FIS/2005/169	Improving productivity and profitability of smallholder shrimp aquaculture and related agribusiness in Indonesia
	FIS/2005/137	Control of nodaviral disease in tropical marine finfish hatcheries: enhanced biosecurity through the application of contemporary biotechnology, epidemiology and pathobiology

	Project Id	
Indonesia (continued)		
	FIS/2002/111	Culture, capture conflicts: sustaining fish production and livelihoods in Indonesian reservoirs
	FST/2011/028	Biological control of Eucalypt pests overseas and in Australia
	FST/2009/051	Increasing productivity and profitability of Indonesian smallholder plantations
	FST/2008/030	Overcoming constraints to community-based commercial forestry in Indonesia
	FST/2007/052	Improving governance, policy and institutional arrangements to reduce emissions from deforestation and degradation (REDD)
	FST/2006/117	Improving added value and small medium enterprises capacity in the utilisation of plantation timber for furniture production in Jepara region
	FST/2003/048	Management of fungal root rot in plantation acacias in Indonesia
	HORT/2011/006	Biological control of papaya mealybug (*Paracoccus marginatus* Hem: *Pseudcoccidae*) in East Timor and Oriental scale (*Aonidiella orientalis*, Hem: *Diaspididae*) on Papaya in Northern Territory
	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
	HORT/2008/041	Area-wide management of pest fruit flies in an Indonesian mango production system
	HORT/2006/147	Integrated pest management of stem borers and insect vectors of viral diseases of sugarcane in Indonesia
	HORT/2006/146	Management of fruit quality and pest infestation on mango and mangosteen to meet technical market access requirements
	HORT/2003/036	Managing pest fruit flies to enhance quarantine services and upgrade fruit and vegetable production in Indonesia
	LPS/2011/004	UNRAM East Timor—Cattle adaptive research
	LPS/2010/060	Workshop to finalise research priorities for tree legume based feeding systems in eastern Indonesia
	LPS/2010/037	Support for development of improved TAKE approaches within BBP2TP & BPTP
	LPS/2010/036	Support for development of effective TAKE approaches in forage tree legumes research
	LPS/2008/054	Improving smallholder cattle fattening systems based on forage tree legume diets in eastern Indonesia and northern Australia
	LPS/2008/038	Improving reproductive performance of cows and performance of fattening cattle in low input systems of Indonesia and northern Australia
	LPS/2006/005	Evaluating strategies to improve calf survival in West Timor villages
	LPS/2006/003	Integrating forage legumes into the maize cropping systems of West Timor
	SMCN/2007/040	Building more profitable and resilient farming systems in Nanggroe Aceh Darussalam and New South Wales
	SMAR/2008/025	Improved seaweed culture and postharvest waste utilisation in South–East Asia

	Project Id	
Indonesia (continued)		
	SMAR/2008/021	Spiny lobster aquaculture development in Indonesia, Vietnam and Australia
	SMAR/2007/216	Improving rice productivity in South and Southeast Sulawesi
	SMAR/2007/203	Integrated tropical passionfruit production systems in South Sulawesi
	SMAR/2007/202	Benchmarking the beef supply chain in eastern Indonesia
	SMAR/2007/196	Market development for citrus from eastern Indonesia
	SMAR/2007/193	Quality management to enhance effective supply chains for mangoes and rambutans in Nusa Tenggara Barat (NTB), Indonesia and Australia
	SMAR/2007/068	Productivity and profitability enhancement of tropical pulses in Indonesia and Australia
	SMAR/2007/063	Enhancing farmer engagement with specialty coffee chains in eastern Indonesia
	SMAR/2006/096	Scaling out herd management strategies in crop–livestock systems in Lombok, Indonesia
	SMAR/2006/061	Building capacity in the knowledge and adoption of Bali cattle improvement technology in South Sulawesi
	SMAR/2005/074	Improving cocoa production through farmer involvement in demonstration trials of potentially superior and pest- and disease-resistant genotypes and integrated management practices
Kiribati		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	PC/2010/038	Identifying pilot sites and research methods for soil health research in the Pacific
	PC/2009/003	Improving soil health in support of sustainable development in the Pacific
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
Laos		
	ASEM/2010/059	Overview of smallholder fish livelihoods in Lao People's Democratic Republic
	ASEM/2009/039	Agricultural policies affecting rice-based farming systems in Cambodia, Lao People's Democratic Republic and Bangladesh
	ASEM/2009/023	Developing agricultural policies for rice-based farming systems in Lao People's Democratic Republic and Cambodia
	ASEM/2006/060	Lao Agricultural Research Fund (LARF)
	ASEM/2005/124	Extension approaches to scaling out livestock production in northern Lao People's Democratic Republic
	AH/2009/001	Increased productivity and reduced risk in pig production and market. Component 1: animal and human health
	AH/2006/161	Management of pig associated zoonosis in the Lao People's Democratic Republic
	AH/2006/159	Best practice health and husbandry of cattle and buffalo in Lao People's Democratic Republic
	AH/2006/025	Understanding livestock movement and the risk of spread of transboundary animal diseases

	Project Id	
Laos (continued)		
	CSE/2009/004	Developing improved farming and marketing systems in rainfed regions of southern Lao People's Democratic Republic
	CSE/2006/041	Increased productivity and profitability of rice-based lowland cropping systems in Lao People's Democratic Republic
	FIS/2009/041	Development of fish passage technology to increase fisheries production on floodplains in the lower Mekong and Murray-Darling river basins
	FST/2005/100	Value adding to Lao People's Democratic Republic plantation timber products
	FST/2004/057	Enhancing on-farm incomes through improved silvicultural management of teak and paper mulberry plantations in Luang Prabang Province of Lao People's Democratic Republic
	LWR/2008/019	Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Lao People's Democratic Republic, Bangladesh and India
Morocco		
	CSE/2010/043	Testing equipment and crop monitoring for Conservation Agriculture in North Africa
Mozambique		
	LWR/2011/015	Potential incentives for sustainable farming for food and water security, and poverty reduction in southern Africa
Nepal		
	LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia
New Caledonia		
	FIS/2010/035	Asia–Pacific tropical sea cucumber aquaculture research symposium
Pakistan		
	HORT/2010/006	Integrated crop management practices to enhance value chain outcomes for the mango industry in Pakistan and Australia—ASLP phase 2
	HORT/2010/003	Social research to foster effective collaboration and strengthen pro-poor value chains
	HORT/2010/002	The enhancement of citrus value chains production in Pakistan and Australia through improved orchard management practices
	HORT/2010/001	Mango value chain improvement
	HORT/2005/160	Increasing citrus production in Pakistan and Australia through improved orchard management techniques
	HORT/2005/157	Optimising mango supply chains for more profitable horticultural agri-enterprises in Pakistan and Australia
	HORT/2005/153	Development of integrated crop management practices to increase sustainable yield and quality of mangoes in Pakistan and Australia
	LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in South Asia
	LWR/2005/144	Optimising canal and groundwater management to assist water user associations in maximising crop production and managing salinisation

	Project Id	
Pakistan (continued)		
	LPS/2010/007	Strengthening dairy value chains in Pakistan through improved farm management and more effective extension services
	LPS/2005/132	Improving dairy production in Pakistan through improved extension services
Papua New Guinea		
	ASEM/2009/042	Improving women's business acumen in Papua New Guinea: working with women smallholders in horticulture
	ASEM/2008/042	Postgraduate scholarship scheme at the University of Technology Lae, Papua New Guinea—phase 2
	ASEM/2008/036	Improving livelihoods of smallholder families through increased productivity of coffee-based farming systems in the highlands of Papua New Guinea
	ASEM/2006/129	Early warning and drought preparedness for improved management of crop production in Papua New Guinea
	ASEM/2006/127	Commercial sector and smallholder partnerships for improving incomes in the oil palm and cocoa industries in Papua New Guinea
	ASEM/2006/035	Improving marketing efficiency, postharvest management and value addition of sweetpotato in Papua New Guinea
	ASEM/2006/023	Re-commercialisation of the Papua New Guinea pyrethrum industry and improving harvested yields in Australia
	ASEM/2005/094	Improving the profitability of village broiler production in Papua New Guinea
	AH/2006/157	Animal health surveillance systems for Papua New Guinea
	FIS/2010/017	Building mariculture capacity in Papua New Guinea
	FIS/2009/015	Impact, management and utilisation of invasive and exotic fish species in Papua New Guinea
	FIS/2008/043	Advisory Committee: Barramundi feed development trial in Western Province, Papua New Guinea
	FIS/2008/023	Increasing production from inland aquaculture in Papua New Guinea for food and income security
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	FST/2010/013	Developing markets and products for the Pacific Island and Papua New Guinea Canarium nut industry
	FST/2009/016	Improving the Papua New Guinea balsa value chain to enhance smallholder livelihoods
	FST/2007/078	Development of a Papua New Guinea timber industry based on community-based planted forests: design and implementation of a national germplasm delivery system
	FST/2006/120	Increasing downstream value adding in Papua New Guinea's forest and wood products industry
	FST/2006/088	Promoting diverse fuelwood production systems in Papua New Guinea
	FST/2006/048	Processing of Canarium indicum nuts: adapting and refining techniques to benefit farmers in the South Pacific
	FST/2004/061	Assessment, management and marketing of goods and services from cutover native forests in Papua New Guinea

	Project Id	
Papua New Guinea (continued)		
	FST/2004/050	Value-adding to Papua New Guinea agroforestry systems
	HORT/2008/011	Strategies for using floriculture to improve livelihoods in indigenous Australian and Pacific Island communities
	PC/2010/026	Validating and documenting a strategy for producing virus-free sweetpotato planting material in Papua New Guinea
	PC/2007/039	The control of basal stem rot of oil palm caused by Ganoderma in Solomon Islands
	PC/2006/063	Integrated pest management for Finschhafen disorder of oil palm in Papua New Guinea
	PC/2004/064	Biological control of 'mile-a-minute' (*Mikania micrantha*) in Papua New Guinea and Fiji
	PC/2003/042	Fruit fly management in Papua New Guinea
	PC/2003/029	Management of potato late blight in Papua New Guinea
	SMCN/2009/013	Sustainable management of soil and water resources for oil palm production systems in Papua New Guinea
	SMCN/2008/008	Increasing vegetable production in Central Province, Papua New Guinea to supply Port Moresby markets
	SMCN/2004/071	Reducing pest and disease impact on yield in selected Papua New Guinea sweetpotato production systems
	SMCN/2004/067	Soil fertility management in the Papua New Guinea highlands for sweetpotato based cropping systems
Philippines		
	ASEM/2009/044	Improving development outcomes for smallholder farmers through closer collaboration between landcare and other ACIAR projects
	ASEM/2006/091	Enhancing tree seedling supply via economic and policy changes in the Philippines nursery sector
	ASEM/2002/051	Sustaining and growing landcare systems in the Philippines and Australia
	AH/2009/022	Improved investigation, diagnosis and technical support for the control of respiratory diseases of pigs in the Philippines and Australia
	FIS/2009/054	Refinement and application of Cage Aquaculture Decision Support Tool (CADS_Tool) for freshwater systems in the Philippines
	FIS/2009/033	Preliminary assessment of the hand-line (banca) fisheries in the Philippines
	HORT/2010/030	Samal Island mango growers R&D study tour to Australia
	HORT/2007/067	Improved domestic profitability and export competitiveness of selected fruit value chains in the southern Philippines and Australia program
	HORT/2007/066	Enhanced profitability of selected vegetable value chains in the southern Philippines and Australia program
	IAP/2010/086	Testing and development of a tool for measuring capability building among the field scientists
	SMCN/2009/031	Watershed evaluation for sustainable use of sloping agricultural land in the southern Philippines
	SMCN/2004/078	Evaluation and adoption of improved farming practices on soil and water resources, Bohol Island, the Philippines
	SMAR/2008/025	Improved seaweed culture and postharvest waste utilisation in South–East Asia

	Project Id	
Samoa		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	PC/2010/038	Identifying pilot sites and research methods for soil health research in the Pacific
	PC/2009/003	Improving soil health in support of sustainable development in the Pacific
	PC/2008/046	Rehabilitating cocoa for improving livelihoods in the South Pacific
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
	PC/2007/118	Developing cleaner export pathways for Pacific agriculture commodities
	PC/2006/053	Evaluation of the impact of Dasheen mosaic virus and other viruses on taro yield
	PC/2004/063	Integrated pest management in a sustainable production system for Brassica crops in Fiji and Samoa
Solomon Islands		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	FST/2007/020	Improving silvicultural and economic outcomes for community timber plantations in the Solomon Islands by interplanting with *Flueggea flexuosa* and other Pacific agroforestry species
	HORT/2008/011	Strategies for using floriculture to improve livelihoods in indigenous Australian and Pacific Island communities
	PC/2008/046	Rehabilitating cocoa for improving livelihoods in the South Pacific
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
	PC/2007/039	The control of basal stem rot of oil palm caused by Ganoderma in Solomon Islands
South Africa		
	FST/2011/028	Biological control of Eucalypt pests overseas and in Australia
	LWR/2011/015	Potential incentives for sustainable farming for food and water security, and poverty reduction in southern Africa
	LPS/2004/022	Pasture development for community livestock production in the Eastern Cape Province of South Africa
Thailand		
	CSE/2006/041	Increased productivity and profitability of rice-based lowland cropping systems in Lao People's Democratic Republic
	FIS/2002/111	Culture, capture conflicts: sustaining fish production and livelihoods in Indonesian reservoirs
	HORT/2006/170	Plant biosecurity: technological research and training for improved pest diagnostics in Thailand and Australia
	SMCN/2007/215	Improving the reliability of rain-fed, rice–livestock-based farming systems in North East Thailand

	Project Id	
Tonga		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	FIS/2006/172	Winged oyster pearl industry development in Tonga
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
	PC/2006/173	Tongan tropical fruit production—improving genetic diversity and production capacity building
	PC/2003/046	Integrated control of powdery mildew and other disease, weed and insect problems in squash in Tonga and Australia
Tunisia		
	CSE/2010/043	Testing equipment and crop monitoring for Conservation Agriculture in North Africa
	CSE/2010/027	Developing a regional Conservation Agricultural Hub for North Africa: scoping study assessment
Vanuatu		
	ADP/2010/024	Accelerating economic development through engagement and development of local industry institutions in Pacific Island countries
	FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific Islands region and tropical Australia
	FST/2008/010	Development and delivery of germplasm for sandalwood and whitewood in Vanuatu and northern Australia
	FST/2006/048	Processing of Canarium indicum nuts: adapting and refining techniques to benefit farmers in the South Pacific
	FST/2005/089	Improved silvicultural management of Endospermum medullosum (whitewood) for enhanced plantation forestry outcomes in Vanuatu
	PC/2008/046	Rehabilitating cocoa for improving livelihoods in the South Pacific
	PC/2008/044	Pacific Agribusiness Research for Development Initiative
Vietnam		
	AGB/2009/053	Improved market engagement for counter-seasonal vegetable producers in north-western Vietnam
	AGB/2008/002	Improved market engagement for sustainable upland production systems in the north-western highlands of Vietnam
	AGB/2006/112	Increasing the safe production, promotion and utilisation of indigenous vegetables by women in Vietnam and Australia
	AGB/2006/066	Improving productivity and fruit quality of sweet persimmon in Vietnam and Australia
	AGB/2005/113	Structural adjustment implications of trade liberalisation in Vietnam
	AH/2004/040	The epidemiology, pathogenesis and control of highly pathogenic avian influenza (HPAI) in ducks in Indonesia and Vietnam
	FIS/2011/008	Development of land-based lobster production systems in Vietnam and Australia
	FIS/2006/141	Improving feed sustainability for marine aquaculture in Vietnam and Australia
	FIS/2005/114	Building bivalve hatchery production capacity in Vietnam and Australia

	Project Id	
Vietnam (continued)		
	FST/2008/039	Enhancement of veneer products from acacia and eucalypt plantations in Vietnam and Australia
	FST/2008/007	Advanced breeding and deployment methods for tropical acacias
	FST/2006/087	Optimising silvicultural management and productivity of high-quality acacia plantations, especially for sawlogs
	LPS/2008/049	Overcoming technical and market constraints to the emergence of profitable beef enterprises in the north-western highlands of Vietnam
	SMCN/2007/109	Sustainable and profitable crop and livestock systems for south-central coastal Vietnam
	SMCN/2003/035	Improving the utilisation of water and soil resources for tree crop production in coastal areas of Vietnam and New South Wales
	SMCN/2002/073	Efficient nutrient use in rice production in Vietnam achieved using inoculant biofertilisers
	SMAR/2008/021	Spiny lobster aquaculture development in Indonesia, Vietnam and Australia
Zimbabwe		
	LWR/2011/015	Potential incentives for sustainable farming for food and water security, and poverty reduction in southern Africa

Multilateral projects

Multilateral projects, those that have an International Agricultural Research Centre as the project leader (commissioned organisation) and are active in a single country, are included in this list only, not in the country list above.

Multilateral	
ADP/2005/066	Markets for high-value commodities in Indonesia: Promoting competitiveness and inclusiveness
ADP/2005/068	Plausible futures for economic development and structural adjustment—impacts and policy implications for Indonesia and Australia
AGB/2006/115	Linking vegetable farmers with markets in West and Central Java, Indonesia
AH/2004/046	Forage legumes for supplementing village pigs in Lao People's Democratic Republic
AH/2010/019	Increased productivity and reduced risk in pig production and market chains. Component 2: animal production
CIM/2003/067	Ensuring productivity and food security through sustainable control of yellow rust of wheat in Asia
CIM/2004/004	Plant genetic resource conservation, documentation and utilisation in central Asia and the Caucasus
CIM/2006/176	Developing molecular markers to enable selection against chalk in rice
CIM/2007/065	Sustainable wheat and maize production in Afghanistan
CIM/2007/120	Improving post-rainy sorghum varieties to meet the growing grain and fodder demand in India
CIM/2007/122	Sustainable intensification of rice–maize production systems in Bangladesh
CIM/2008/027	Development of conservation cropping systems in the drylands of northern Iraq
CIM/2010/048	Bioinformatics for breeding: data management and cross prediction
CSE/2009/005	Improved rice germplasm for Cambodia and Australia

Multilateral	
CSE/2009/024	Sustainable intensification of maize–legume cropping systems for food security in eastern and southern Africa (SIMLESA)
FIS/2003/059	Sea ranching and restocking sandfish (*Holothuria scabra*) in the Asia–Pacific region
FIS/2007/116	Improving resilience and adaptive capacity of fisheries-dependent communities in Solomon Islands
FIS/2009/061	Aquaculture and food security in Solomon Islands—phase 1
FIS/2010/031	Fish supply and demand scenarios in the lower Mekong basin
FIS/2010/056	Scaling out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu
FST/2005/177	Improving economic outcomes for smallholders growing teak in agroforestry systems in Indonesia
FST/2007/119	Mahogany and teak furniture: action research to improve value chain efficiency and enhance livelihoods
HORT/2004/048	Integrated disease management (IDM) for anthracnose, Phytophthora blight and whitefly transmitted geminiviruses in chilli pepper in Indonesia
HORT/2008/040	Integrated crop production of bananas in Indonesia and Australia
LPS/2005/063	Improving the competitiveness of pig producers in an adjusting Vietnam market
LWR/2009/034	Soil salinity management in central and southern Iraq
LWR/2011/018	Egypt–Australia on-farm water use efficiency and water management workshops—Egypt
PC/2005/077	Integrated crop management package for sustainable smallholder gardens in Solomon Islands
PC/2005/134	The use of pathogen tested planting materials to improve sustainable sweetpotato production in Solomon Islands and Papua New Guinea
PC/2006/114	Managing cocoa pod borer in Papua New Guinea through improved risk incursion management capabilities, IPM strategies and stakeholder participatory training
PC/2007/111	Incursion prevention and management of coffee berry borer (CBB) in Papua New Guinea and Indonesia (South Sulawesi and Papua)
SMCN/2006/013	Increasing food security and farmer livelihoods through enhanced legume cultivation in the Central Dry Zone of Burma
SMCN/2009/021	Climate change affecting land use in the Mekong Delta: adaptation of rice-based cropping systems (CLUES)

APPENDIX 5: PUBLICATIONS 2010–11

Publ. code	Title	Authors	Year	Pages
Monographs				
MN 121a	Planters and their components: types, attributes, functional requirements, classification and description [Persian translation]	J.R. Murray, J.N. Tullberg and B.B. Basnet [Persian translation by Arzhang Javadi and Reza Mohammadi Gol; translation reviewed by Mohammad Reza Daahi]	2010	222
MN 131 2nd ed.	Integrated pest and disease management for sustainable cocoa production: a training manual for farmers and extension workers [2nd edition]	John Konam, Yak Namaliu, Rosalie Daniel and David Guest	2011	36
MN 137b	Jorani and the green vegetable bugs [Lao translation]	Bob Martin and Deborah White [Lao translation by Soukphansa Phouphasouk; translation reviewed by Dara Kanlaya]	2011	48
MN 141a	Weeds of upland crops in Cambodia [Khmer translation]	Robert Martin and Pol Chanthy [Khmer translation by Keo Kynal; translation reviewed by Miech Phalla and Van Touch]	2010	86
MN 143	Insects of upland crops in Cambodia (online only)	C. Pol, S. Belfield and R. Martin	2010	132
MN 143a	Insects of upland crops in Cambodia [Khmer translation]	C. Pol, S. Belfield and R. Martin [Translation by Keo Kynal; translation reviewed by Van Touch]	2011	132
MN 145	Beef production in crop–livestock systems: simple approaches for complex problems	W.H. Winter (ed.)	2011	160
Proceedings				
PR 134	Development of sustainable livestock systems on grasslands in north-western China	D.R. Kemp and D.L. Michalk (eds)	2011	189
Technical Reports				
TR 75	Environmental sustainability of oil palm cultivation in Papua New Guinea	Paul N. Nelson, Michael J. Webb, Ian Orrell, Harm van Rees, Murom Banabas, Susanne Berthelsen, Marcus Sheaves, Felix Bakani, Otto Pukam, Michael Hoare, William Griffiths, Graham king, peter Carberry, Rachel pipai, Ann McNeill, Petra Meekers, Simon Lord, James Butler, Tony Pattison, John Armour and Charles Dewhurst	2011	66
TR 76	Nutritional status of cocoa in Papua New Guinea	Paul N. Nelson, Michael J. Webb, Suzanne Berthelsen, George Curry, David Yinil and Chris Fidelis	2011	68
TR 77	Hidden economies, future options: trade in non-timber forest products in eastern Indonesia	A.B. Cunningham, W. Ingram, W. Daos Kadati, J. Howe, S. Sujatmoko, R. Refli, J.V. Liem, A. Tari, T. Maruk, N. Robianto, A. Sinlae, Y. Ndun, I. Made Maduarta, D. Sulistyohardi and E. Koeslutat	2011	117
TR 78	Sustainable intensification of Rabi cropping in southern Bangladesh using wheat and mungbean	H.M. Rawson (ed.)	2011	256

Publ. code	Title	Authors	Year	Pages
Impact Assessment Series reports				
IAS 69	Lessons learned from past ACIAR impact assessments, adoption studies and experience	David Pearce	2010	36
IAS 70	Extending low-chill fruits in northern Thailand: an ACIAR–World Vision collaborative program	David N. Harris	2011	52
IAS 71	The economic impact in Indonesia and Australia of investment in plantation forestry research, 1987–2009	Bob Lindner	2011	90
IAS 72	Frameworks for assessing policy research and ACIAR's investment in policy-oriented projects in Indonesia	Bob Lindner	2011	68
IAS 73	Forestry in Papua New Guinea: a review of ACIAR's program	Hayden Fischer	2011	72
Corporate publications				
	ACIAR Annual Operational Plan 2010–11	ACIAR	2010	152
	ACIAR Annual Operational Plan 2010–11: Indonesian (22 pp.) and Vietnamese (16 pp.) translations of country extracts (online only)	ACIAR	2010	22/16
	Annual Report 2009–10	ACIAR	2010	211
	ACIAR publications catalogue 2010	ACIAR	2010	123
	ACIAR corporate brochure	ACIAR	2010	8
	Partners in Research for Development magazine (November 2010–February 2011, March–May 2011, June–August 2011)	ACIAR		32

APPENDIX 6: STAFFING STATISTICS

Public Service Act 1999 employee numbers at 30 June 2011*

	Ongoing staff	Non-ongoing staff	Total
Full-time			
Male	7	10	17
Female	19	3	22
Part-time			
Male	1	0	1
Female	7	2	9
Total	**34**	**15**	**49**

** Excludes two inoperative employees and CEO

At 30 June 2011 the Centre employed 67 employees, of whom 49 are employed under the *Public Service Act 1999 and are located in Canberra and* 18 are at overseas missions and embassies. ACIAR has one male SES Band 1, employee.

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

Staff turnover

ACIAR maintained good retention rates in 2010–11. Nine employees ceased employment with two staff remaining on leave without pay. The table below shows a comparison of employee turnover over the past five years.

	2006–07	2007–08	2008–09	2009–10	2010–11
Retrenched		1			
Promotions/transfers	4	2	1		1
End of contract	5	6		1	
Resigned	2	7	3	3	6
Retired	1	1	2	3	1
Leave without pay	1		2	2	2
Temporary movement					
Other					1
Total	**13**	**17**	**8**	**9**	**11**

Non-APS employees employed overseas at 30 June 2011

ACIAR employs 18 (16.25 FTE) contract and locally engaged staff in Australian overseas missions to provide program support locally, as detailed in the table below.

Post	Male	Female	Full-time	Part-time	Total
Bangkok	0	2	1	1	**2**
Beijing	1	0	1	0	**1**
Hanoi	2	2	3	1	**4**
Jakarta	1	3	3	1	**4**
Manila	1	2	3	0	**3**
New Delhi	0	2	2	0	**2**
Port Moresby	0	2	2	0	**2**
Total	**5**	**13**	**15**	**3**	**18**

ACIAR CLASSIFICATION STRUCTURE

Breakdown of ACIAR employees by broadband (excludes LWOP)

ACIAR broadband	APS classification	Employees by classification	Ongoing/Non-ongoing	Male/Female
Band 4	EL 2	1	1.....0	1.....0
Band 3	EL 1	7	7.....0	2.....5
Band 2	APS 6	6	6.....0	1.....5
	APS 5	4	4.....0	2.....2
	APS 4	17	13.....4	2.....15
Band 1	APS 3	2	1.....1	0.....2
	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	Male/Female
Band 4	EL2—RPM	11	1.....10	9.....2

1 x SES Band1 ongoing male.

APPENDIX 7: FREEDOM OF INFORMATION

Individuals have a means to obtain access to Government-held documents through the *Freedom of Information Act 1982 (FOI Act).* Only documents where exemptions are in place are excluded from FOI requests. Government departments and agencies have reporting responsibilities under the *FOI Act* in relation to FOI requests. The following statement is made in accordance with Section 8 of the Act.

ACIAR received no requests in 2010–11 regarding the supply of documents or information as prescribed under the provisions of the *FOI Act*. No requests are outstanding.

ACIAR received no requests, made with reference to the FOI Act, for publications produced by the Centre. The requirements of the *Privacy Act 1988 are abided by in the collection of requests for available publications and in relation to its website.*

Administration of the FOI Act

ACIAR holds responsibility for determinations relating to the granting, withholding or deferring of access to particular documents. The Central Office of the Department of Foreign Affairs and Trade assists ACIAR in administering FOI requests. Returns to the Attorney-General's Department are coordinated and prepared through the Centre.

ACIAR's Canberra headquarters and some overseas posts hold documents, with many pre-1990 documents being held in archival custody. These may be obtained under the *Archives Act 1983.*

Public access

ACIAR holds no documents that are open to the public through a public register or otherwise. Publications, including scientific publications of ACIAR-supported research, can be inspected and copies obtained from the Centre's office, with many also available electronically through the ACIAR website <aciar.gov.au>. A number of other documents are freely available online in accordance with the Government Online initiative.

Freely available documents that may be requested, and increasingly are available through the ACIAR website, include research-related publications, project final reports, information sheets on projects, scientific project working papers, the annual report, *Partners in Research for Development magazine, and brochures and fact sheets relating to ACIAR activities.*

Inquiries concerning access to documents or other FOI matters should be directed to:

Chief Executive Officer
Australian Centre for International Agricultural Research
GPO Box 1571
Canberra ACT 2601
Telephone: (02) 6217 0500
Facsimile: (02) 6217 0501
Email: <aciar@aciar.gov.au>

APPENDIX 8: ECOLOGICALLY SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL PERFORMANCE

This report is provided in accordance with Section 516A of the *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. It comprises the Centre's report on its ecologically sustainable development and environmental performance.

Project-related environmental impacts

Guidelines covering the development of ACIAR projects include triggers to ensure that any projects developed that result in significant environmental impacts follow all due processes under the *EPBC Act*. When partner organisations are developing projects, either as the commissioned (lead) agency or as a collaborator, they must fulfil all relevant obligations under the *EPBC Act*. All obligations under international arrangements to which Australia is a signatory (e.g. the Convention on Biological Diversity) must also be fulfilled.

Where any potential environmental impacts are identified by project proponents, obligation rests with those proponents to ensure that all relevant EPBC obligations have been fulfilled. This includes obligations under international arrangements to which Australia is a signatory, specifically for biological resources, must have been met and properly documented. Reference to the EPBC Administrative Guidelines on Significance (EPBC Guidelines) is included in such processes. 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.

Once project proposals have passed these processes and met obligations they are then subject to assessment by the relevant ACIAR Research Program Manager (RPM). This determines if environmental impacts outlined in the proposal having reference to, among other documents, the EPBC Guidelines require action. If informal consultation with the EPBC Referrals Unit is required, RPMs are empowered to seek and document whether potential impacts are sufficient to warrant a formal referral through the Department of Environment, Water, Heritage and the Arts.

How the outcomes of the organisation contribute to ecologically sustainable development (ESD)

The ACIAR Act outlines the mandate and functions of the Centre under Section 5. This includes 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 delivers on this mandate.

Effect of the organisation's activities on the environment (s. 516A(6)(c))

ACIAR's projects often have strong environmental benefits. These are spread throughout the Centre's mandated region of operations, in developing countries of the Asia–Pacific region, and Africa. ACIAR projects target research to 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 Development Policy—developing processes and practices to mitigate against climate change; examining policy and institutional frameworks and their impacts on water management;

- Crop Improvement and Pest Management—improving productivity and sustainability in farming systems through crop diversification and the use of alternative cropping methods; developing control and management strategies for weeds and pests threatening crop species; the collection and conservation of unique crop and legume germplasm;
- Fisheries—sustainable management of marine species, including inshore fisheries; cross-country fisheries resource management; and developing sustainable aquaculture technologies to minimise wild capture and harvest in ACIAR's mandate region
- Forestry—improvements in breeding technologies for Australian species, such as eucalypts and acacias, widely used for forestry plantations in Australia and parts of Asia; enhancing disease- and pest-surveillance methodologies and management; improving germplasm usage and management;
- Land and Water Resources—developing new approaches to managing and alleviating the affects of salinity and soil acidification; investigating water allocation and management strategies; 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 (s. 516A(6)(d))

Rather than implement a formal environmental management system (EMS), ACIAR has chosen 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.

As the sole building tenant, ACIAR is 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	
	2009–10	2010–11
Energy (kilowatt hours)	201,630	216,961
Water (kilolitres)	269	270

Mechanisms for reviewing and increasing the effectiveness of these measures (s. 516A(6)(e))

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

APPENDIX 9: COMPLIANCE CHECKLIST

Part of Report	Description	Requirement
iii	Letter of transmittal	Mandatory
v	Table of contents	Mandatory
181	Index	Mandatory
179	Glossary	Mandatory
ii	Contact officer(s)	Mandatory
ii	Internet home page address and Internet address for report	Mandatory
Review by Secretary		
5, 69	Review by departmental secretary	Mandatory
3, 6	Summary of significant issues and developments	Suggested
1	Overview of department's performance and financial results	Suggested
10	Outlook for following year	Suggested
1	Significant issues and developments – portfolio	Portfolio departments – suggested
Departmental Overview		
152	Role and functions	Mandatory
153	Organisational structure	Mandatory
154	Outcome and program structure	Mandatory
No variation	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
56	Portfolio structure	Mandatory for portfolio departments
Report on Performance		
14	Review of performance during the year in relation to programs and contribution to outcomes	Mandatory
128	Actual performance in relation to deliverables and KPIs set out in PB Statements/PAES or other portfolio statements	Mandatory
No variation	Where performance targets differ from the PBS/ PAES, details of both former and new targets, and reasons for the change	Mandatory
128	Narrative discussion and analysis of performance	Mandatory
6	Trend information	Mandatory
149	Performance of purchaser/ provider arrangements	If applicable, suggested
No significant changes	Significant changes in nature of principal functions/ services	Suggested
6	Factors, events or trends influencing departmental performance	Suggested
65	Contribution of risk management in achieving objectives	Suggested
147	Social inclusion outcomes	If applicable, mandatory
Not applicable	Performance against service charter customer service standards, complaints data, and the department's response to complaints	If applicable, mandatory

Part of Report	Description	Requirement
69	Discussion and analysis of the department's financial performance	Mandatory
69	Discussion of any significant changes from the prior year or from budget.	Suggested
154	Agency resource statement and summary resource tables by outcomes	Mandatory
Not applicable	Developments since the end of the financial year that have affected or may significantly affect the department's operations or financial results in future	If applicable, mandatory
Management Accountability		
Corporate Governance		
68	Agency heads are required to certify that their agency comply with the Commonwealth Fraud Control Guidelines.	Mandatory
55	Statement of the main corporate governance practices in place	Mandatory
57, 183	Names of the senior executive and their responsibilities	Suggested
62, 66	Senior management committees and their roles	Suggested
128	Corporate and operational planning and associated performance reporting and review	Suggested
65	Approach adopted to identifying areas of significant financial or operational risk	Suggested
67	Policy and practices on the establishment and maintenance of appropriate ethical standards	Suggested
57	How nature and amount of remuneration for SES officers is determined	Suggested
External Scrutiny		
148	Significant developments in external scrutiny	Mandatory
148	Judicial decisions and decisions of administrative tribunals	Mandatory
148	Reports by the Auditor-General, a Parliamentary Committee or the Commonwealth Ombudsman	Mandatory
Management of Human Resources		
146	Assessment of effectiveness in managing and developing human resources to achieve departmental objectives	Mandatory
170	Workforce planning, staff turnover and retention	Suggested
147	Impact and features of enterprise or collective agreements, individual flexibility arrangements (IFAs), determinations, common law contracts and AWAs	Suggested
147	Training and development undertaken and its impact	Suggested
147	Occupational health and safety performance	Suggested
147	Productivity gains	Suggested
146	Statistics on staffing	Mandatory
147	Enterprise or collective agreements, IFAs, determinations, common law contracts and AWAs	Mandatory
147	Performance pay	Mandatory

Part of Report	Description	Requirement
Assets management		
69	Assessment of effectiveness of assets management	If applicable, mandatory
Purchasing		
148	Assessment of purchasing against core policies and principles	Mandatory
Consultants		
149 and AusTender	The annual report must include a summary statement detailing the number of new consultancy services contracts let during the year; the total actual expenditure on all new consultancy contracts let during the year (inclusive of GST); the number of ongoing consultancy contracts that were active in the reporting year; and the total actual expenditure in the reporting year on the ongoing consultancy contracts (inclusive of GST). The annual report must include a statement noting that information on contracts and consultancies is available through the AusTender website. (Additional information as in Attachment D to be available on the Internet or published as an appendix to the report. Information must be presented in accordance with the pro forma as set out in Attachment D.)	Mandatory
Australian National Audit Office Access Clauses		
148	Absence of provisions in contracts allowing access by the Auditor-General	Mandatory
Exempt contracts		
149	Contracts exempt from the AusTender	Mandatory
Financial statements		
71	Financial Statements	Mandatory
Other Mandatory Information		
147	Occupational health and safety (section 74 of the Occupational Health and Safety Act 1991)	Mandatory
172	Freedom of information for the period 1 July 2010 to 30 April 2011 inclusive (see terms of subsection 8(1) of the Freedom of Information Act 1982 as it existed prior to 1 May 2011)	Mandatory
149	Advertising and Market Research (Section 311A of the Commonwealth Electoral Act 1918) and statement on advertising campaigns	Mandatory
173	Ecologically sustainable development and environmental performance (Section 516A of the Environment Protection and Biodiversity Conservation Act 1999)	Mandatory
149	Grant programs	Mandatory
147	Disability reporting – explicit and transparent reference to agencylevel information available through other reporting mechanisms	Mandatory
Not applicable	Correction of material errors in previous annual report	If applicable, mandatory
175	List of Requirements	Mandatory

LIST OF ACRONYMS AND ABBREVIATIONS

ACACA	Australia–China Agricultural Cooperation Agreement
ACIAR	Australian Centre for International Agricultural Research
ANAO	Australian National Audit Office
AOP	Annual Operational Plan (of ACIAR)
APS	Australian Public Service
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
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
CIMMYT	International Maize and Wheat Improvement Center (Mexico)
CPB	coca pod borer
CPGs	Commonwealth Procurement Guidelines
CSF	classical swine fever
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
DAFF	Department of Agriculture, Fisheries and Forestry (Australia)
DFAT	Department of Foreign Affairs and Trade (Australia)
EBRM	ecologically-based rodent management
EEO	equal employment opportunity
FAO	Food and Agriculture Organization (of the United Nations)
FMA Act	*Financial Management and Accountability Act 1997*
FMD	foot-and-mouth disease
FMOs	Finance Minister's Orders
FOI	freedom of information
FTE	full-time equivalent (staff)
GDP	gross domestic production
IA	Impact Assessment (program) (ACIAR)
IARCs	International Agricultural Research Centres
ICARDA	International Center for Agricultural Research in the Dry Areas (Syria)
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

ILRI	International Livestock Research Institute (Kenya)
INDOVETPLAN	Indonesian Veterinary Plan
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
MAF	Ministry of Agriculture and Fisheries (East Timor)
MDGs	Millennium Development Goal
NAMA	Northwest Agricultural Marketing Association (Cambodia)
NARI	National Agricultural Research Institute
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
PARDI	Pacific Agribusiness Research for Development Initiative
PCR	polymerase chain reaction
PGR	plant genetic resource
PIC(s)	Pacific Island country(ies)
PNG	Papua New Guinea
PRB	permanent raised bed
QTL	quantitative trait locus
R&D	research and development
RMD	remote microscope diagnostics
RPM	Research Program Manager
RSA	Republic of South Africa
SADI	Smallholder Agribusiness Development Initiative
SES	Senior Executive Service (of APS)
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
Unitech	University of Technology (PNG)
USP	University of the South Pacific
WSD	watershed development
WTO	World Trade Organization

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