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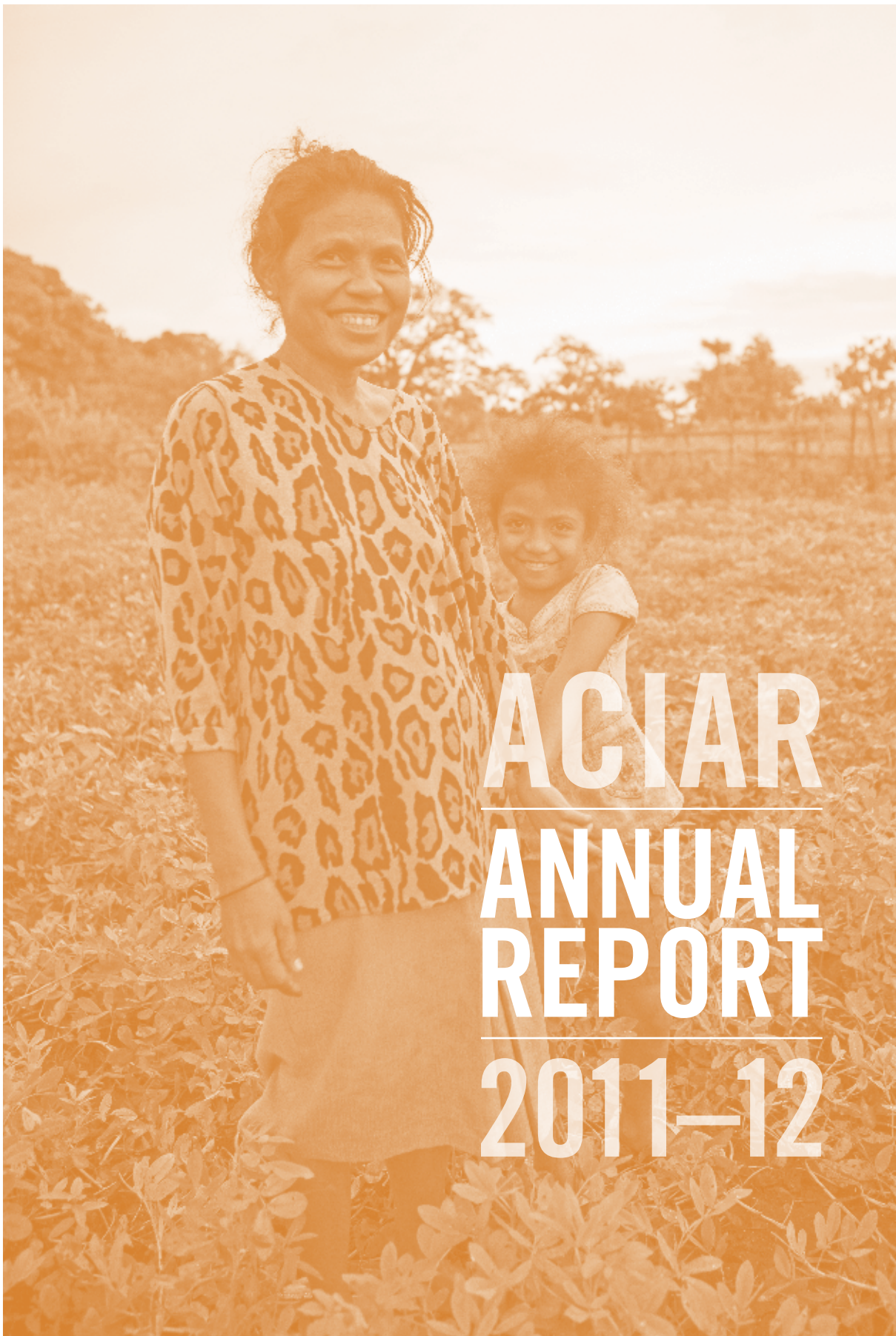
**Australian Centre for
International Agricultural Research**



ACIAR

**ANNUAL
REPORT**

2011–12



ACIAR

ANNUAL
REPORT

2011-12

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AR_current>

ACIAR Annual Report 2011–12

ISBN 978-1-922137-04-3 (print)

ISBN 978-1-922137-05-0 (online)

Executive Editor: Alexandra Bagnara, ACIAR
Design: Giraffe Visual Communication Management
Printing: Canprint Communications
Cover photo: Isabella Dacavarhlo maintains her family's peanut and sweetpotato crop while her husband is away in Dili. Her daughter, Elvita Bendita Da Seus Soares, who is 7 years old and studies in class 1, joins Isabella. Isabella is part of a Seeds of Life support group that received training in effective methods of planting, maintenance and post-harvest. Isabella lives in Salary village, Laga sub-district, rural East Timor with her husband and their six children.

Printing statistics

2000 copies of this Annual Report have been printed and provided to key stakeholders.



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October 2012

Dear Minister

ACIAR Annual Report 2011–12

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 2012.

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 to international agricultural research made by ACIAR staff and commissioned research organisations, to help achieve more productive and sustainable agricultural systems for the benefit of development countries and Australia.

Yours sincerely

Nick Austin
Chief Executive Officer

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

ACIAR
Research that works for developing
countries and Australia
www.aciarc.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 contributes to 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:

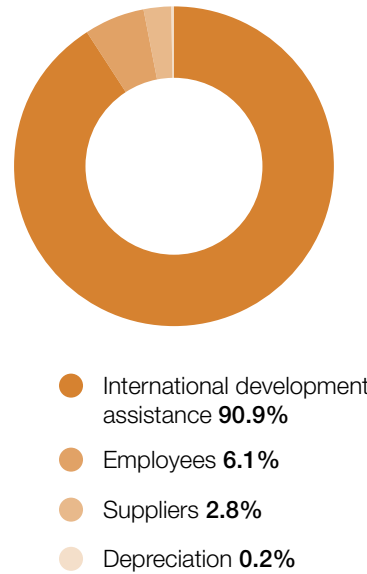
- saving lives
- promoting opportunities for all
- investing in food security, sustainable economic growth and private sector development
- supporting security, improving the quality of governance and strengthening civil society
- preparing for, and responding to, disasters and humanitarian crises.

ACIAR works collaboratively with the Australian Agency for International Development (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.

Expenditure

ACIAR expenditure 2011-12



Research expenditure by region 2011-12



ACIAR administered expenditure overview

	2011-12 AOP budget (\$)	2011-12 actual (\$)	2010-11 actual (\$)	2009-10 actual (\$)
Bilateral and multilateral projects by region and country				
Papua New Guinea and Pacific island countries	10,588,113	11,780,189	9,993,999	9,358,076
Papua New Guinea	4,257,159	5,135,515	4,048,526	4,504,326
Pacific island countries	6,330,954	6,644,674	5,945,473	4,853,750
Indonesia, East Timor, Philippines	16,583,479	17,681,891	18,305,714	17,852,433
Indonesia	8,110,339	9,187,547	8,508,937	11,568,086
East Timor	5,373,140	5,411,584	5,901,188	2,517,022
Philippines	3,100,000	3,082,760	3,895,589	3,767,325
Mekong countries and China	16,692,864	16,616,544	12,302,937	10,912,736
Vietnam	4,721,296	5,242,286	4,013,569	3,079,900
Lao PDR	4,963,490	4,023,888	3,589,996	2,737,637
Cambodia	5,041,378	5,341,354	3,645,304	3,301,320
Thailand	200,000	242,390	125,440	356,836
Myanmar (Burma)	200,000	178,776	64,029	137,043
China	1,566,700	1,587,850	864,599	1,300,000
South and West Asia	13,414,473	11,641,607	10,681,113	7,727,887
India	4,599,317	4,201,857	3,225,096	2,923,604
Bangladesh	1,447,333	1,688,965	1,302,517	1,272,181
Pakistan	3,677,074	2,879,670	2,314,631	1,289,417
Iraq	1,819,093	2,235,097	3,405,071	1,588,232
Afghanistan	1,253,578	46,050	40,950	436,957
Bhutan	181,539	187,392	215,312	167,496
Nepal	411,539	388,284	107,536	-
South and West Asia (other)	25,000	14,292	70,000	50,000
Africa	11,690,000	13,665,753	5,719,378	2,705,384
African countries	11,690,000	13,665,753	5,719,378	2,705,384
Total projects	68,968,929	71,385,984	57,003,141	48,556,516
Multilateral program	19,030,000	23,028,507	28,994,344	10,599,063
Building research capacity	6,800,000	5,066,128	7,957,859	7,067,954
Communicating research results	760,000	690,329	688,287	593,250
Measuring research impacts	600,000	590,913	562,973	547,301
Research program support	2,116,000	2,472,651	1,753,820	2,557,280
TOTAL	98,274,929	103,234,512	96,960,424	69,921,364

Selected achievements

Papua New Guinea

Support for women engaged in vegetable and floriculture production, including teaching business skills and supporting efforts to open up new markets.

Pacific

Broodstock identified for new strains of giant freshwater prawns, with complementary low-cost feed formulations using local ingredients, to help future development of prawn culturing.

Quarantine capacity in pest surveillance of exotic species improved for forest managers in Fiji and Vanuatu.

Indonesia

Indonesian beef supply chains across four producing regions characterised with key stakeholders, from policymakers to farmers, having access to improved information for decision-making.

Indonesia and East Timor

ACIAR helps establish the first trilateral research partnership between East Timor, Indonesia and Australia to improve cattle productivity and profitability.

Philippines

Projects improve fruit and vegetable production, supply chains and land management, increasing productivity and incomes of smallholder farmers.

Laos

Changes introduced to the timber manufacturing industry increasing value-adding to processing, lifting incomes and health and safety of industry workers.

Cambodia

Collaboration with the Maddox Jolie-Pitt foundation helping to extend knowledge and use of integrated pest management to families.



Children in Cambodia get a 'sneak peak' at *Sophy and the vegetable patch*—a book to help stop malnutrition by educating children and their parents about the importance of eating a diverse, healthy diet. (Photo: Maddox Jolie-Pitt Foundation)

Myanmar

Development of a new ACIAR–AusAID collaborative program to support emerging democracy underway, building on past research successes.

Bangladesh

Introduction of small, two-wheeled mechanised tractors driving increasing productivity and sustainability via the uptake of minimum tillage cropping.



Shanaton Kumar Biswas and his son Bijon service their two-wheeled tractor and prepare to go to the field for work. Shanaton bought his first tractor with support from ACIAR and it greatly increased his family's livelihood.

Pakistan

Improved horticulture management techniques being introduced, helping to lift crop yields and fruit quality in the Punjab region, the primary production district.

Iraq

Rapid adoption of zero-tillage agriculture fostered by introduction of improved crop varieties and support for innovative small machinery manufacturers.

Kenya

SIMLESA program seeing increasing uptake of maize-legume cropping with farmers reporting yield increases and associated income gains.

First projects of the Australian International Food Security Centre, addressing smallholder decision-making, tree production in crop-livestock systems and small-scale mechanisation underway.

Capacity building

One hundred and twenty-nine active postgraduate fellowships for developing-country scientists associated with ACIAR projects, with 38 scientists completing studies at either Masters or PhD level.

COMMISSION
CHAIR'S
AND CHIEF
EXECUTIVE OFFICER'S
REVIEW

When ACIAR was established three decades ago, food security was one of the great foreign policy challenges. Since then, there have been impressive strides in the battle against hunger: world crop production has increased by over 50%. Yet the number of hungry people in the world is higher. Roughly one in seven people lack sufficient nourishment. Worse still, the problem will be compounded as the world's population grows to over nine billion people over the next 40 years. There will be an extra two billion people to feed, mainly in the developing world. Today, one billion already suffer chronic hunger.

Incongruously, most of the world's food-insecure are themselves farmers. Three-quarters of the world's poor and food insecure live in rural areas and rely directly or indirectly on agriculture for their livelihoods.

Agriculture can be a fundamental driver of economic growth and, in turn, poverty alleviation. World Bank research indicates that agricultural productivity growth is twice as effective in reducing poverty as growth in other sectors of the economy. The World Bank also estimates that a 1% increase in agricultural yields leads to a 0.6-1.2% reduction in people living on less than US\$1 per day.

Agricultural productivity growth is one of the basic building blocks of food security, and is highly reliant on research, development and innovation. ACIAR works to reduce poverty, improve livelihoods and increase food security by deploying Australia's research capability to deliver practical results. Australia has an international reputation for the quality and relevance of its agricultural research.

ACIAR's success in supporting the goal of Australia's aid program, helping people overcome poverty, is more important than ever. This work also serves Australia's national interests by promoting stability and prosperity in our region and beyond.

An effective aid program

In July 2011, the Australian Government released a new policy for Australia's aid program: An Effective Aid Program for Australia: Making a real difference— Delivering real results. The policy reflects the Government's response to recommendations made in the Independent Review of Aid Effectiveness. It supports a growing aid program and is being implemented via the Comprehensive Aid Policy Framework, which was released on 8 May 2012, to guide future increases in the aid budget.

Australia's aid program has five strategic goals. ACIAR's work contributes particularly to the goal of sustainable economic development, by investing in agricultural productivity to improve food security, markets, incomes, employment and opportunities for poor people. ACIAR's programs also seek to reduce the negative impacts of climate change and other environmental factors on poor people.

During 2011-12 a panel of experts, led by Australia's Chief Scientist, Professor Ian Chubb AC, considered the strategic framework for international agricultural research within Australia's aid program. The panel's report articulated the role of agricultural research in food security and will help guide future growth in support for agricultural research.

New initiatives

The Government underlined its commitment to a stronger role for international agricultural research with the announcement by Prime Minister the Hon. Julia Gillard in October 2011 at the Commonwealth Heads of Government Meeting of the **Australian International Food Security Centre (AIFSC)**.

The new Centre, established within ACIAR, recognises the importance of food security to developing countries across Africa, Asia and the Pacific region. Initial focus is being given to advancing food security in Sub-Saharan Africa, where progress towards food security and the Millennium Development Goals has been slower than in other regions.

The AIFSC is making a bridge between agricultural innovations (technologies, policies and practices) and their adoption by smallholder farmers, including livestock keepers. Its first projects are underway, across countries in the south-eastern Africa region (Burundi, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania and Uganda). Projects are focusing on enabling smallholder farmers to access research innovations.

These projects are examining the use of trees in crop–livestock systems, the application of small-scale mechanisation and the dynamics of smallholder decision-making processes. Scoping studies are also underway investigating water-use, family poultry, vegetable farming and community landcare approaches to improving farming.

The AIFSC is part of a broader Australian engagement in Sub-Saharan Africa to enhance food security, working to accelerate a transition from a reliance on emergency funding and food aid to building a viable smallholder farming sector.

The AIFSC complements work already underway by ACIAR in a number of African countries, principally through its Sustainable Intensification of Maize and legume Cropping Systems for Food Security in Eastern and Southern Africa (SIMLESA) program. This initiative has seen a significant increase in Australian aid to Africa, with AusAID, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and ACIAR all contributing to a whole-of-government effort to boost food security across Sub-Saharan Africa.

The 2009 Food Security through Rural Development initiative also provided funds to ACIAR for research on **climate change and rice-based farming systems in the Mekong and South Asia** and for the large program: **Pacific Agribusiness Research for Development Initiative**.

Each of these programs is targeting issues specific to the regions—in the Mekong the impacts of climate change on rice-based farming, particularly in the delta region of Vietnam; a second Mekong-focused program, with linkages to Bangladesh, to alleviate poverty through improving the productivity and profitability of rice-based

farming systems; and, in the Pacific, research to improve marketing opportunities and boost agribusiness focusing on the unique constraints of these island nations.

Changes in the political system in Myanmar have set the right environment for AusAID and ACIAR to work on complementary initiatives in health, education, livelihoods and food security. The focus is on strengthening the capacity of people and organisations, as well as supporting vulnerable populations across Myanmar and on the Thailand and Bangladesh borders.

Achievements in 2011–12

ACIAR's strength is its ability to target specific research challenges and apply Australian know-how and expertise to the circumstances of developing countries. This helps it to advance the Australian Government's commitments to the Millennium Development Goals and the aims of its aid program.

During 2011–12 ACIAR projects in **Papua New Guinea** (PNG) delivered good results. More than 50,000 high-value eucalypt and teak trees were planted in the Markham Valley. Deforestation in PNG is widespread, and villagers and smallholders particularly face the challenge of long-term income sustainability. Plantings help to create long-term prospects for increased income.

Projects underway help women to develop business skills that can underpin the fruits of research efforts in areas such as floriculture, vegetable production and emerging aquaculture industries. The focus on women is reinforced through research on social and cultural issues and constraints, and the key role women play in adopting new technologies.

ACIAR's work in PNG also includes research aimed at controlling and minimising pest and disease incursions, which threaten a range of crops. A strong capacity in science is part of this, along with helping villagers with management and control options. This also has benefits for Australia, as controlling diseases and pests in our closest neighbour is a vital part of quarantine preparation and management.



ACIAR supports women researchers in Papua New Guinea. Tabithe Manjobbie works at the PNG Oil Palm Research Association.

In **Indonesia**, our largest partner country, ACIAR is involved in the Australia–Indonesia Partnership (AIP 2008–13) that has formulated a comprehensive plan to reduce the large number of Indonesia's population living in poverty. ACIAR directly supports the AIP (Pillar 1) through a focus on sustainable growth and economic management, especially in improving rural growth and livelihoods.

ACIAR's research partnerships to reduce poverty in Indonesia target some of the country's poorest regions—including six provinces in eastern Indonesia. This focus is helping to deliver results across important sectors: rice farming, horticulture, cropping and livestock production. In Sulawesi a natural resource management program developed through ACIAR-funded research helped farmers increase rice yields by 10%.

Research on the management of potato and cabbage production systems identified low soil pH levels, and offers farmers the potential to lift yields across West Java, Central Java, West Nusa Tenggara and South Sulawesi. Some 140,000 farmers grow sugarcane, but many struggle with the impacts of pests and diseases. Research has identified issues and approaches that form the foundation of an integrated pest management (IPM) approach that promises to help.

Two projects are aiding the livestock sector. The first has identified the link between iodine deficiency and goitre in goats, and the second is focused on the farm to market chain for beef. A new project on Indonesian beef started late in the financial year, with

the aim of reaching more than 50,000 smallholder producers and workers across a range of value-chains.

A suite of projects in the **Mekong** region is examining regional issues, including biosecurity and fisheries management. Some of this work is being done with Thailand, using the skills developed in earlier projects (with relevance to the poorest farming communities) and helping to foster regional partnering with Laos, Cambodia and Vietnam on Mekong fisheries management.

In **East Timor** ACIAR is managing, on behalf of AusAID, the third Seeds of Life project. This project continues to be a highly effective means to deliver outcomes to the poor. Some 21,000 farming families across East Timor are growing Seeds of Life crop varieties (maize, rice, sweetpotato, cassava and peanuts) that mature more quickly and with yields that are 24–159% better than traditional varieties.



John Dalton, director of Seeds of Life, observes a range of corn species at the opening of the Loes Research Station.

The Agriculture Sector Linkages Program in **Pakistan** (ASLP) is another AusAID–ACIAR partnership yielding dividends. The ASLP is now in its second phase with a focus on benefiting smallholders, poor farmers and other disadvantaged groups, including women.

This work is generating strong results, including in citrus production. The research is helping the primary production district, Punjab, to increase crop yield and fruit quality.

ACIAR's **Africa** programs have grown recently, including through the AIFSC and SIMLESA work referred to. Elsewhere on the continent, a scoping study team to countries in northern Africa has identified opportunities for providing support to encourage the development and adoption of conservation agriculture, an area in which Australia is a world leader. The adoption and promotion of conservation cropping in very similar dryland regions in Australia provides a focal point for engagement in northern Africa.

Outlook

There is no easy solution to poverty, nor to delivering productivity gains across the agriculture sectors of the developing world. Fluctuations in food prices show no signs of abating, nor do the impacts of climate change and competition for land and water resources, all of which place pressure on smallholder farmers. Applying research that reduces poverty for this group remains ACIAR's main priority. During 2012 ACIAR marked its 30th anniversary and used the occasion to take stock of what we have achieved, recognising that more is needed.

ACIAR's track record in delivering effective and efficient aid is excellent, as evidenced by the \$31.9 billion in benefits the Centre has produced, according to independent economic assessments.

The staff of ACIAR will work to preserve and improve this strong record of achievement, recognising that much more needs to be done and that we have a small but strategic role.

Globally, the outlook for the next few years will be shaped by the twin crises of food price rises and the global economic downturn. ACIAR is embarking on a new corporate planning cycle. A key element will be an external review of the Centre to explore where and how ACIAR can improve the Australian Government's efforts to reduce poverty through international agricultural research.

ACIAR's last external review (the Nairn Review) was 14 years ago. Given the magnitude of the changes in ACIAR's operating environment, the Minister for

Foreign Affairs, Senator Bob Carr, has commissioned an external review to examine the appropriateness, effectiveness and efficiency of ACIAR's efforts, and to make recommendations for improvements. The review is not prompted by perceived problems, but intended to make a strong agency even better. It will be undertaken by Mr Bill Farmer (Chair), Professor Ron Duncan, Dr Wendy Jarvie and Mr Terry Enright.

In line with the broader aid program, ACIAR has grown in size over recent years, with an annual appropriation of approximately \$100 million in 2012–13. The Australian Government has committed to increasing support for ACIAR. While this decision was based on the agency's 'impressive results, confirmed by independent evaluations', the Government, Parliament and taxpayers need to be confident that current and further investments are targeted appropriately, effective in helping to overcome poverty, and used efficiently.

It is anticipated that the review panel will consult extensively across the Australian Government, non-government organisations and other key stakeholders both in the Australian community and internationally. The review will be supported by a Secretariat led by ACIAR. We look forward to supporting the review panel and building even stronger performance in the years ahead.



Ms Joanna Hewitt AO
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 program in Papua New Guinea (PNG) is working to improve food supply and increase 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

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

Papua New Guinea

Highlights

- The establishment of small-scale feed mills to make cheaper concentrate diets, substituting local feed resources for imported ingredients, assists the development of smallholder and semi-commercial aquaculture, pig and poultry farming.
- Portable sawmills confirmed as a viable pathway to the development of skills that are both useful at the community level and contribute to the cash economy.
- A national strategy of disseminating best-practice details for the control of coffee green scale commenced, with the rollout of an information campaign in Tok Pisin.
- At Marawasa village in the Markham Valley 213 farmers received training in tree planting and nursery management, and more than 53,000 high-value eucalypt and teak trees planted.

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 PNG—including poorly developed infrastructure, weak market signals and services, new pest and disease threats, poor product quality, and pressure on land and renewable resources as a result of population increases and mining development.

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

A key component of Australia's involvement in PNG is the ACIAR–AusAID research partnership, in which AusAID co-invests in ACIAR-managed activities. 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.

Research achievements

A detailed analysis of the direct and indirect costs and benefits of **portable sawmills** in PNG (also Solomon Islands and Australia) highlighted the need to build commercial skills capacity relevant to operating portable sawmills as a business. It also revealed

opportunities for teaching the principles of silviculture, with emphasis on how these principles should be applied to ensure the sustainability of the customary forest resource through appropriate choice of trees to be harvested for portable sawmilling operations. The research team concluded that greater adoption of portable sawmills offers a pathway to the development of skills that are both useful at the community level and portable into the cash economy.

PNG has many talented women agricultural researchers who are delivering improvements in agricultural production and marketing. In recognition of the 2012 International Women's Day, ACIAR chose to highlight the important contribution of **PNG's women agricultural researchers**, many of whom are key partners in ACIAR-funded agricultural research projects. They met in Port Moresby with Australia's Parliamentary Secretary for Foreign Affairs and Pacific Island Affairs, Richard Marles.



On the outskirts of Port Moresby, Papua New Guinea, agronomist Philmah Seta-Waken checks the progress on her latest ACIAR project, which is helping local farmers grow different varieties of vegetables at different altitudes.

Research is underway to improve the business knowledge and practices of **women vegetable producer smallholders** in PNG, taking account of the cultural and contextual issues of each region. The program will teach women vegetable business knowledge and skills, develop their financial skills and open up opportunities, with a focus on tailoring local schemes to enhance the women's success and security.

Smallholder and semi-commercial aquaculture, pig and poultry farming are making an important contribution to the livelihoods of rural households in PNG. An increasing number of farms are being established around major urban markets because of the demand for high-quality animal protein. However, farm livelihoods are at risk through rising costs of imported ingredients and the lack of cheap feed made from local ingredients. A project is sourcing local feeds that meet the nutritional requirements of the most popular farmed fish, pigs and poultry. Project work includes the establishment of **small-scale feed mills** to make cheaper concentrate diets, substituting local resources for imported ingredients.

A study seeking to improve smallholder returns from coffee production through participatory improvements to integrated control of **coffee green scale (CGS)** undertook surveys of smallholders in the three major coffee-growing provinces. Results showed that the scale spread more rapidly in the presence of invasive ants. Where the ants were absent or removed, the scale could be controlled satisfactorily by local natural predators. A national strategy of supporting best practice has commenced with the rollout of information posters (in Tok Pisin). The overall social impacts of CGS control uptake and its implications are particularly important to women, who contribute more than 65% of coffee production.

Value-adding to PNG's agroforestry could foster commercial-scale high-value tree growing by landowners, and this is being tested in a small number of pilot regions. Good progress has been accomplished while working with landowners in the Ramu and Markham valleys in Morobe province to implement **agroforestry systems utilising teak and *Eucalyptus pellita***. The project team has developed a community nursery at Marawasa village in the Markham Valley. Here they have overseen tree planting and nursery training for 213 farmers, facilitated the planting of more than 53,000 high-value eucalypt and teak trees, and prepared a booklet in pidgin to teach methods of collecting seed and growing tree seedlings in a nursery.

Healthier alternative in new charcoal stove

The ACIAR fuelwood project in Papua New Guinea (PNG) is trialling the production of charcoal from trees grown by farmers. Charcoal by itself is of limited value, so the project has adopted an innovative, low-cost (about A\$27) charcoal stove as part of its technology package. It uses a modified galvanised-iron bucket with a concrete internal sleeve to enable charcoal to be used to prepare meals.

Researchers at the PNG University of Technology developed the stove, but it had not been widely adopted because of lack of access to charcoal. Thus the joining of the two strands of endeavour has potential for a net benefit to villagers.

In PNG, large numbers of families in rural areas and towns use fuelwood for cooking. The advantage of the charcoal stove is that it will reduce the amount of fuelwood needed by households and improve the health of women, who do the cooking, by removing smoke.

The new charcoal stoves and the charcoal made from plantations have been displayed at shows in PNG and have generated substantial interest. Many stoves are already on order from ACIAR's partner non-government organisation.

Project partners are looking at how a commercial charcoal production system could be established to enable widespread adoption of this innovative technology. This could be a charcoal cooperative linking growers, charcoal- and stove-makers, and sellers. There is already strong interest for this possibility in Mount Hagen.



Yosi Cossey, a Papua New Guinean forest scientist and former John Allwright Fellow, assessing and monitoring forest resources to ensure they are sustainably managed.

Pacific island countries

Highlights

- Fiji and Vanuatu now have greater capacity to routinely monitor plantations, nurseries and hazard sites for exotic insect pests.
- Effective suppression of invasive Asian honeybees in designated areas of Solomon Islands enables local keepers of European honeybees to resume honey production.
- Development of a drying regime that leads to high-quality *Canarium* nuts, along with development of two suitable nutcrackers adapted from the macadamia industry, enables more processors to join the canarium processing industry in Solomon Islands and Vanuatu.
- Material derived from the softer core portion of the coconut stem found to be suitable for bolstering the organic composition of poor soils in Pacific islands.

Overview

ACIAR's program in the Pacific island countries, namely 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 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) is designed to provide (among other objectives) research and technical underpinning for the AusAID-funded Pacific Horticultural and Agricultural Market Access (PHAMA) program, 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 research and development 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

Researchers studying **soil fertility and biological soil health** at different sites in Kiribati, Fiji and Samoa have identified possible ways to overcome low levels of organic carbon in agricultural soils (less than 0.5%), poor water retention and high-levels of lime-induced chlorosis of plants. In Kiribati some soil samples taken from traditional taro pits had the opposite characteristics and were a testimony to the power of composting and soil management in improving soil health in these atoll soils. In addition, when the team explored composting options and strategies in Tarawa, they found that organic municipal waste could be utilised in small peri-urban vegetable gardens, and these materials could be augmented with other sources from coconut wastes, leaf litter and seaweed.

The discoveries of Asian honeybees on Guadalcanal and Savo islands in Solomon Islands coincided with the demise of most managed European honeybee colonies and the total cessation of honey production. Since permanent eradication

was judged impossible, the project focused on **temporary suppression of the Asian honeybees**. Based on a method used successfully elsewhere, the broad-spectrum insecticide fipronil was offered to foraging bees at 'bait-stations', allowing the lured bees to return to their hives, where the poison is dispersed and destroys the colonies. Used in conjunction with a modified hive that restricts entry to thieving Asian honeybees, this method will enable the development of beekeeping to resume in Solomon Islands. Ongoing extension activities will be needed to ensure that these benefits are realised, but the income generated through this project will flow through to whole families and village groups, with particular benefits for women and children.

Expansion of the **Canarium nut industry** has great potential to improve the livelihoods of rural households in Pacific island countries and PNG. A major constraint to commercialisation of this industry has been poor quality of the nuts due to traditional postharvest handling, whereby nuts were cracked by hand using stone hammers. A project has now developed a drying regime that results in high-quality nuts, and two types of nutcracker suitable for *Canarium* processing have been adapted from the macadamia industry. One processor in Vanuatu who was previously freezing nut products is now selling *Canarium* nut products based on drying protocols, and the project has led to additional processors emerging in Solomon Islands and Vanuatu. The packaged product is now sold in the supermarkets in Port Vila.

The underlying principle in **forest health surveillance** is that early detection of a pest problem allows more scope for its management. ACIAR and its partners have invested substantially over time to develop early detection systems to protect plantations (in particular) and native forests in Fiji, Vanuatu and Australia. An earlier research group developed a combination of insect traps and lures that was effective in attracting all the main groups of wood-boring insects. These have been employed in more recent activities, leading to successful strengthening of Fijian capacity to routinely monitor plantations, nurseries and hazard sites for exotic insect pests. Vanuatu also

now has a core group trained in basic skills of surveillance/static trapping, with institutional support to continue to develop that expertise.

Work to resolve the key technical issues surrounding the processing of fibre from **harvested coconut stems**—known as cocowood—found that the fibre can be successfully processed using traditional wood machinery to produce a high-value flooring product. Demand for cocowood flooring products was proven during the project, and beneficial impacts for communities (such as employment, skills, income and more productive land use) could emerge from a sustainable harvesting and primary processing sector. Since only the outer annulus of hard fibre is suitable for flooring, the project team also investigated and developed secondary products derived from the softer core portion of the stem. This material was found to be suitable as growing media, and it could be used to bolster the organic composition of poor soils in Pacific islands as well as to develop the floriculture and horticulture industries in Fiji, Samoa and beyond.

After evaluation of four strains of **giant freshwater prawn** (one each from Fiji, Vietnam, Indonesia and Malaysia), the strain from Vietnam has been selected for future development of the freshwater prawn culture industry in Fiji. Broodstock from this high-performing strain were formally handed over to Fiji Government officials in June 2011. At the conclusion of the project Fijian farmers had a productive culture stock along with a low-cost feed formulation for prawns that incorporates local feed ingredients. In parallel, hatchery practices have been improved to maintain supply of post-larval prawns to local farmers. These ongoing issues have hindered development of the industry, and their resolution has sparked a renewed interest among farmers in prawn culture.

Market opens for Fijian papaya

The papaya industry in Fiji, while small in scale, is starting to play an increasingly important role in its economy. Papaya has been identified as one of several high-value crops that can help to diversify agriculture following the loss of preferential sugar prices from the European Union.

For years papaya growers in Fiji relied on the planes that brought tourists to the island to freight produce to overseas buyers. The practice helped open markets in New Zealand, Australia and Japan for 'Fiji Red' papayas, but air freight also imposed high costs and put some limits on the industry's growth.

An ACIAR project has helped to reassess the state of the industry, beginning with examining the questionable quality of the papaya at point of sale, which had started to undermine the reputation of Fiji Red papaya. The project team set out to improve standards—targeting every area from better planting material through to crop nutrition, grading and postharvest handling.

The second component of the project was to undertake a sea-freight trial as part of an opportunity to compare freight alternatives and increase the competitiveness of Fijian papaya by reducing costs.

The impetus for the papaya project came from an industry service company that is owned by the Fijian papaya growers and exporters. ACIAR brokered connections between this cooperative and Australian and international expertise. Prime issues were how to stall ripening during the longer sea route and the need for a carton that protected the fruit while promoting cooling.

The sea-freight trial proved a commercial success. A cooling treatment was identified to arrest the ripening process in transit, and in New Zealand the importer arranged an in-store promotion that ensured that the entire trial container sold within a week. Comparisons found that the transport cost per carton was about 60% of the cost by air, while the amount of produce carried could be doubled.

This successful public-private partnership could serve as a model for other fruits and vegetables exported from the Pacific, and help to raise standards and expectations across the board.



The project is working with all stakeholders in the production and export of red papaya from Fiji to improve quality and assure the sustainability of the trade.

Indonesia, East Timor and the Philippines

Indonesia

Indonesia has a growing regional and economic status, which has subsequently altered Australia's development cooperation relationship with that country. 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 projects seek to improve productivity and resilience of livestock and fisheries systems, transform smallholder and community livelihoods, and raise individual and institutional capacity. To deliver these projects, ACIAR focuses largely on the second of the four objectives in the Australia–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.

Philippines

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

Indonesia

Highlights

- Study of highly pathogenic avian influenza helps develop practices to reduce the risk of disease outbreaks in ducks, chickens and humans.
- Farmers in Sulawesi increase rice yields by 10% by following a natural resource management program.
- Iodine deficiency leading to goitre in goats in south Sulawesi identified and treated.
- A trial shipment of waxed keprok (mandarins) from eastern Indonesia, destined for retail supermarkets in Java, highlights ways to improve efficiencies throughout the supply chain.

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 alternative approaches. These include initiatives to address food and nutritional security through enhanced productivity and food quality, and 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; supporting profitable smallholder aquaculture systems; enhancing capture fisheries management; enhancing forestry products and services; and developing profitable agribusiness systems for eastern Indonesia.

Research achievements

Farmers in Sulawesi have **increased their rice yields by 10%** after following a natural resource management program developed through ACIAR-funded research. The practices include alternate wetting and drying of fields for water management, using the International Rice Research Institute (IRRI)-developed drum seeder for direct seeding, use of better herbicides for weed control and more efficient fertiliser management.

Introduction of silvicultural technologies have **improved returns for smallholder teak producers** in Gunungkidul district near Yogyakarta. Other initiatives with a positive impact include the provision of farmer-run microfinance schemes and training for farmers to increase their understanding of the potential for larger earnings through providing timber for commercial markets.

A study of goat production in Enrekang district, South Sulawesi, led to the recognition that an iodine deficiency in the goats' diet was leading to goitre. This problem was quickly overcome when a solution containing iodine was applied to the skin. Working with goat farmers, the research team also developed guides to **better nutrition** and a practical, cheap and accurate tool for estimating the live weights of goats.

Sugarcane is grown by over 140,000 Indonesian farmers, but productivity in the past 40 years has seen a serious decline in yields, largely due to pests and diseases. Stem borers particularly have dramatically affected crop yields in Java. A project has laid the foundation of an **integrated pest management (IPM) program** to combat these pests and diseases. The project team has identified the most important pests and diseases of sugarcane in Java, developed better IPM practices to combat them and extended these practices to the sugarcane farming community.

A study of the complete **Indonesian beef supply chain**—taking in four producer regions as well as the main market in Jakarta—yielded a comprehensive picture of the farm to market chain. Project partners and actors through the supply chain now have an improved understanding of the big picture, driving forces and functionalities of the beef supply chain in Indonesia and its place in an international context. Policymakers now have information to initiate ideas of how to better target beef policies in Indonesia, and farmers have gained a better picture about their farm performance (compared with others) and about market implications of their activities. Domestic traders of beef and live cattle, importers, processors and supermarkets now have the knowledge on hand to gain a more comprehensive understanding of market drivers, directions and options.

A project aimed at increasing the production and **profitability of the potato and cabbage system** in West Java, Central Java, West Nusa Tenggara and South Sulawesi identified low soil pH as a major constraint. Correcting soil pH will help farmers to obtain the full potential from their potato, cabbage and other vegetable crops, and the crops will utilise also fertiliser inputs more efficiently. The project identified and tested a scheme that can supply increased quantities of seed potatoes free from potato cyst nematode at an affordable price to the areas in Indonesia currently free from the pest. Each province ran a series of farmer field schools as the platform for participatory field learning about potato and cabbage management.

Aceh women's groups are gaining knowledge about farming and group management and how to connect to local extension support. So far there are more than **35 women's farming groups** comprising 742 members. Through other village farming groups (mainly rice growers) at long-term sites, 103 farmers are gaining direct access to

advice on planting systems, new varieties, fertiliser management and soil-test kits. As well, 256 farmers and 17 extension staff have attended demonstrations of planting and weeding technology, new varieties and planting layout, and use of the leaf colour chart and soil-test kit.

Vital clues emerge in bird flu study

H5N1 highly pathogenic avian influenza (HPAI) emerged in Asia in the late 1990s, causing massive outbreaks of disease in poultry, deaths in humans and worldwide concern that the virus could lead to a global influenza pandemic. Because of the central role of ducks in the maintenance and evolution of other avian influenza viruses, it was considered likely that they played a similar role with the H5N1 virus.

There was, however, limited evidence to support this assumption, particularly from field studies. The serious nature of the situation demanded urgent action to provide a knowledge-based approach to control of the disease in poultry and prevent further deaths in humans.

ACIAR sponsored research to gather essential information that would lead to greater understanding of the biology and epidemiology of the virus in ducks. In Indonesia, 35% (34/96) of the study farms experienced an HPAI disease outbreak during the course of a 12-month longitudinal field study. Most chickens in the outbreaks succumbed to the disease, whereas most ducks showed minimal clinical signs and survived the infection. The studies suggested that ducks are not an effective species for transmission of the virus; by contrast, infection in chickens was rapidly fatal, virus replication was extensive, and virus shedding was extremely high for the short period of time before death, indicating very efficient transmission of the virus.

The project identified management factors that reduced the risk of an HPAI disease outbreak or H5N1 infection occurring, including completing a full course of vaccination, confining duck flocks overnight on the farm, preventing ducks scavenging around neighbouring houses and avoiding consumption of carcasses of dead birds. The findings are vital to putting effective management plans in place.



The majority of livestock kept by smallholder farmers (small and large ruminants, pigs and poultry) are integral components of complex crop–livestock systems.

East Timor

Highlights

- Local village groups and researchers working together to introduce seeds of high-performing crops to farmers.
- Control of mealy bug on papaya expected through the implementation of integrated pest management practices.
- ACIAR brokering a trilateral partnership involving Australia, Indonesia and East Timor to improve the productivity and profitability of Bali cattle raised in East Timor.

Overview

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 higher levels of 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 fisheries systems, transform smallholder and community livelihoods, and raise individual and institutional research and development capacity.

Opportunities for ACIAR assistance in East Timor lie in the food crops sector, where yields are low by regional standards. Agriculture provides livelihoods for more than 80% of the East Timorese population and accounts for 30% of gross domestic production. 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, while 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.

Research achievements

Seeds of Life, Phase III, a 5-year project designed to help East Timor develop seed systems and **deliver high-performing seed to growers**, is progressing smoothly. A scheme has been developed in which local village groups undertake informal implementation, while formal activities to test growing seeds take place on research stations.

Papaya is an increasingly important crop in East Timor, but the harvest has been affected by an infestation of mealy bug, a pest that is spreading rapidly in both this country and Indonesia. A project is developing an **integrated pest management plan** that will depend on the identification and introduction of biological control agents.

Australia has helped establish a **trilateral research partnership** that enables East Timor and Indonesia to work together. This has enabled Indonesian researchers to help East Timor adapt, for its local conditions, the simple approaches to improving the productivity and profitability of Bali cattle that are working well in eastern Indonesia.

East Timor's fisheries and aquaculture sectors currently fall well short of their potential to contribute in a significant way to improving livelihoods and food security. A newly commenced small project is funding research through WorldFish. It aims to produce a **National Plan of Action in Aquaculture**, map fisheries and aquaculture potential and dependence, and initiate the development of an inshore fisheries strategy to guide investments in fisheries management and production.

Philippines

Highlights

- Farmers to gain from enhanced profitability and competitiveness of selected fruit and vegetable crops and from better quality vegetables through integrated crop management.

- Superior seedling production policies used successfully for smallholder and community plantations in other south-East Asian countries introduced into the Philippines.
- New opportunities to improve both commercial and municipal handline fishing in three key regions.

Overview

The mountainous nature of the Philippines means that there is relatively little new land suitable for expanding rice areas, and productivity growth in existing areas in recent years has been low. In addition, the population continues to grow at more than 2% per year (expected population will rise from 95 million to 101 million over the next 7 years). In 2008 the Philippines became a net food importer for the first time since the early 1980s. While production of rice remains a dominant national priority, there is increasing pressure in the country to diversify and produce a range of other food, livestock and fisheries products.

ACIAR specifically 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.

The following are the lead priorities for the Philippines under ACIAR's medium-term research strategy (2012–16), agreed in February 2012: increasing the market competitiveness of Philippine horticultural products; competitive and sustainable fisheries and aquaculture production; land

and water resource management for profitable and sustainable agriculture; improving returns from low-input animal production systems; tackling the adverse impacts of climate change on the rural poor; and improving agricultural technology uptake through better understanding of extension and uptake processes. Undertaking the program involves engagement with a wide range of local 'next-user' partners (such as local government units, NGOs, commercial agribusiness companies and farmer community groups).

Research achievements

The substantial progress achieved by two horticultural mega projects has led to the commissioning of two further projects. One seeks to **enhance the profitability and competitiveness of selected fruit and vegetable crops** through improved supply chains, and the other will **lift the performance** of a selected range of vegetables through integrated crop management.

Plantation establishment in many parts of the country is hampered by poor-quality tree seedlings. A project has analysed the structure of the tree nursery industry and the related policy environment, starting with a survey of approximately 160 nurseries in Mindanao and Leyte. Simultaneously, a comparative study of the seedling production policies for smallholder and community plantations in key South-East Asian countries identified policies and initiatives appropriate to the Philippines. Working in partnership with key stakeholders, team members have now identified some key areas to pilot test initiatives that could lead to substantial **improvements in seedling quality**.



Farmer Boie Gerona proudly shows sweet peppers he produced under his protected cropping structure in Bontoc, Southern Leyte, Philippines. Dr Zenaida Gonzaga, from Visayas State University and project leader of the ACIAR protected cropping project, looks on. (Photo: G Rogers)

Various types of **handline (banca) fishing** are still the most common method in both municipal and commercial fishing sectors in the country. A project investigated three regions representing some of the most significant centres of tuna handline fishing. Project members identified factors including illegal fishing, declining fish stocks, competition with other users, environmental

factors (such as climate change), poor fisheries information, inadequate management regimes and lack of effective fisheries enforcement. Despite numerous challenges, the team found opportunities to recommend for improvements in both commercial and municipal handline fishing sectors in the three regions.

Enhancing food security in Bohol

Justiniano Celeres farms his half-hectare plot of land on the mountainous slopes of Pilar, on the island of Bohol. Five years ago the sole crop he planted was cassava, and his main challenge was managing the topsoils that were frequently washed away in heavy rains.

Today he plants cassava, pineapples, ginger, corn and sweetpotato. The increased yields and variety of crops provide a year-round income: Justiniano can feed his wife and six children and still have money available. By contrast, 5 years ago any income was dependent on the successful harvesting of the cassava crop.

Justiniano made the key decision to become involved in an ACIAR project on developing and adapting landcare techniques in the hope of bringing a stop to the constant loss of so much of the topsoil. It was a worthwhile choice. 'You could hardly see any topsoil at all here before I started landcare', he says. 'Now the topsoil has built up again; this soil is healthy and I don't have to use as many fertilisers or chemicals, so my costs are less.'

By following the landcare approach of ploughing contours and creating natural vegetative strips along the steep slopes of his farm, Justiniano saw changes within a year. The benefit to the farm soon followed, with several crops providing a year-round income. It also provides him with the ability to better plan for the future and tie his plans to the income potential of the farm. 'While one crop is at a young stage, I am planting another crop and harvesting yet another', he says.

As the changes on Justiniano's farm became visible to other farmers in the locality, they decided to seek the same success and are now introducing landcare practices on their own farms.

Mekong countries and China

This program comprises Vietnam, Lao People's Democratic Republic (Laos), Cambodia, Thailand, Myanmar 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, south-central coast and north-western highlands—where poverty persists and where the agricultural natural resource base is vulnerable.

Lao People's Democratic Republic (Laos)

Food security is still central to agricultural development in Laos, which is one of four countries involved in a new ACIAR initiative on safeguarding food security in rice-based farming systems. ACIAR's program aims to increase the productivity of these systems and, in cooperation with other international agricultural development centres, to fast-track the delivery of new crop varieties.

Cambodia

Around 80% of Cambodia's people rely on agriculture for their livelihoods. ACIAR supports research to lift the productivity of rice-based farming systems, increase agricultural diversification (particularly into non-rice field and horticultural crops, ruminant livestock and fisheries) and adapt to climate change at the farm scale.

Thailand

ACIAR's program in Thailand has seen increasing co-investment in the partnership. ACIAR is investing in implementation of the results of earlier projects (with relevance to the poorest farming communities), biosecurity systems implementation, and regional partnering with Laos, Cambodia and Vietnam on Mekong fisheries management.

Myanmar

ACIAR's aim in Myanmar is to work predominantly through international organisations and NGOs (including Australian-accredited organisations) that

have a longstanding presence on the ground. The program has a focus on the legume-based farming systems in the central dry zone, and is working to establish a new program to improve productivity in the crop, fisheries and livestock sectors.

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; and improved integrated crop–livestock systems in favourable areas of Tibet Autonomous Region and rangelands of north-western China.

Vietnam

Highlights

- Poor coastal communities seeing the benefits of oyster farming and enthusiastically embracing the opportunity.
- Over 150 farmers directly acting as 'champions' for the use of inoculant biofertilisers, while around 1,000 new farmers have been exposed to the knowledge generated.
- Rising success among families in the north-western highlands in growing and marketing local Indigenous vegetables.

Country overview

ACIAR's program in Vietnam supports technical and agribusiness research to enhance smallholder incomes from selected areas of high-value agriculture, aquaculture and forestry. In recent years the program has focused on three geographic regions—the Mekong Delta, south-central coast and north-western highlands—where poverty has persisted and where there are threats to sustaining the agricultural natural resource base. There is also opportunity to employ Australian agricultural technical skills to assist in development.

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

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

Research achievements

Research to establish an industry centred around the culture of molluscs has had ongoing success. Restaurants in the coastal tourist areas of Quang Ninh and Hai Phong provinces have enthusiastically accepted 'milky oysters' (Hau Sua) and are promoting the new product. **Oyster production** has continued to increase rapidly, and over 1,500 people are now fully employed in the oyster industry. Poor coastal communities are seeing the benefits of oyster farming and enthusiastically embracing the opportunity. Money from oyster farming has enabled diversification into other types of farming, and provided jobs including casual seasonal jobs and opportunities for younger people.

A project to encourage the emergence of **profitable beef enterprises** in north-western Vietnam has completed initial assessments. The technical and marketing teams have identified constraints to the beef industry including a winter feed deficit, varied and inconsistent supply, a market price for small farmers set by downstream buyers and no traceability for domestic beef. However, they also identified a number of current advantages. They found that farmers consider cattle production advantageous in building wealth, and that there is increased demand due to recognition of traditional practices and production quality in the study area. The local authority has an open policy to investors, and customers are willing to pay a premium for traceability.

A recently completed project sought proof that an **inoculant of 'free-living' microorganisms** to crops would enhance plant growth and yield. Studies of an inoculant product 'BioGro' with and without the application of nitrogen fertiliser showed that plant growth promotion and improved grain yields could be gained with normal nitrogen fertiliser application plus 'BioGro', or that BioGro could substitute up to half the applied urea without loss of yield. There are now over 150 farmers directly acting as 'champions' for the use of inoculant biofertilisers, while around 1,000 new farmers have been exposed to the knowledge generated. The most recent data from the participatory field trials indicate that over 80% of the farmers using BioGro increased yields by over 5% and lifted income by an average of 8%.

Helping women to market Indigenous vegetables

A Masters degree in agricultural business from the University of Adelaide equipped Rebecca McBride to spend 12 months working in north-western Vietnam as an Australian Youth Ambassador for Development. Rebecca was an agricultural marketing officer for an ACIAR project, helping women from often poor families in the north-western highlands to grow and market local Indigenous vegetables in rapidly transforming markets.

The project's aim is to help the farmers get higher market prices than they usually receive for vegetables grown in competition with other local producers and imported goods. It is taking a whole-of-chain approach from production through to consumer choices. Rebecca worked on the marketing strategies, reviewed marketing research and contributed to a number of marketing-related events.

Her consumer research included holding tasting days of the Indigenous vegetables versus conventional varieties, and testing the taste of the vegetables at different growth stages, to find out when it was best to pick them. She also described a restaurant challenge in the tourist town of Sapa, where seven restaurants created dishes using the vegetables from the area. People came off the street and rated the food, and the team tallied up the votes.

Another aspect of the project is helping the women understand safer vegetable production by training them in the judicious use of chemicals to combat pests and diseases. This is important as food safety becomes more highly valued by Vietnamese consumers, particularly in urban high-end markets.

A key partner in the ACIAR project is the Vietnam Women's Union. Rebecca was impressed by their incredible level of organisation and huge member network, which is particularly empowering women in rural areas.



A woman selling Indigenous bittermelon at a market in Vietnam. An ACIAR project has been helping to increase the skills of women farmers in the safe production, promotion and use of Indigenous vegetables. (Photo: S. Newman)

Lao People's Democratic Republic (Laos)

Highlights

- Project finds evidence of the occurrence and impact of pig-associated zoonoses, whereby parasites and other pathogens spread from pig to humans.
- Construction of vertical slot fishways acknowledged as a useful management tool for the rehabilitation of wetland fisheries.

Country overview

ACIAR research aims to increase the productivity of these systems, and to foster cooperation with CGIAR centres to fast-track development of new crop varieties through advanced informatics and biotechnology. ACIAR's program in Laos 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 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; forestry and wood manufacturing industries; livestock and fisheries; agribusiness, marketing, policy and social issues; and adapting Lao farming systems to climate change.

Research achievements

The Lao Agricultural Research Fund (LARF) was established to provide Lao scientists with an opportunity to access, and compete for, **funds for agricultural research**. Opportunities are provided for Lao scientists to develop and submit for funding consideration, research proposals of 1–3 years duration, with a project budget limit of US\$12,000 (but with the budget for any single year not to exceed US\$5,000). Up to December 2011 there were 43 projects supported through the ACIAR–LARF initiative, involving a total commitment of US\$353,000. Three other donor agencies in Laos have observed the LARF in action and decided to adopt the same model for providing support for Lao agricultural research.

Pig production is becoming increasingly important for food security in Laos. The low-input traditional methods for pig production present opportunities for the transmission of a broad range of medically important **zoonotic infectious diseases**. A project found that the human, pig and dog populations studied had a very high prevalence of parasitism, including two kinds of tapeworm, a roundworm, the protozoan *Giardia* and soil-transmitted helminth worms. As a consequence, multiple research partners are developing new research initiatives in the area of zoonotic infectious diseases.

The benefits of **fishway construction** for floodplain species of central Laos are emerging after a project team worked with a local community to construct an experimental facility at a floodplain regulator in Pak San. Initial experiments recorded over 2,000 fish from 50 species successfully gaining passage in the first 2 weeks. A preliminary analysis of results suggested that vertical slot fishways, on conservative gradients, could represent a useful management tool for the rehabilitation of wetland fisheries. The work will have wider applicability to rehabilitate other degraded fisheries within the lower Mekong Basin.

Value-adding to Laos plantation timber products will ensure long-term benefits for the **secondary wood processing industry**. Project activities have led to improvements and changes in the value-

added manufacturing processes within a network of nine selected companies. The strengthening of Lao capacity in plantation wood processing will empower workers and improve their health and safety. In addition, the project has provided a sound base for enhanced value-adding in the wood-based sector and implementation of furniture product development to meet international standards.

Cambodia

Highlights

- Effectiveness of laser land levelling for better crop soil moisture management demonstrated in trials.
- Best practice manual for cattle health and production in Cambodia prepared for publication.

Country overview

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

ACIAR's strategy is to support rural development in line with Cambodia's National Strategic Development Plan 2006–2013 and its priorities for poverty reduction. ACIAR's program in Cambodia has three thrusts: to support research to increase and secure the productivity of rice-based farming systems; to support applied research and development that underpins agricultural diversification, particularly into non-rice field and horticultural crops and ruminant livestock; and to recognise the vulnerability of Cambodian agriculture, particularly rainfed cropping, to climate variability and change.

ACIAR is 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

A suite of three projects jointly publishes a best practice manual for **cattle health and production** in Cambodia. One of the projects has sought methods to improve cattle productivity by trialling interventions in the areas of nutrition, animal health, reproduction and husbandry management, and marketing. The central Cambodian project team continues to work with the farmers in six villages in Kandal, Kampong Cham and Takeo provinces, where 250 cattle belonging to an average of 100 households in each village were initially enrolled for participation in the productivity trials.

Cambodia is one of three countries (the others are Laos and Bangladesh) taking part in the Rice-based Systems Research program, which explores opportunities to alleviate poverty through improving the productivity and profitability of **rice-based farming systems**. In the Cambodian component of the program a survey of the types of rice best suited to local farmers and traders has been completed. Cambodian collaborators have also conducted trials to see which establishment methods and weed management strategies are the best performers under local conditions.

Another project is seeking to develop an understanding of farm-level water management constraints and opportunities, and to research and develop adapted **water management interventions** at a farm and district level. Rice production in Cambodia can be greatly enhanced by an improved understanding of water requirements. Demonstration trials of laser land levelling have been conducted at five locations—a precisely levelled land surface leads to uniform soil moisture distribution, resulting in good germination, enhanced water-use efficiency and improved crop stand and yield. The project activities have sparked a wave of activity in laser land levelling, culminating in CAVAC levelling 30 hectares as a demonstration.

Learning about bugs

An ACIAR-funded project in Cambodia teaching farmers and their children about better ways of managing crop pests and diseases has featured on ABC TV's premier educational program 'Behind the News'. The program, 'A Bug's Life', shows Australian scientists Dr Bob Martin and Stephanie Belfield helping the Cambodians identify the beneficial insects in their crops, along with better ways of using pesticides.

The project has developed school-based activities as aids for training the next generation of farmers, and to help children influence their parents on integrated pest management. In support of these activities Dr Martin also illustrated an ACIAR-published children's book *Jorani and the green vegetable bugs*, which is available in English and Khmer.



Children in a village in north-western Cambodia acting out the story of *Jorani and the green vegetable bugs*, a publication by ACIAR about using integrated pest management to reduce the need for pesticides to control insects. (Photo: M Gyles)

Thailand

Highlights

- Thailand working with Australia to establish remote microscopy centres in neighbouring countries.
- World Vision Foundation in Thailand achieves promising results working with farmers on ACIAR-sponsored program in Mahasarakham province to improve quality of crop–livestock farming.

Country overview

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

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 Laos and Indonesia on sustainable fisheries and basin fisheries management.

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

Research achievements

The ability to identify pest organisms is fundamental for both plant quarantine and crop protection processes. Australia has developed a **system for remote microscopy**, and already a facility is underway in Thailand. Currently, there is limited or no physical biosecurity and quarantine system operating in Cambodia or Laos, and the project aims to develop a regional network of remote

microscope centres that will encourage the operation of a regional communication network for the purpose of remote identification of pests.

ACIAR is sponsoring a project with the World Vision Foundation in Thailand to help rural people in Mahasarakham province in north-eastern Thailand, one of the poorest parts of the country, which suffers from low soil fertility, salinity and acidity. **Farmer participation in trials** has been encouraged and in 2010 extended to eight target villages of four subdistricts. The promising results obtained thus far will be evaluated in 2012–13.

Myanmar

Highlights

- New varieties of legume identified through trials that yielded as much as 35% more than traditional varieties in Myanmar's central dry zone.
- Focus on Myanmar's inland capture and culture fisheries to lead to better management of the natural resource and to the emergence of small-scale aquaculture.

Country overview

Australia is providing support to activities in 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 Myanmar 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 bodies. 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 Myanmar's agricultural scientists over many years.

Research achievements

New, **high-yielding varieties of chickpea, pigeonpea and peanut** were identified by Department of Agricultural Research and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) scientists after 4 years of evaluation. Eighty-eight replicated mother trials and 541 unreplicated baby trials took place across 23 township areas in Myanmar's central dry zone. The new varieties yielded as much as 35% more than traditional varieties. A farmer participatory model was used throughout, with more than 1,500 farmers involved in on-farm trials, increasing seed or selecting preferred varieties at field days.

A newly commissioned project will improve the capacity for **management of Myanmar's inland capture and culture fisheries**, and facilitate the emergence of co-management of capture fisheries and small-scale aquaculture as cornerstones of rural food security and livelihoods.

China

Highlights

- Over 50 high-yield lines of wheat germplasm resistant to yellow rust now being tested for suitability in Sichuan and Yunnan provinces, China.
- Pilot scheme successful in encouraging farmers to bid for financial incentives to undertake ecological restoration on their farms.

Country 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 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; and integrated crop–livestock systems in favourable areas of Tibet Autonomous Region and rangelands of north-western China.

Research achievements

Yellow rust is, at present, the most important wheat disease in Asia, Middle East and Africa. A large research thrust is underway, and China has contributed through development of high-yielding, adapted **rust-resistant wheat germplasm** with durable, adult plant resistance. Over 50 high-yield lines of wheat germplasm adapted in Sichuan and Yunnan provinces with high to adequate adult plant resistance could be developed. Several scientists in China are using these resistant materials in their breeding programs to develop future varieties.

In both north-western China and Australia, conservation farming practices are being promoted as an important component of more-sustainable farming systems. CSIRO Plant Industry has achieved considerable success for dryland wheat in Australia by breeding for specific traits that make more **effective use of available water**, and some of these traits have also been shown to improve adaptation of wheat to conservation farming practices. Now a project is making advances to extend this success to

north-western China, working with leading programs breeding dryland wheat varieties in that region.

A follow-up study of an ACIAR-funded project that reviewed the Conversion of Cropland to Forest and Grassland Program (CCFGP) has explored the feasibility of an alternative bidding scheme for conservation contracts to allocate government ecological funds. In case studies of four villages in Sichuan province, farmers were offered the opportunity to change their land use in return for a financial payment. The study showed that this was both a practically feasible and more economically efficient method for **encouraging ecological restoration** than the scheme promoted under CCFGP.

South and West Asia

The South and West Asia region includes India, Bangladesh, Pakistan, Nepal, Afghanistan, Iraq and Bhutan.

India

Collaboration with India includes projects on better water management to improve livelihoods in the more marginal rainfed 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.

Nepal

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

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, and other projects have helped manage fruit fly damage and footrot in ruminants. A major initiative to improve citrus production through pest and disease management is now underway.

India

Highlights

- Development of a mechanised no-till system for rice produces similar yields to paddy rice while using 30% less irrigation water and less labour.
- Researchers help communities manage and conserve their groundwater resources.
- Policy research puts India's agricultural sector on a pathway that reveals its true comparative advantage in production/cropping systems.

Country overview

Australia and India share many of the same agricultural and natural resource management problems, as well as key commodity crops such as wheat, resulting in researchable issues of mutual relevance

to both countries. ACIAR has supported a program of collaborative agricultural research with India since 1983. Most ACIAR programs in India consist of bilateral projects, in which Australian research organisations collaborate with one or more Indian research institutions (eg 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.

ACIAR's strategy for 2011–16 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

Indian consumers rate chapatti **quality of wheat** very highly, yet farmers do not attach much importance to quality as nearly all wheat is sold with no segregation. High grain hardness is shown to be the main wheat quality measure closely correlated with high chapatti score. An ACIAR project has determined that the practice of sowing early, although resulting in lower protein than with later sown wheat, maintains high grain hardness. The project concluded that

farmers can adopt a practice that includes variety choice and timely sowing to obtain acceptable chapatti quality without losing grain yield benefits.

Researchers are seeking to help communities manage their **groundwater resources**. In many parts of India water is almost free and the electricity used to pump groundwater is heavily subsidised. Electrification for pumping groundwater has had a huge impact on poverty, but it is now overused. There are two lines of research: focusing on how to manage aquifer recharge and establishing institutional arrangements that encourage people to conserve the resource.

Another project is examining issues of **water access in a changing climate**. The research aims to help farmers adapt to changing conditions. By helping to establish systems and processes that give farmers access to relevant climate information, they will be better placed to respond whatever the situation.

A project has developed a framework through which India can approach **agricultural policy reform** in ways that will ensure that the gains from trade reform will be shared within the farm sector. The project has also made a strong contribution to putting India's agricultural sector on a pathway that reveals its true comparative advantage in production/cropping systems. The project was based around the premise that India's trade policy reforms at the border need to be complemented by 'behind-the-border' domestic reforms if government policy objectives of improved productivity, higher rural employment, and incomes and enhanced food security are to be met.

Exciting promise for double no-till farming

For the past 5 years Dr Gurjeet Gill from the University of Adelaide has headed an ACIAR project to develop a no-till rice production system. One of the major purposes of no-till rice is to overcome the soil degradation caused by excessive tillage and ‘puddling’ of soil to minimise water infiltration in flooded fields for paddy rice production.

‘This aggressive tillage for rice production creates an inhospitable soil environment for the following wheat crop’, says Dr Gill. ‘We have now developed a mechanised no-till that produces similar rice yields while using 30% less irrigation water and less labour. Because soil structure is not degraded during the rice rotation, we are also seeing 10% higher wheat yields.’

With double no-till, farmers can retain stubble and go in with a seed drill to sow the next crop. Large amounts of the crop residues can still be removed and used as animal feed in an integrated cropping–livestock system.

The University of Adelaide collaborated with CCS Haryana Agricultural University, Punjab Agricultural University and the International Maize and Wheat Improvement Center (CIMMYT) in India. The project focused on the states of Haryana, Punjab and Bihar, where the level of extension undertaken over the duration of the 5-year project has been exceptional. More than 1,000 grower-assisted sites (greater than 500 acres) clearly demonstrated that direct-seeded rice, zero-till rice and unpuddled, mechanically transplanted rice are technically and economically viable rice establishment systems.

The project innovations are likely to have long-term benefits on farm productivity and profitability while helping to conserve oversubscribed water resources, improve soil fertility and remove the need to burn straw in preparing the ground for the next crop.

Bangladesh

Highlights

- Increasing wheat and mungbean production in Bangladesh’s southern coastal region proved feasible.
- Minimum tillage practices lead to increased cropping intensity and lifted productivity of smallholder farms.

Country 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. Research activities are strongly related to agricultural food production. Bangladesh also 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.

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 food. 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

Increasing wheat and mungbean production in Bangladesh’s southern coastal region has proved to be feasible. A project concluded that around 800,000 hectares were under-utilised between rice plantings. The research focused on whether **short-duration dry-season crops** such as wheat and mungbean

could be grown profitably under the hot, humid and sometimes saline conditions of the region. More suitable potentially high-yielding varieties of wheat and short-duration mungbean are becoming available. The project also found that farmers, many of them women, need substantial support and training in producing wheat, which has not been traditional in the region.

The rise of mechanisation in Bangladeshi agriculture has seen the introduction of small-scale two-wheeled tractors, now increasingly being used in association with seed drills for minimum tillage practices. This trend has increased cropping intensity and lifted productivity of smallholder farms. Business opportunities have also grown as entrepreneurs supply tractors for sale or hire.

Pakistan

Highlights

- Members of Pakistan's citrus industry visit the Sunraysia district in New South Wales to learn about Australian farming practices.
- Groundwater model to help improve equity of water distribution in the Punjab region reaches an advanced stage.
- Survey of a selection of villages and households in Pakistan helping to establish the issues and constraints preventing poor and marginalised groups from entering certain industries.

Country overview

Development challenges in Pakistan are considerable and have been exacerbated by the floods of 2010. 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 research, development and technical capacity building, technical support and carefully targeted interventions to underpin Pakistan development programs. Poverty reduction, linking smallholders to markets and gender equality are major issues for development programs in Pakistan, and are 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 has initially concentrated on the mango, citrus and dairy sectors. As the work progresses, there will be an increasing 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

Citrus is one of the major fruit crops of Pakistan, with approximately 10% of production being sold internationally. ACIAR research is helping the primary production district, Punjab, to increase crop yield and fruit quality by adopting **improved horticultural management techniques**. As part of the capacity building associated with the project, members of Pakistan's citrus industry visited the Sunraysia district in New South Wales in April 2012 to learn about Australian farming practices that would have potential application back in Pakistan.

A team undertaking social research to foster effective collaboration and **strengthen pro-poor value-chains** adopted participatory research and case-study approaches within four industries: mango protection, mango value-chain, citrus and dairy. Team members engaged with poor and marginalised groups to gain an understanding of the issues and constraints affecting their participation in the selected industries. This was achieved

by surveying a representative selection of villages and households. In April 2012 the data gathered through the baseline survey were analysed and discussed at a major workshop entitled 'Linkages for Livelihoods', held in Canberra.

There is a need to improve **equity of water distribution** among the water-users in Pakistan's Punjab region. A project is working to achieve this by devising a knowledge-based management option for improving livelihoods. Development of a groundwater model is progressing well through a dynamic interchange between Australian and Pakistani partners. Once sufficiently developed, they will calibrate and validate the model prior to testing it with local Pakistani hydrological data.

Nepal

Highlights

- Research collaboration seeks to develop climate-resilient farms in the eastern Terai rice–wheat systems.
- Study investigates the characteristics of tanks and tank irrigation on the Terai plains of Nepal.

Country overview

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

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

Research achievements

The ongoing agricultural challenges in Nepal are shared with neighbouring countries including India and Bangladesh.

An ongoing ACIAR **water management** project is focusing on soil–water–crop modelling for all three countries. Another ACIAR subregional research collaboration seeks to develop climate-resilient farms in the eastern Terai rice–wheat systems.

In eastern India and Nepal tanks (small reservoirs) are still used for irrigation, livestock and domestic purposes, but fisheries are emerging as their primary usage. Competition between irrigation and fisheries often creates a rift within communities, resulting in management issues that directly contribute to poor tank maintenance. A 10-month scoping study is investigating the **characteristics of tanks and tank irrigation** in East Indian states (West Bengal, Bihar and Orissa) and the Terai plains of Nepal.

Afghanistan

Highlights

- New high-yielding disease-resistant lines of wheat and maize multiplied and released for farmer trials.

Country overview

ACIAR's collaboration with Afghanistan started in 2002 and focuses support on wheat and maize production. Activity in Afghanistan continues through collaboration with CIMMYT and 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.

The country program has a new focus on crop and livestock intensification and better water management. The researchers will

foster linkages between the improvement of wheat varieties and agronomy, the development of forages for small ruminants and community-based watershed management.

Research achievements

The major thrust of the Afghanistan project has been to introduce and screen **new wheat lines** with a particular emphasis on resistance to yellow rust and stem rust (including Ug99). It is also undertaking a similar process with maize. The work has supported the release of new high-yielding varieties, supporting the production and dissemination of quality breeder seed, improved targeting of wheat improvement programs, the evaluation and promotion of crop management practices, and ongoing capacity-building efforts.

Four high-yielding **disease-resistant varieties of wheat** have been selected and multiplied for general release. More varieties will become available after specialised selections for promising bread wheat, durum and barley lines. Four high-yielding maize varieties have also been selected, multiplied and released for farmer trials.

One project under development will undertake research to improve livelihoods of smallholder livestock farmers in crop–livestock systems of Baghlan, Nangarhar and Mazar provinces. Another will build the capacity of national scientists to undertake **community-based watershed management** and improve agronomic practices.

Iraq

Highlights

- Sheep and goat farmers in the dry areas of northern Iraq benefit from introduction of improved forages.

Country overview

ACIAR-managed and AusAID-funded projects are supporting the recovery of Iraq's agricultural sector, a key priority for the Iraq Government. Pressures to abandon cereal–fallow rotations have exacerbated soil degradation and nutrient depletion, and established cropping systems are now in serious decline. Iraqi scientists have had limited

access to international developments in the agricultural sector for over two decades.

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 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.

Research achievements

The **improved germplasm** introduced into cropping systems in the drylands of northern Iraq is being rapidly adopted by farmers, who are also keen to move to zero tillage conservation agriculture. This agronomic advance is being underpinned by stimulating innovation among the region's small manufacturers of machinery.

A new focus on small ruminants (sheep and goats) will see the **introduction of improved forages** to help farmers raise more productive animals. Because crop residues are also an important source of fodder, this research will complement the conservation agriculture research in northern Iraq.

ACIAR 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.

The introduction of sustainable tillage is playing a key role in **restoring agricultural production and marketing systems**, and spillover benefits are expected beyond Iraq. The relevance of Australian expertise to Iraqi conditions has helped, but lack of access to project sites in Iraq has constrained the work of Australian scientists.

Tackling Iraq's salinity problems

In Iraq soil and water salinity problems are impacting on three-quarters of the country's irrigated farmland and causing around 25,000 hectares of agricultural land to be abandoned each year. ACIAR's Iraq Salinity Project brings together an expert group of agricultural researchers and policymakers from Iraq, international research centers and Australia to produce a new body of research to help Iraq better manage the salinity.

The project is operating at three different scales: regionally, to identify the distribution of salt-affected soils and causes of soil salinity, and the levels of salinity in the river systems; locally, to assess the irrigation and drainage infrastructure; and on farms, to find out the best ways to control salt levels in soil.

Dr Andrew Noble, ACIAR's Land and Water Program Manager, toured research sites of the ACIAR–AusAID-funded project in central and southern Iraq and saw firsthand some promising results. In Wasit Governate, he saw a number of trials where salt-tolerant wheat varieties were growing well in soils that had been 'deep ripped' and leached to reduce the saltiness of the soil.

The construction of deep drains to facilitate a drop in salty groundwater is another technique being tested. By contrast, in the regular farmer practice being tested alongside, the crop had failed to establish and there were obvious deposits of salt on the soil, a clear reminder of what the farmers are facing.

'The project is benefiting from the lessons Australia learnt since the 1980s about tackling its salinity problem to the point where the problem is being controlled and in some cases reversed. Experts from the project leader ICARDA are also helping our Iraqi colleagues improve the situation of salinity on the Mesopotamian plain', he said.

Dr Noble was also impressed with the quality of the research and extension activities being undertaken by the Iraqi researchers. 'This demonstrates that there is a capable research base in Iraq that can achieve good results under difficult conditions', he said.



Andrew Noble (ACIAR) and Dr Kasiem (Project coordinator, Ministry of Agriculture) inspect introduced salt-tolerant sorghum lines at field sites located Al-Dujaila site, Wasit Governorate, Iraq, May 2012.

Bhutan

Highlights

- Findings of earlier citrus research lead to development of integrated programs to address citrus greening, powdery mildew and crop irrigation management.

Country overview

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

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

Research achievements

Ongoing research to develop on-farm best practices for citrus production in Bhutan identified citrus greening, powdery mildew and irrigation management as constraints that needed to be addressed. New research is now developing integrated crop production and protection programs that they will be introduced to growers. Pilot districts are being targeted initially, with the intention of eventual rollout to all major production areas.

Africa

ACIAR is helping to address the problems encountered by smallholder farmers in many countries throughout the African continent.

African countries

Highlights

- The Australian International Food Security Centre (AIFSC) commences projects that augment ACIAR's African projects.
- Kenyan farmers celebrate their fourth harvest with the SIMLESA program with a field day attended by 1,000 people.
- Scoping study identifies other African countries where Australian expertise can speed the development and adoption of conservation agriculture.

Regional overview

ACIAR's African research program is concentrated in three regions—eastern-central, southern and northern Africa—and consideration is being given to possible work in West Africa. ACIAR is delivering a major component of the Australian Government's enhanced engagement with Africa through the initiative 'Overseas Development Assistance—Food Security through Rural Development' (approximately A\$20 million over 4 years). Australian support (A\$100 million over 4 years), which is strongly focused on country needs, is aligned with the African Union's 'Comprehensive Africa Agriculture Development Programme' and Australia's expertise in rainfed mixed farming systems.

The research program in Africa has been developed through systematic consultations with African and Australian stakeholders, and includes new projects under the AIFSC. Projects underway seek solutions to problems within aspects of sustainable agricultural development and food security.

Research areas can be grouped into three themes that focus on increased agricultural productivity and improved food security: sustainable management of natural resources; better production practices, which combine improved germplasm/breeds and management/husbandry; and better access to production inputs and markets.

Research achievements

The Lignwa Farmers' Group in Western Kenya recently celebrated their fourth harvest through the SIMLESA program trials with a field day attended by nearly 1000 people. In the Hawassa region, southern Ethiopia, maize yields have been steadily declining. The deep-rooted agricultural practices of low-input farming, repeated ploughing and removal of crop residues to feed livestock have damaged the land. An Ethiopian farmer taking part in the Australian-funded SIMLESA's **conservation agriculture trials** has planted four conservation agriculture (CA) trial plots involving different combinations of maize and haricot beans. 'The maize under CA is very robust and green, an indication of far better yields than we usually harvest', he observed.

A scoping study team to countries in northern Africa identified opportunities

for providing support to encourage the development and adoption of CA across that region. They confirmed that Australia had a lot to offer in understanding, expertise and experience with successfully **developing and promoting conservation cropping** widely in very similar dryland regions.

In line with this finding, a new project initiative seeks to help Egypt find more rural employment. Along the Nile Delta agricultural intensity is already at the optimum; project scientists will therefore look for **ways to increase productivity through expansion** using CA techniques to match the finite amount of water available beyond the fertile strip.

In fisheries research, a project on pearl culture in Tanzania is building on past ACIAR work in Asia. The capacity building will subsequently feed back to other countries in Asia.

Food Security Centre adds value to Australia's African program

The Australian International Food Security Centre (AIFSC), announced in October 2011, has placed its initial emphasis on Africa, where the highest proportion of the population lives in poverty. Across Sub-Saharan Africa the AIFSC is building on, and adding functionality and value to, ongoing ACIAR research programs. The new projects have arisen from foresight studies, farming systems analysis and systematic consultation with potential partners in Sub-Saharan Africa and Australia. The focus of the Centre is on bridging the gap between research and its uptake, focusing on barriers to adoption and testing ways to overcome these.

Scientists have identified the following areas for fast-track implementation: evergreen agriculture embracing agroforestry and maize systems, and technology adoption and pathways. Additional topics under consideration include mechanisation in conservation agriculture, improving smallholder poultry and small ruminant productivity, water management in southern Africa, Indigenous and other vegetable production, improving access to farming inputs and markets, improving nutrition and capacity building.

For further information, see the chapter on the Australian International Food Security Centre in this Annual Report.

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

- Practices introduced by the Center for International Forestry Research (CIFOR) helping to make teak a more profitable enterprise for smallholder production systems in Gunungkidul district near Yogyakarta, Indonesia.
- The Innovation Platform Framework, promoted through the work of the International Maize and Wheat Improvement Center (CIMMYT) in five African countries, contributing to productive, sustainable and resilient maize–legume systems.
- The work of WorldFish in Vietnam aims to ensure that all levels of sea cucumber cultivation are possible at the community level.

Overview

The system of IARCs comprises the institutions financed under the umbrella of CGIAR, together with the non-associated centres that also have a global mandate. One of ACIAR's legislated functions is to fund IARCs 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 CGIAR. The Australian Government continues supporting CGIAR, committing to increasing financial support.

CGIAR continues its reform process that was instigated in 2008. The framework

includes: a new constitution for the CGIAR Consortium; a centralised multidonor CGIAR Fund; a Strategy and Results Framework 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.

Achievements

IARCs are taking part in 18 multilateral projects, with 21 more under development. The **contributions of a number of international centres to ACIAR projects** are documented throughout the country reports. The IARC presence in countries such as Afghanistan, Iraq and Myanmar overcomes the hurdles of inaccessibility, enabling ACIAR to commission research to reach the poor in those countries.

In the 1950s, Gunungkidul district near Yogyakarta in Indonesia had just 3% forest cover. The figure today is about 28%, representing 42,000 hectares of cover. Teak plantations represent a large portion of this. Taking part in this transformation is CIFOR. The Center aspires to make teak a more **profitable enterprise for smallholder production systems**.

SIMLESA is a flagship enterprise of CIMMYT. The 4-year program, launched in 2010, is already bringing substantial gains in maize and bean production to communities in five African countries—Ethiopia, Kenya, Tanzania, Malawi and Mozambique. At a recent meeting in Arusha, Tanzania, to celebrate 2 years of activities, the participants affirmed that the use of integrated systems can **foster productive intensification of agriculture**. Indeed, the Innovation Platform Framework, supported by science and partnerships, can contribute to productive, sustainable and resilient maize–legume systems.

Rice farmers in southern and south-eastern Sulawesi, Indonesia, have become champions in **promoting the use of improved management options**, such as alternate wetting and drying for water management, using the IRRI-developed drum seeder for direct seeding, application of better herbicides for effective weed control and

more efficient fertiliser management. These changes, coupled with more ecologically based rodent management, and integrated

insect pest management have rewarded the farmers with a 10% increase in the rice harvest.

Sea cucumber culture shows promise

ACIAR and the WorldFish Center have invested in sea cucumber cultivation research in Vietnam, the Philippines, Solomon Islands, New Caledonia, Fiji and Australia since the mid 1990s. Current projects focus on hatchery culture, techniques for releasing sandfish into the wild, and sea-ranching and pond culture.

Research based in Vietnam is focused on pond aquaculture, using ponds that were once used for shrimp farming. The Vietnam research has led to simplified hatchery and breeding techniques, creating a breeding system that is more easily adopted in developing countries.

The research, undertaken at the Research Institute for Aquaculture No. 3 at Van Ninh in Vietnam's central coastal region, aims to ensure that all levels of sea cucumber cultivation are possible at the community level. Key achievements have been the adoption of simple algal paste coatings to promote settlement of larvae on plastic plates and a refinement of algae food sources for the larvae and juvenile sea cucumbers.

The sea cucumbers have benefits when grown in a cucumber–shrimp rotation. Shrimp alone can make the water sludgy and toxic, while the sea cucumbers actually clean the ponds. The rotation may also be beneficial in reducing disease risk in the shrimp.



Sea cucumber from the wild at Nha Trang fish port, Vietnam.

Australian International Food Security Centre

Highlights

- Development of the interim strategy underpinned by extensive African, Australian and international consultations.
- First two major projects and four scoping studies developed and active, with a third project near finalisation.
- Office established with staff recruited and operational in ACIAR, Canberra, and identification of a regional office location in Africa.

Overview

The Australian International Food Security Centre (AIFSC) was announced by the Prime Minister of Australia, the Hon. Julia Gillard, in October 2011 at the Commonwealth Heads of Government Meeting in Australia. The AIFSC was established as a centre within ACIAR. The Australian Government made a financial commitment to the AIFSC of \$33 million over 4 years.

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

The work of the AIFSC supports the broader Australian Government aid frameworks and the Millennium Development Goals, but addresses specific African priorities identified through extensive consultations (see below). The AIFSC contributes to food security by providing a bridge between agricultural innovations (technologies, policies and practices) and their adoption by smallholder farmers, including livestock keepers. This gap between research and development will be addressed through understanding why farmers make the decisions they make and through facilitating partnerships and mechanisms that enable innovations to be adopted.

The AIFSC's key focus is to understand the incentives and barriers to delivery and adoption, to accelerate the provision of practical solutions to smallholder farmers.

Initial efforts will focus on achieving increased and sustainable agricultural productivity; better nutritional quality, safety and diversity of food; reduced losses post harvest; and better access to markets and other business opportunities. There is also a focus on education and capacity building of relevant institutions and individuals. Gender will be a central element of all the work, recognising that many smallholder farmers are women.

The AIFSC operates as a centre within ACIAR, building on ACIAR's successful research partnerships and using existing infrastructure and corporate support. As the Centre develops, it will seek new partners and initiatives focused on increasing adoption of innovations.

The AIFSC is engaging with a broad range of national and international partners from researchers through to delivery and extension workers, from the public and private sectors, community groups and civil society.

Achievements

The AIFSC's **Director and a small team** were appointed in the first quarter of 2012 and the office was established at ACIAR House in Canberra. The AIFSC is planning to open a regional office in Africa with additional staff, to act as an interface with African partners and to support the AIFSC's operations in Africa.

The AIFSC is in the process of establishing a high-level **International Advisory Committee**, who will provide a mixture of strategic and programmatic advice to the management of AIFSC and the ACIAR Chief Executive Officer. This Committee will also inform and advise the Commission for Agricultural Research (the Commission) as required.

One-third of the Centre's first tranche of **funding has been committed to three major projects** now underway across eight countries in south-eastern Africa (Burundi, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania and Uganda). These projects are focusing on enabling smallholders to access research innovations. Areas being looked at include the use of trees in crop–livestock systems, the use of small-

scale mechanisation and understanding smallholder decision-making processes.

Scoping studies are also underway investigating water-use, family poultry,

vegetable farming and mapping farming systems across Africa. Research–design workshops have also been planned to help inform the programmatic focus of the AIFSC.

AIFSC across Africa

The AIFSC conducted extensive consultations across Africa and Australia this year to develop its interim strategy (2012–22). In January, consultations with Australian stakeholders determined where Australia's comparative agricultural research advantages would be of value to African food security challenges. In February, ACIAR and the Forum for Agricultural Research in Africa (FARA) hosted a key consultation with farmers', civil society, subregional and regional organisations and universities. Enthusiastically received by African counterparts, these consultations identified agricultural research priorities with a smallholder focus for the differing geographical regions of Africa.

In March and April 2012 members of the Commission and ACIAR subsequently met with African and international research institutions contributing to food security in Tanzania, Ethiopia and Kenya.

The interim strategy has now been approved by the Commission. Ms Mellissa Wood (Director) has since been extensively promoting the strategy with Australian, African and international stakeholders. Ms Wood visited FARA to demonstrate how consultations have shaped AIFSC research priorities. Prof. Monty Jones, FARA's Executive Director, congratulated the Centre for its strategic vision. He stated that FARA 'looks forward to partnering closely with the Centre to promote food security and poverty reduction in Africa'.

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 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, or travel to an international conference to present results of postgraduate research, 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 directly form part of the project. If appropriate, fellows are able to spend up to 50% 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 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 2011–12 there were 129 active fellowships at Australian universities.

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 2011–12 six small projects, totalling \$30,240, were awarded. Since 2000, 64 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 policymaking. ACIAR has awarded 75 fellowships since the program's inception in 2002. A group of 10 fellows (from Bangladesh, Indonesia, Papua New Guinea, the Philippines and Vietnam) visited Australia for a 2-week period in March–April 2012. 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 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 3–12 months assisting on a development activity in a partner country. During 2011–12, 11 Youth Ambassadors were associated with ACIAR projects in the following countries: Cambodia, China, Indonesia, Tonga, Vanuatu and Vietnam.

Australian Academy of Technological Sciences and Engineering (ATSE) Crawford Fund fellowships, training courses and master classes

In 2011–12 total funding to the Crawford Fund included provision of an Australian Government allocation (through ACIAR) of \$1,027,500, as well as \$189,075 from ACIAR for joint training activities. In 2011–12 the Crawford Fund conducted 11 short-term training activities associated with ACIAR projects, as well as two master classes held in Thailand (Science Communications) and Tanzania (Climate Risk).

The Crawford Fund also supported short technical training placements for developing-country scientists in Australia. In 2011–12 five placements were sponsored for members of ACIAR project teams.

Communicating research results

Overview

ACIAR's legislative functions include communicating the results of research the Centre funds. The Communications and Public Affairs unit utilises a range of mediums to 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. A social media platform furthers these dissemination activities.

Other activities focus on raising public awareness of ACIAR's work through: media releases, television and radio coverage; *Partners* magazine; and providing support for internal and external stakeholders.

Achievements

ACIAR published and distributed 12 scientific and extension titles in its scientific series during 2011–12. This included 6 reports in its Impact Assessment Series (IAS). Thirty-five 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.

The major publications included: *A guide to upland cropping in Cambodia: soybean* (Monograph 146); *Practical methods for the quality control of inoculant biofertilisers* (Monograph 147); and an Indonesian translation of *Making value-chains work better for the poor: a toolbook for practitioners of value-chain analysis* (Monograph 148). Proceedings on three major conferences were also produced.

Corporate publications included a 30th Anniversary edition of *Partners*, along with two other editions, reporting on a range of projects. Other corporate publications included: the Strategic framework for

international agricultural research within Australia's aid program, and the agency's 2010–11 Annual Report and 2012–13 Annual Operational Plan.

Communication efforts have leveraged off figures reported in the IAS, particularly *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 4 years earlier.

The ACIAR Communications team worked collaboratively with a range of partners, notably the Crawford Fund, to generate public awareness of the Centre's activities and on the benefits of international agricultural research. 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.

ACIAR has continued to engage in public narrative around food security as a means of increasing public awareness of its role. This has included deploying a social media platform, positioning ACIAR as a leader in the area of food security.

In 2011–12 ACIAR established a corporate social media presence. Several social media platforms are now in use to augment the established communication channels already in operation. A social media strategy and guidelines are in place, and monitoring and evaluation systems have been instigated to gauge the effectiveness of investment in this area.

The Communications team has also worked on developing methodologies to improve dissemination activities within projects. This is helping to build capacity within project teams to deliver targeted and improved communications. Work has also commenced on examining the feasibility of using mobile and web-based technologies to disseminate project results to next and end-users.

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Measuring research impacts

Overview

Since its inception, ACIAR has assessed the difference its investment makes to research capabilities and the livelihoods of our target groups in our partner countries and Australia. The results of these assessments are used to support the Centre's public accountability, improve project development and implementation, and provide valuable input into aggregate priority setting.

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 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 sought.

The second type of finished project evaluations are the set of adoption studies. They are 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, the reasons why

are sought. An increased understanding of the contextual environment in which ACIAR operates increases the likelihood that our research will have a positive impact.

In a similar vein, the third type of finished project evaluations is called 'impact pathway analysis'. These studies provide an in-depth analysis of the contextual environment, key stakeholders, pathway linkages, 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.

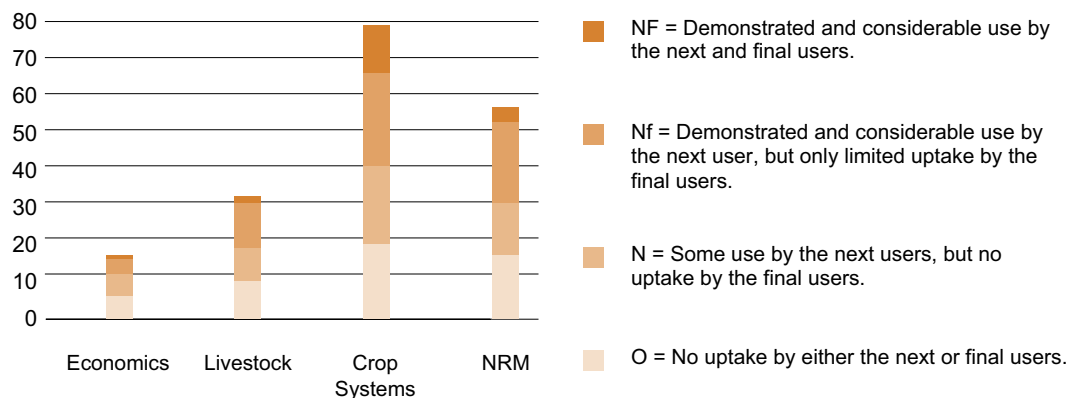
The knowledge gained through completed project evaluations is used to guide project development and implementation, and in research evaluation training courses funded and delivered by ACIAR.

Achievements

In 2011–12 five impact assessment reports were finalised and **reports published**. Seven more studies were completed, with three of these due to be published in early 2012–13. The published reports range from measuring the economic impact of crop improvement to a framework for measuring the impact of ACIAR research on poverty.

Adoption studies have been undertaken for 9 years. Now 85 adoption studies provide 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.

Adoption indicators by research area



Impact assessments

Extending rice crop yield improvements in Lao PDR: an ACIAR–World Vision collaborative project

In 2000–01, ACIAR initiated a collaborative program of extension projects with World Vision to enhance the adoption of results from technical research projects. There were six projects in Thailand, Laos and Vietnam. In general, the project objectives focused on poverty alleviation and/or food security. This report presents the assessment for a project on improving crop yields in southern Laos.

A farm survey in selected trial villages provided a perspective of the project impact. Average farm outputs were derived for each of the six districts. They were compared with a ‘no impact’ base case to estimate the project benefits. The estimate allowed for differences in the timing and extent of the output gains achieved by different groups of beneficiaries.

The change in farm outcomes for the 22,654 potential beneficiaries generated a project benefit of A\$149.4 million, in nominal terms. The survey results provided a representative indicator of the yield change in each district. The change was small in comparison with the trial outcomes. There was a high-level of acceptance of the new varieties, but fertiliser use remained very low. In some villages many farmers did not apply fertiliser.

The present value of the project net benefits is A\$73.8 million, using a discount

rate of 5%. The gains are substantial and the project has had an extensive impact across the six districts. The project objectives have been achieved in the participating villages. Rice yield gains have enhanced the food security of adopting farmers, which will improve the nutritional content of household diets. The project has also generated some poverty alleviation benefits through increased rice sales.

The contribution of agricultural growth to poverty reduction

There is general consensus that, since 1980, there has been a significant reduction in poverty in many developing countries, with some countries achieving ahead of time the Millennium Development Goal of halving extreme poverty by 2015. This report outlines the poverty experiences of China, India, Indonesia, South Africa and Vietnam, all of which have been substantial long-term research partners with ACIAR. The poverty status of each country was examined in terms of monetary (unidimensional) indicators and an emerging alternative indicator, the Multidimensional Poverty Index. The key linkages between agricultural development and poverty reduction are defined, and the forms of rural development most conducive to poverty reduction examined.

The authors concluded that all the countries studied in this report had made substantial progress in reducing poverty, although their performance had been uneven. The largest reductions have been achieved in

China and Vietnam. Indonesia has also made significant progress. However, poverty reduction in South Africa was slow and heavily dependent on social protection, because of retarded growth in sustainable employment generation. India, the country with the largest number of poor in the world, has made slow but steady progress in poverty reduction.

The report stresses that, regardless of past performance, major challenges remain ahead for all five countries. Such challenges must be tackled to achieve further reductions in poverty and reduce vulnerabilities due to external shocks.

Rice–wheat cropping systems in India and Australia and development of the ‘Happy Seeder’

Saving India from the brink of famine, the green revolution delivered substantial improvements in productivity and an expansion of cultivated lands. Under the green revolution, India's production of rice and wheat expanded enormously, leading to it now being the world's second-largest producer of rice and wheat. However, this expansion came at a price—degradation of the natural environment. Falling groundwater levels, with pockets of rising groundwater and salinity, are threatening the sustainability of rice–wheat cropping. Furthermore, the practices used to grow rice, including puddling, burning rice stubble and the high usage of fertilisers and pesticides, are leading to degradation of air, soil and water quality.

The primary output from the ACIAR project ‘Permanent beds for irrigated rice–wheat and alternative cropping systems’, was the ‘Happy Seeder’ implement. It is being built upon by another ACIAR project ‘Fine-tuning the Happy Seeder technology for adoption in north-western India’. The total ACIAR investment in this and subsequent related projects was A\$2.3 million (in nominal terms), forming around 43% of the A\$5.2 million (nominal) budget. In real present-value terms, total project costs were \$5.6 million, of which ACIAR contributed \$2.4 million.

By reducing the field operations, and labour, water and other inputs, the cost of production falls, directly benefiting farmers. It is estimated that, in constant 2009 dollars, the project will deliver gross benefits of around A\$96 million in present-value terms, using a discount rate of 5%. Of these benefits, A\$41 million can be attributed to ACIAR on the basis of its contribution to the funding of this and associated projects. These benefits far exceed the costs associated with the projects. The net benefit of the research is A\$90.4 million, representing a return of A\$17.20 for every A\$1 spent on this project.

These estimated benefits are subject to significant uncertainty, since most of them will occur in the future and are highly dependent upon further developments in policy and technology that may affect the level of adoption. Despite the uncertainties, the broad conclusion that this project is likely to deliver significant benefits is plausible in light of the examination of a range of assumptions undertaken as part of this assessment.

A methodology for assessing the poverty-reducing impacts of Australia's international agricultural research

ACIAR has made efforts to assess the extent to which the research it funds addresses poverty criteria, and has funded methodological reviews in this area. These reviews adopted an income-poverty perspective and highlighted the many difficulties faced when assessing poverty using purely quantitative means.

When considering the poverty-reducing impact of agricultural research, however, it is useful to adopt a multidimensional conception of poverty and to develop an approach that considers the myriad ways, not just income, that agricultural research contributes to poverty reduction. The sustainable livelihoods framework provides some guidance in this regard. The all-encompassing nature of the framework can make it somewhat difficult to operationalise in a practical way. As such, it is up to researchers with an understanding of livelihoods and systems thinking to adapt the framework to the phenomena under investigation, which for ACIAR is the

assessment of the poverty-reducing impact of agricultural research. This report outlines how the framework should be adapted for this purpose.

Developing and testing a tool for measuring capacity building

The research described in this report developed a monitoring and capacity development tool initially called the Capacity Snapshot. The tool is designed to capture data on the ways in which scientists engage in capacity development and to provide a clear picture of the capacities developed by research scientists in specific ACIAR projects. The information gathered by this methodology can be used to aid the transfer of knowledge across projects, contribute to ACIAR's ability to foster agricultural development and assist in ensuring that ACIAR projects build the appropriate range of capacities in scientists working on agricultural development in developing countries.

The tool developed has two parts. The first part can be used to measure communication or interaction between scientists and other stakeholders. The second part records the capacities or skills built in scientists through their project activities. Taken together, the two parts provide a holistic picture of the capacities that are built among agricultural scientists in ACIAR projects. The tool can be used at the start of a project to indicate capacity-building intentions, at midpoint as a monitoring mechanism to see whether capacity building is going to plan, and at the end to measure the capacities built.

Comprehensive Aid Policy Framework

Overview

During 2011–12 Australia's aid program underwent an independent review, leading to and informing the development of a new policy framework. *Helping the World's Poor through Effective Aid: Australia's Comprehensive Aid Policy Framework to 2015–16 (CAPF)* is a roadmap that outlines future increases in aid budgets.

The CAPF builds on the Government's new aid policy, the 'Independent Review of Aid Effectiveness: An Effective Aid Program for Australia; Making a real difference—Delivering real results', which is committed to increase funding to research.

That policy states that 'ACIAR funds research projects that reflect the priorities of Australia's aid program and our national research strengths, and works in partnership with agricultural research and development bodies in developing countries'.

ACIAR's contribution to the whole-of-government approach to aid delivery is also evident in our participation in projects over the past decade—in East Timor, Solomon Islands, Papua New Guinea, the aftermath of the Indian Ocean tsunami, and most recently in Pakistan, Iraq and Afghanistan.

The CAPF confirms ACIAR's role in improving food security, supporting the strategic goal of Sustainable Economic Development. ACIAR's research develops and disseminates new agricultural technologies. Through this research crop productivity gains are made, resulting in increased crop value and reduction in poverty.

In addition to managing its own project portfolio, ACIAR also contributes to whole-of-government aid initiatives, such as the Food Security through Rural Development initiative, with programs operating in countries including eastern Africa and the Mekong. ACIAR also manages a selection of AusAID-funded projects, including Seeds of Life in East Timor and the Agriculture Sector Linkages Program in Pakistan.

Purpose and strategic goals of the Australian aid program

Our purpose

The fundamental purpose of Australian aid is to help overcome poverty

This also serves Australia's national interest by promoting stability both in our region and beyond. We focus our efforts in areas where Australia can make a difference and where our resources can most efficiently and effectively be deployed.

Our strategic goals

Saving lives	Promoting opportunities for all	Sustainable economic development	Effective governance	Humanitarian and disaster response
Improving public health by increasing access to safe water and sanitation	Giving more children access to school	Improving food security	Improving governance to deliver better services, improve security, and enhance justice and human rights.	More effective preparedness and responses to disasters and crises
Saving the lives of poor women and children through greater access to quality maternal and child health services, and supporting large-scale disease prevention, vaccination and treatment	Empowering women to participate in the economy, leadership and education	Improving incomes, employment and enterprise opportunities		
		Reducing the negative impacts of climate change and other environmental factors		

The results framework

By improving food security, ACIAR also contributes to the strategic goals of the Australian official development assistance program.

Tier 1—Millennium Development Goals

ACIAR research contributes to:

Goal 1 eradicate extreme poverty and hunger—Delivering productivity gains to increase crop yields for smallholder farmers

Goal 7 ensure environmental sustainability—Reducing negative impacts of climate change and other environmental factors through adaptation and mitigation within agricultural systems

Goal 8 develop a global partnership for development—Manage and administer Australia's contribution to the CGIAR

Tier 2—Sustainable economic development

ACIAR contributes to:

750,000 farmers (at least 40 per cent women) will be able to access new agricultural technologies resulting in increased crop value of over half a billion dollars

More than 10,000 farmers accessing new technology including:

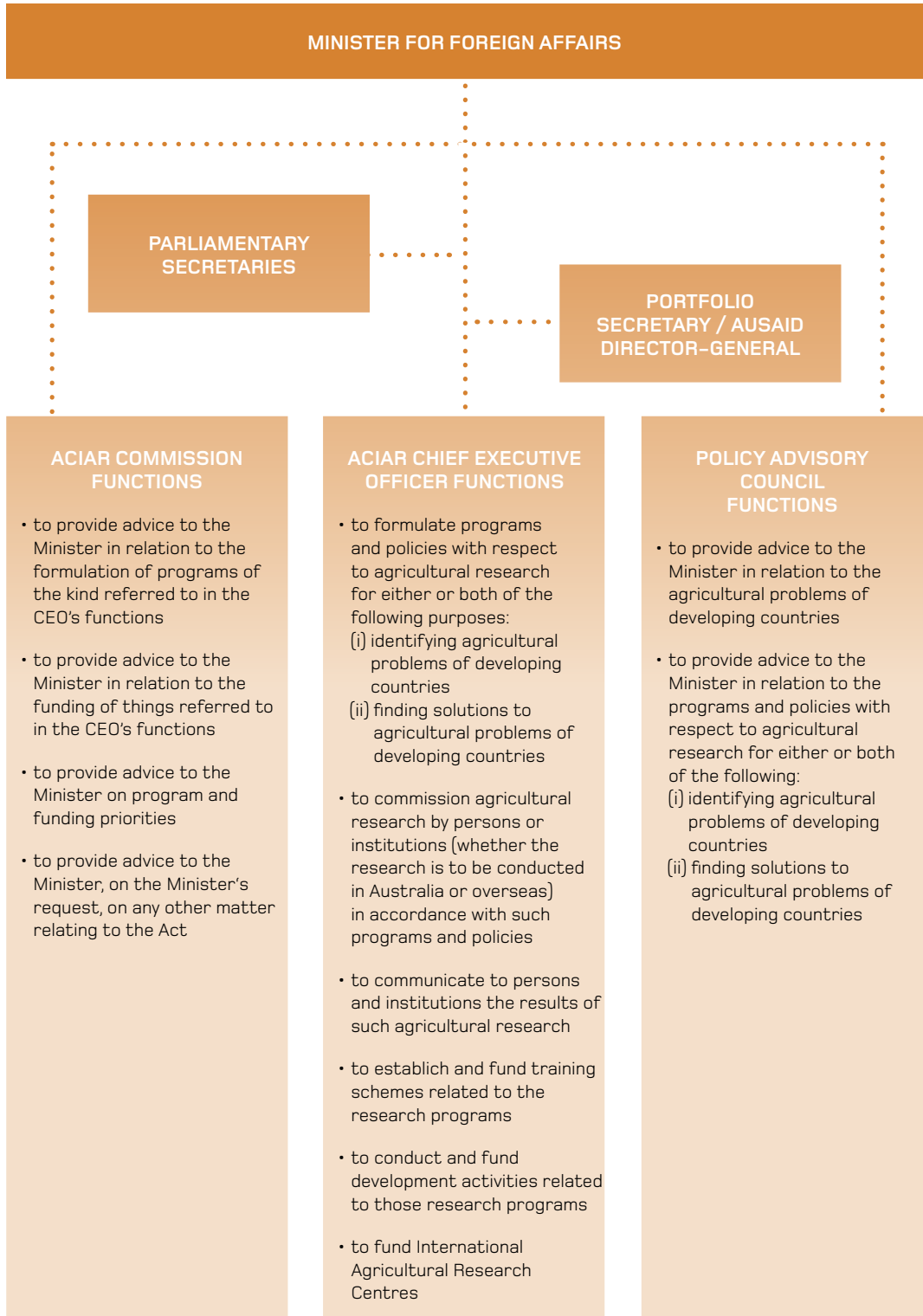
- Sustainable Intensification of Maize–Legume based cropping systems for food security in Eastern and Southern Africa, with 2,800 farmers receiving new crop varieties
- 21,000 families in East Timor receiving improved staple crop varieties (managed on behalf of AusAID)
- Poultry production in Papua New Guinea, with 32,000 farmers attending field days where information on ACIAR's vegetable supply chain and market integration research was available
- 1,094 farmers directly involved in research to improve mango supply chains in Pakistan

Investment in International Rice Research Institute varietal improvement programs generates US\$36.5 million per annum in increased crop value

A photograph of a man working on a bamboo raft. The raft is constructed from numerous parallel bamboo poles. The man is shirtless, wearing dark shorts and gloves, and is focused on a cluster of oysters hanging from the raft. The background shows a vast expanse of similar rafts stretching into the distance. The entire image has a warm, orange-toned overlay.

CORPORATE
GOVERNANCE

ACIAR's governance framework



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 7 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 2011–12 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 2011/11.

The CEO's remuneration package at 30 June 2012 consisted of:

- base salary of \$230,212
- superannuation with an employer contribution of 10% 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 four times during the 2011–12 financial year:

Meeting	Date	Loaction
16th meeting	20 September 2011	Canberra
17th meeting	30 November 2011	Canberra
18th meeting	19-23 March 2012	Arusha, Tanzania and Nairobi, Kenya
19th meeting	1 June 2012	Canberra



ACIAR Commission members and staff meet colleagues at the International Laboratory for Research on Animal Diseases during their visit to Kenya.



Ms Joanna Hewitt AO
Chair

Ms Hewitt, AO, is currently a public policy consultant and company Director. She was Secretary of the 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, among her other responsibilities, she was the lead negotiator for the World Trade Organization Doha round. Joanna was Australia's Ambassador in Brussels during 2000–03 and before that Deputy Secretary of the Department of Foreign Affairs and Trade and Australia's APEC 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 2011 for 3 years.

Meetings attended: 4



Professor Kym Anderson
Commissioner

Prof. Anderson is 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. He is the George Collins Professor of Economics and formerly foundation Executive Director of the Centre for International Economic Studies at the University of Adelaide, as well as a Professor of Economics in the Australian National University's Crawford School of Public Policy. 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: 4



Dr Nick Austin
Commissioner

Dr Austin has been CEO of ACIAR since 31 July 2009. He was 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 3 years.

Meetings attended: 4



Mr Peter Baxter
Commissioner

Mr Baxter is Director-General of AusAID. Prior to moving to AusAID, he headed the Department of Foreign Affairs and Trade's (DFAT'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 (2000-01), Market Development (2001-02) and North Asia (2005-08) Divisions within DFAT.

Appointed 6 May 2010 for 3 years.

Meetings attended: 1



Mr David Crombie
Commissioner

Mr Crombie has more than 30 years of commercial and representative experience in agriculture in 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 7 April 2011 for 3 years.

Meetings attended: 3



Dr Joanne Daly
Commissioner

Dr Daly is the Strategic Advisor to the Environment Group of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) on future opportunities for CSIRO's national biological collections and biodiversity. Her immediate past role was as Group Executive, Agribusiness (2007-10) on the CSIRO Executive. The Group comprised seven Flagships and Divisions in the area of agricultural and life sciences and preventative health.

Appointed 29 October 2009 for 3 years.

Meetings attended: 4



Dr Conall O'Connell
Commissioner

Dr O'Connell is the Secretary of the Department of Agriculture, Fisheries and Forestry (DAFF) and was previously Deputy Secretary of 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 two 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: 3

Commission performance

During 2011–12 major milestones for the Commission included:

- endorsement of ACIAR's Annual Operational Plan 2011–12
- input into the establishment of the Australian International Food Security Centre
- participation in the SIMLESA annual meeting in Arusha, Tanzania, followed by discussions with key partners in Nairobi, Kenya
- development of a blueprint 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 2011–12 there were no directions given.

Commission costs

The direct cost of Commission operations during 2011–12 was \$92,122 including fees, travel and other meeting expenses. The CEO's salary and other management costs are not included. The comparative figure for 2010–11 for the Commission was \$23,663.

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 \$774 and \$564 respectively as at 30 June 2012.

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 9 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.

Council meetings

The Council holds an annual meeting, in Australia, over several days to discuss areas related to its role and functions. During 2011–12 the Council met in Canberra on 19 September 2011. The program included discussions with the Parliamentary Secretary for Pacific Island Affairs in Canberra and was followed by meetings and field visits with Australian research providers and stakeholders in Canberra and the Northern Territory during 20–23 September 2011.

At its meeting the Council gave priority consideration to:

- the role of agricultural research in food security in key partner countries
- growth opportunities related to food security
- the changing nature of ACIAR's country consultations
- a presentation from AusAID on the lessons from Australia's rural development assistance

Council membership¹ (as at 30 June 2012)

Member	Term of appointment
Dr Beth Woods, OAM Deputy Director-General, Agriculture, Fisheries and Forestry Department of Agriculture, Fisheries and Forestry 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
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
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 22 August 2011 – 21 August 2014
Dr Monthathip Chanphengxay Director-General Department of Agriculture Vientiane LAO People's Democratic Republic	Appointed member 15 May 2008 – 14 May 2011 22 August 2011 – 21 August 2014
Dr Patricio Faylon Executive Director Philippine Council for Agriculture, Aquatic 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 22 August 2011 – 21 August 2014
Dr Nguyen Van Bo President Vietnamese Academy of Agricultural Sciences Hanoi VIETNAM	Appointed member 19 July 2010 – 19 July 2013
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
Dr Muhammad Tusneem Chair National Agricultural Education Accreditation Council Islamabad PAKISTAN	Appointed member 15 May 2008 – 14 May 2011 22 August 2011 – 21 August 2014

¹ There were four vacancies as at 30 June 2012.

Financial accountability and compliance

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

ACIAR's authority derives from the *Australian Centre for International Agricultural Research Act 1982* (ACIAR Act). Financial powers and duties are also drawn from the *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 73–134 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 2011–12 was \$27,937 (excluding GST). The premium paid for 2010–11 was \$49,902 (excluding GST).

Liability and professional indemnity insurances were not invoked in 2011–12.

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 the agency's Risk Management Plan and Fraud Control Plan in 2011–12 to enhance corporate governance and assurance processes and to ensure that current and emerging risks are appropriately identified and addressed.

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 2011–12. 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

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

Internal auditing

Internal auditing forms an important part of ACIAR's governance framework, providing an integral contribution to governance, risk management and control. In 2011–12 internal audit activity consisted of a review of ACIAR's management of key projects, payroll activity and legislative compliance.

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 are tailored to meet the agency's 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 Australian Public Service (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.

Reports by the Auditor General and the ANAO

One ACIAR-specific audit, of the 2011–12 financial statements, was completed in 2011–12 and was unmodified.

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.



Australian Government
Australian Centre for
International Agricultural Research

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F (61 2) 6217 0501
E aciar@aciar.gov.au
ABN 34 864 955 427

// October 2012

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 2011-12, 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 meet the specific needs of the agency and complied with the Commonwealth Fraud Control Guidelines 2011.

Signed:

Nick Austin
Chief Executive Officer

ACIAR

Research that works for developing
countries and Australia

www.aciar.gov.au

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 them in consultation with ACIAR's Research Program Managers.

Competitive tendering

No open purchase (over \$80,000) involving tendering was carried out during 2011–12.

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 the AusTender website <www.tenders.gov.au>.

Consultants and contracts

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

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

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

During 2011–12 one consultancy² contract was entered into.

² 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 266 contracts and agreements to acquire services mainly related to the research program. These contracts totalled \$4,843,109 in 2011–12 (2010–11: \$2,670,452). All contracts over \$10,000 were reported on the AusTender website <www.tenders.gov.au>.

Discretionary grants

ACIAR did not issue any discretionary grants during 2011–12 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 availability of research papers and reports, was placed with the National Farmers' Federation yearbook. ACIAR is also a sponsor of the annual Crawford Fund Conference. No other advertisements or agreements with media advertising organisations were entered into. No direct marketing of information to the public was undertaken and ACIAR has no contracts for any such activities. The Centre maintains mailing lists of project personnel and those requesting selected material.

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 for 2011–12 was a deficit of \$0.25 million (2010–11: deficit \$0.213 million—pre a change to the asset revaluation reserve). The deficit arises due to the fact that funds appropriated for capital purposes are credited directly to reserves whereas depreciation and amortisation and other asset write-downs of capital items are expensed. Excluding depreciation and amortisation and other asset write-downs from expenditure, a surplus of \$0.004 million was achieved (2010–11: surplus \$0.043 million).

Revenue was mainly a direct appropriation of \$9.913 million (2010–11: \$9.538 million) supplemented by a small amount of other income. The main components of department expenditure were staff costs of \$6.750 million, operating expenses (e.g. property expenses, travel, IT, communications) of \$3.184 million, and depreciation and amortisation of assets of \$0.254 million.

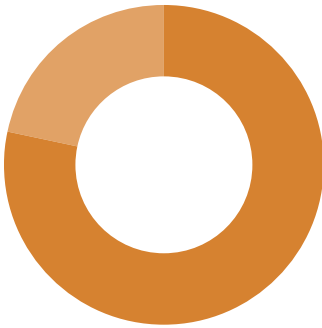
Administered activity

Total administered funds appropriated to ACIAR for 2011–12 were \$78.881 million, and \$78.873 million of appropriated funds were utilised in 2011–12. In 2010–11 \$61.035 million of appropriation funding were expended.

Total program expenditure for 2011–12 was \$103,235 million (2010–11: \$96.940 million). This included \$24.410 million (2010–11: \$35.909 million) expenditure of moneys received under separate agreements or records of understanding with external parties (mainly AusAID).

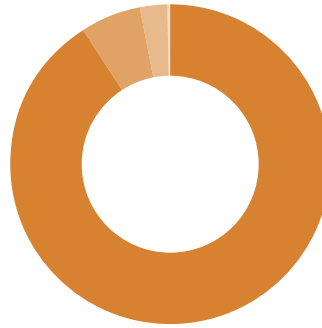
The pie charts below present a summary picture of total departmental and administered revenue and expenditure for 2011–12 compared with 2010–11. Administered revenue for 2010–11 (included in appropriation revenue) is the non-lapsing portion of the total available administered appropriation as approved by Government.

ACIAR revenue 2011-12



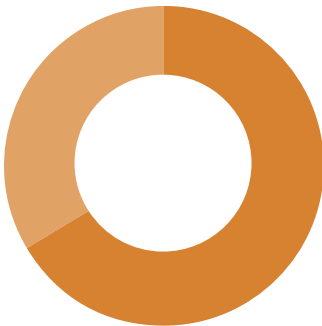
- Appropriation **78.4%**
- External funds **21.6%**

ACIAR expenditure 2011-12



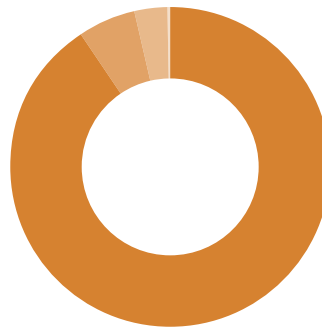
- International development assistance **90.9%**
- Employees **6.1%**
- Suppliers **2.8%**
- Depreciation **0.2%**

ACIAR revenue 2010-11



- Appropriation **66.6%**
- External funds **33.4%**

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. Further information is contained in the Corporate Governance section of this report.



FINANCIAL STATEMENTS



INDEPENDENT AUDITOR'S REPORT

To the Minister for Foreign Affairs

I have audited the accompanying financial statements of the Australian Centre for International Agricultural Research for the year ended 30 June 2012, which comprise: a Statement by the Chief Executive and Chief Finance Officer; Statement of Comprehensive Income; Balance Sheet; Statement of Changes in Equity; Cash Flow Statement; Schedule of Commitments; Administered Schedule of Comprehensive Income; Administered Schedule of Assets and Liabilities; Administered Reconciliation Schedule; Administered Cash Flow Statement; Schedule of Administered Commitments; and Notes to and forming part of the Financial Statements, including a Summary of Significant Accounting Policies and other explanatory information.

Chief Executive Officer's Responsibility for the Financial Statements

The Chief Executive of 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 is necessary to enable the preparation of the financial statements that give a true and fair view and 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 agency'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 agency's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the Chief Executive Officer of the agency, 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 the Australian Centre for International Agricultural Research's financial position as at 30 June 2012 and of its financial performance and cash flows for the year then ended.

Australian National Audit Office



Kristian Gage
Audit Principal

Delegate of the Auditor-General

Canberra

13 September 2012

Statement by the Chief Executive Officer and Chief Finance Officer

AUSTRALIAN CENTRE FOR INTERNATIONAL AGRICULTURAL RESEARCH

STATEMENT BY THE CHIEF EXECUTIVE OFFICER AND CHIEF FINANCE OFFICER

In our opinion, the attached financial statements for the year ended 30 June 2012 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

13 September 2012

Signed 

Albert Blair
Chief Finance Officer

13 September 2012

STATEMENT OF COMPREHENSIVE INCOME*for the period ended 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
EXPENSES			
Employee benefits	3A	6,750	6,135
Supplier	3B	3,184	3,392
Depreciation and amortisation	3C	254	240
Write-down and impairment of assets	3D	-	16
Losses from asset sales	3E	3	-
Total expenses		10,191	9,783
LESS:			
OWN-SOURCE INCOME			
Own-source revenue			
Sale of goods and rendering of services	4A	5	9
Total own-source revenue		5	9
Gains			
Sale of assets	4B	-	2
Other	4C	23	21
Total gains		23	23
Total own-source income		28	32
Net cost of services		10,163	9,751
Revenue from Government	4D	9,913	9,538
(Deficit)		(250)	(213)
OTHER COMPREHENSIVE INCOME			
Changes in asset revaluation surplus		-	383
Total other comprehensive income		-	383
Total comprehensive (loss) income		(250)	170

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

BALANCE SHEET*as at 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
ASSETS			
Financial Assets			
Cash and cash equivalents	<u>5A</u>	69	52
Trade and other receivables	<u>5B</u>	3,479	3,021
Total financial assets		<u>3,548</u>	<u>3,073</u>
Non-Financial Assets			
Land and buildings	<u>6A,C</u>	398	471
Property, plant and equipment	<u>6B,C</u>	515	420
Intangibles	<u>6D,E</u>	157	84
Other non-financial assets	<u>6F</u>	132	206
Total non-financial assets		<u>1,202</u>	<u>1,181</u>
Total assets		<u>4,750</u>	<u>4,254</u>
LIABILITIES			
Payables			
Suppliers	<u>7A</u>	75	452
Other payables	<u>7B</u>	475	354
Total payables		<u>550</u>	<u>806</u>
Provisions			
Employee provisions	<u>8A</u>	1,906	1,420
Total provisions		<u>1,906</u>	<u>1,420</u>
Total liabilities		<u>2,456</u>	<u>2,226</u>
Net assets		<u>2,294</u>	<u>2,028</u>
EQUITY			
Parent Entity Interest			
Retained surplus		755	1,005
Reserves		708	708
Contributed equity		831	315
Total equity		<u>2,294</u>	<u>2,028</u>

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

STATEMENT OF CHANGES IN EQUITY
for the period ended 30 June 2012

	Retained earnings		Asset revaluation surplus		Contributed equity/capital		Total equity	
	2012	2011	2012	2011	2012	2011	2012	2011
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Opening balance								
Balance carried forward from previous period	1,005	1,218	708	325	315	-	2,028	1,543
Adjustment for errors	-	-	-	-	-	-	-	-
Adjustment for changes in accounting policies	-	-	-	-	-	-	-	-
Adjusted opening balance	1,005	1,218	708	325	315	-	2,028	1,543
Comprehensive income								
Other comprehensive income	-	-	-	383	-	-	-	383
(Deficit) for the period	(250)	(213)	n/a	n/a	n/a	n/a	(250)	(213)
Total comprehensive income	(250)	(213)	-	383	-	-	(250)	170
Transactions with owners								
Contributions by owners								
Departmental capital budget	-	-	-	-	316	315	316	315
Equity injection - Appropriation Act 4	-	-	-	-	200	-	200	-
Sub-total transactions with owners	-	-	-	-	516	315	516	315
Closing balance as at 30 June	755	1,005	708	708	831	315	2,294	2,028

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

CASH FLOW STATEMENT*for the period ended 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
OPERATING ACTIVITIES			
Cash received			
Appropriations		9,623	8,979
Sales of goods and rendering of services		5	9
Net GST received		463	233
Other		-	240
Total cash received		<u>10,091</u>	<u>9,461</u>
Cash used			
Employees		6,391	5,975
Suppliers		3,762	3,658
Total cash used		<u>10,153</u>	<u>9,633</u>
Net cash (used by) operating activities	<u>9</u>	<u>(62)</u>	<u>(172)</u>
INVESTING ACTIVITIES			
Cash received			
Appropriations - departmental capital budget		391	226
- equity injection		40	-
Proceeds from sales of property, plant and equipment		-	6
Total cash received		<u>431</u>	<u>232</u>
Cash used			
Purchase of property, plant and equipment		249	207
Purchase of intangibles		103	19
Total cash used		<u>352</u>	<u>226</u>
Net cash from investing activities		<u>79</u>	<u>6</u>
Net increase (decrease) in cash held		<u>17</u>	<u>(166)</u>
Cash and cash equivalents at the beginning of the reporting period		<u>52</u>	<u>218</u>
Cash and cash equivalents at the end of the reporting period	<u>5A</u>	<u>69</u>	<u>52</u>

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

SCHEDULE OF COMMITMENTS*as at 30 June 2012*

	2012	2011
BY TYPE	\$'000	\$'000
Commitments receivable		
Net GST recoverable on commitments ¹	(76)	(126)
Total commitments receivable	<u>(76)</u>	<u>(126)</u>
Commitments payable		
Capital commitments²		
Land and buildings	219	-
Total capital commitments	<u>219</u>	<u>-</u>
Other commitments		
Operating leases ³	1,651	2,728
Other ⁴	74	-
Total other commitments	<u>1,725</u>	<u>2,728</u>
Total commitments payable	<u>1,944</u>	<u>2,728</u>
Net commitments by type	<u>1,868</u>	<u>2,602</u>
BY MATURITY		
Commitments receivable		
Other commitments receivable		
One year or less	(56)	(54)
From one to five years	(20)	(72)
Total other commitments receivable	<u>(76)</u>	<u>(126)</u>
Total commitments receivable	<u>(76)</u>	<u>(126)</u>
Commitments payable		
Capital commitments		
One year or less	146	-
From one to five years	73	-
Total capital commitments	<u>219</u>	<u>-</u>
Operating lease commitments		
One year or less	784	647
From one to five years	839	1,802
Over five years	28	279
Total operating lease commitments	<u>1,651</u>	<u>2,728</u>
Other commitments		
One year or less	52	-
From one to five years	22	-
Total other commitments	<u>74</u>	<u>-</u>
Total commitments payable	<u>1,944</u>	<u>2,728</u>
Net commitments by maturity	<u>1,868</u>	<u>2,602</u>

Notes:

¹Commitments are GST inclusive where relevant.²Capital commitments are commitments relating to an overseas office fitout.³Operating leases are effectively non-cancellable and comprise:

- lease of office accommodation in Canberra and overseas, and
- lease of a motor vehicle.

⁴Other commitments include commitments relating to the purchase of IT services and general office services.

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

ADMINISTERED SCHEDULE OF COMPREHENSIVE INCOME*for the period ended 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
EXPENSES			
International development assistance	<u>15</u>	103,235	96,940
Total expenses administered on behalf of Government		103,235	96,940
LESS:			
OWN-SOURCE INCOME			
Own-source revenue			
Non-taxation revenue			
External funds	<u>16</u>	24,410	35,909
Total non-taxation revenue		24,410	35,909
Total own-source revenue administered on behalf of Government		24,410	35,909
Net cost of services		78,825	61,031
(Deficit) before income tax on continuing operations		(78,825)	(61,031)
Income tax expense		-	-
(Deficit) after income tax on continuing operations		(78,825)	(61,031)
(Deficit) after income tax		(78,825)	(61,031)
OTHER COMPREHENSIVE INCOME			
Total other comprehensive income before income tax		-	-
Income tax expense - other comprehensive income		-	-
Total other comprehensive income after income tax		-	-
Total comprehensive (loss)		(78,825)	(61,031)

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

ADMINISTERED SCHEDULE OF ASSETS AND LIABILITIES*as at 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
ASSETS			
Financial assets			
Cash and cash equivalents	17A	24,326	10,866
Trade and other receivables	17B	1,403	1,558
Total financial assets		25,729	12,424
Non-financial assets			
Other non-financial assets	18	30	27
Total non-financial assets		30	27
Total assets administered on behalf of Government		25,759	12,451
LIABILITIES			
Payables			
Suppliers	19A	721	1,617
Other payables	19B	25,643	11,925
Total payables		26,364	13,542
Provisions			
Employee provisions	20	1	3
Total provisions		1	3
Total liabilities administered on behalf of Government		26,365	13,545
Net liabilities		(606)	(1,094)

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

ADMINISTERED RECONCILIATION SCHEDULE

	2012	2011
	\$'000	\$'000
Opening administered assets less administered liabilities as at 1 July	(1,094)	(689)
Adjustment for change in accounting policies	-	-
Adjustment for errors	-	-
Adjusted opening administered assets less administered liabilities	(1,094)	(689)
Surplus (deficit) items:		
Plus: Administered income	24,410	35,909
Less: Administered expenses	(103,235)	(96,940)
Administered transfers to/from Australian Government:		
Appropriation transfers from OPA:		
Annual appropriations for administered expenses	79,313	60,626
Closing administered assets less administered liabilities as at 30 June	(606)	(1,094)

ADMINISTERED CASH FLOW STATEMENT*for the period ended 30 June 2012*

	Notes	2012 \$'000	2011 \$'000
OPERATING ACTIVITIES			
Cash received			
External funds		38,186	18,361
Net GST received		4,301	4,315
Total cash received		<u>42,487</u>	<u>22,676</u>
Cash used			
International development assistance		(108,983)	(100,371)
Total cash used		<u>(108,983)</u>	<u>(100,371)</u>
Net cash flows (used by) operating activities	<u>21</u>	<u>(66,496)</u>	<u>(77,695)</u>
Cash and cash equivalents at the beginning of the reporting period		10,866	28,159
Cash from Official Public Account for:			
-Appropriations		84,279	64,721
		<u>84,279</u>	<u>64,721</u>
Cash to Official Public Account for:			
- Appropriations		(4,323)	(4,319)
		<u>(4,323)</u>	<u>(4,319)</u>
Cash and cash equivalents at the end of the reporting period	<u>17A</u>	<u>24,326</u>	<u>10,866</u>

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

SCHEDULE OF ADMINISTERED COMMITMENTS*as at 30 June 2012*

	2012 \$'000	2011 \$'000
BY TYPE		
Commitments receivable		
Net GST recoverable on commitments	(7,348)	(8,112)
Total commitments receivable	<u>(7,348)</u>	<u>(8,112)</u>
Commitments payable		
Other commitments		
International development assistance	112,122	117,451
Total other commitments	<u>112,122</u>	<u>117,451</u>
Total commitments payable	<u>112,122</u>	<u>117,451</u>
Net commitments by type	<u>104,774</u>	<u>109,339</u>
BY MATURITY		
Commitments receivable		
Other commitments receivable		
One year or less	(3,371)	(3,319)
From one to five years	(3,977)	(4,793)
Total other commitment receivable	<u>(7,348)</u>	<u>(8,112)</u>
Total commitments receivable	<u>(7,348)</u>	<u>(8,112)</u>
Commitments payable		
Other commitments		
One year or less	54,450	51,269
From one to five years	57,672	66,182
Total other commitments	<u>112,122</u>	<u>117,451</u>
Total commitments payable	<u>112,122</u>	<u>117,451</u>
Net commitments by maturity	<u>104,774</u>	<u>109,339</u>

Note: Commitments are GST inclusive where relevant.

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

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Note 1: Summary of Significant Accounting Policies

1.1 Objectives of ACIAR

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

ACIAR is structured to meet one outcome:

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

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

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

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

- International agriculture research and development.

1.2 Basis of Preparation of the Financial Statements

The financial statements are general purpose financial statements and are required by section 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 2011; 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

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.

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 were 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 and are applicable to the future reporting period are not expected to have a financial impact on ACIAR.

1.5 Revenue

Revenue from the sale of goods is recognised when:

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

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

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

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

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

1.6 Gains

Resources Received Free of Charge

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

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

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

Sale of Assets

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

1.7 Transactions with the Government as Owner

Equity Injections

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

1.8 Employee Benefits

Liabilities for 'short-term employee benefits' (as defined in AASB 119 *Employee Benefits*), 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 period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

Leave

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

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

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

Separation and Redundancy

Provision is made for separation and redundancy benefit payments. ACIAR recognises a provision for termination when it has developed a detailed formal plan for the terminations and has informed those employees affected that it will carry out the terminations.

Superannuation

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

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

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

For CSS, PSS and PSSap members, ACIAR makes employer contributions to the employees' superannuation scheme at rates determined by an actuary to be sufficient to meet the current cost to the Government. ACIAR accounts for the contributions as if they were contributions to defined contribution plans. For all other approved superannuation schemes, ACIAR, as employer, contributes a minimum of 9% of superannuable salaries.

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

1.9 Leases

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

ACIAR has no finance leases.

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

1.10 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:

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

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

Effective Interest Method

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

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

Financial Assets at Fair Value Through Profit or Loss

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

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

Assets in this category are classified as current assets.

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

Loans and Receivables

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

Impairment of Financial Assets

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

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

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

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

1.12 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.

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 measurement
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 improvements, 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:

	2012	2011
Leasehold improvements	Lower of useful life or lease term	Lower of useful life or 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 2012. 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 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 (2010-11: 5 to 10 years).

All software assets were assessed for indications of impairment as at 30 June 2012.

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.

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 schedule of administered cash flows and in the administered reconciliation schedule.

Revenue

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

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

Loans and Receivables

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

International development assistance

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

International development assistance liabilities are recognised to the extent that (i) the services required to be performed by the recipient have been performed or (ii) the contract eligibility criteria have been satisfied, but payments due have not been made. A commitment is recorded when the Government enters into an agreement to provide international development assistance but services have not been performed or criteria satisfied.

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

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

Administered

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

Note 3: Expenses

	2012	2011
	\$'000	\$'000
Note 3A: Employee Benefits		
Wages and salaries	5,415	5,111
Superannuation:		
Defined contribution plans	161	171
Defined benefit plans	609	541
Leave and other entitlements	565	312
Total employee benefits	6,750	6,135

Note 3B: Supplier**Goods and services**

Travel	434	315
Property	143	135
Information technology and management	421	709
Other	1,401	1,288
Total goods and services	2,399	2,447

Goods and services are made up of:

Provision of goods – external parties	278	434
Rendering of services – related entities	209	259
Rendering of services – external parties	1,912	1,754
Total goods and services	2,399	2,447

Other supplier expenses**Operating lease rentals – external parties:**

Minimum lease payments	721	901
Workers compensation expenses	64	44
Total other supplier expenses	785	945
Total supplier expenses	3,184	3,392

Note 3C: Depreciation and Amortisation**Depreciation:**

Property, plant and equipment	121	120
Land and buildings	103	94
Total depreciation	224	214

Amortisation:

Intangibles	30	26
Total amortisation	30	26
Total depreciation and amortisation	254	240

Note 3D: Write-Down and Impairment of Assets**Asset write-downs from:**

Revaluation decrement - computer equipment	-	16
Total write-down of assets	-	16

Note 3E: Losses from Asset Sales**Property, plant and equipment:**

Carrying value of assets sold	3	-
Total losses from asset sales	3	-

Note 4: Income

	2012	2011
	\$'000	\$'000

OWN-SOURCE REVENUE**Note 4A: Sale of Goods and Rendering of Services**

Provision of goods - external parties	<u>5</u>	<u>9</u>
Total sale of goods and rendering of services	<u>5</u>	<u>9</u>

GAINS**Note 4B: Sale of Assets****Property, plant and equipment:**

Proceeds from sale	-	6
Carrying value of assets sold	-	(4)
Net gain from sale of assets	<u>-</u>	<u>2</u>

Note 4C: Other Gains

Resources received free of charge	<u>23</u>	<u>21</u>
Total other gains	<u>23</u>	<u>21</u>

REVENUE FROM GOVERNMENT**Note 4D: Revenue from Government****Appropriations**

Departmental appropriation	<u>9,913</u>	<u>9,538</u>
Total revenue from Government	<u>9,913</u>	<u>9,538</u>

Note 5: Financial Assets

	2012 \$'000	2011 \$'000
Note 5A: Cash and Cash Equivalents		
Cash on hand or on deposit	69	52
Total cash and cash equivalents	69	52
Note 5B: Trade and Other Receivables		
Appropriations receivable		
For existing programs	3,329	2,954
Total appropriations receivable	3,329	2,954
Other receivables:		
GST receivable from the Australian Taxation Office	-	64
Other	150	3
Total other receivables	150	67
Total trade and other receivables	3,479	3,021
Receivables are expected to be recovered in:		
No more than 12 months	3,479	3,021
More than 12 months	-	-
Total trade and other receivables	3,479	3,021
Receivables are aged as follows:		
Not overdue	3,479	3,021
Overdue by:		
0 to 30 days	-	-
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	-	-
Total receivables	3,479	3,021

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

Note 6: Non-Financial Assets

	2012	2011
	\$'000	\$'000
<u>Note 6A: Land and Buildings</u>		
Leasehold improvements:		
Work in progress	26	-
Fair value	475	471
Accumulated depreciation	(103)	-
Total leasehold improvements	398	471
Total land and buildings	398	471

No indicators of impairment were found for land and buildings.

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

Note 6B: Property, Plant and Equipment**Property, plant and equipment:**

Fair value	633	420
Accumulated depreciation	(118)	-
Total property, plant and equipment	515	420

No indicators of impairment were found for property, plant and equipment.

No property, plant or equipment is expected to be sold or disposed of within the next 12 months.

Revaluation of non-financial assets

Revaluations were conducted in accordance with the revaluation policy stated at Note 1. Non-financial assets 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 for leasehold improvements was credited to the asset revaluation reserve and included in the equity section of the balance sheet;
- a revaluation increment of \$37,481 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 for office equipment was credited to the asset revaluation reserve and included in the equity section of the balance sheet;
- a revaluation decrement \$16,006 for computer equipment was expensed.

Note 6C: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment 2012

	Land and buildings \$'000	Property, plant & equipment \$'000	Total \$'000
As at 1 July 2011			
Gross book value	471	420	891
Accumulated depreciation and impairment	-	-	-
Net book value 1 July 2011	471	420	891
Additions:			
By purchase	51	198	249
Depreciation expense	(103)	(121)	(224)
Asset reclassification	(21)	21	-
Disposals:			
Other	-	(3)	(3)
Net book value 30 June 2012	398	515	913
Net book value as of 30 June 2012 represented by:			
Gross book value	501	633	1,134
Accumulated depreciation and impairment	(103)	(118)	(221)
Net book value 30 June 2012	398	515	913

Note 6C: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment 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:			
By purchase	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	-	-	-
Net book value 30 June 2011	471	420	891

	2012 \$'000	2011 \$'000
Note 6D: Intangibles		
Computer software:		
Purchased	561	458
Accumulated amortisation	(404)	(374)
Total computer software	157	84
Total intangibles	157	84

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 2012

	Computer software purchased \$'000
As at 1 July 2011	
Gross book value	458
Accumulated amortisation and impairment	(374)
Net book value 1 July 2011	84
Additions	
By purchase	103
Amortisation	(30)
Net book value 30 June 2012	157
Net book value as of 30 June 2012 represented by:	
Gross book value	561
Accumulated amortisation and impairment	(404)
Net book value 30 June 2012	157

Note 6E: Reconciliation of the Opening and Closing Balances of Intangibles 2011

	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	
By purchase	19
Amortisation	(26)
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)
Net book value 30 June 2011	84

	2012	2011
	\$'000	\$'000
<u>Note 6F: Other Non-Financial Assets</u>		
Prepayments	<u>132</u>	<u>206</u>
Total other non-financial assets	<u>132</u>	<u>206</u>
Total other non-financial assets - are expected to be recovered in:		
No more than 12 months	<u>132</u>	<u>206</u>
Total other non-financial assets	<u>132</u>	<u>206</u>

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

Note 7: Payables

	2012	2011
	\$'000	\$'000
Note 7A: Suppliers		
Trade creditors and accruals	<u>75</u>	<u>452</u>
Total supplier payables	<u>75</u>	<u>452</u>

Supplier payables expected to be settled within 12 months:

Related entities	31	79
External parties	<u>44</u>	<u>373</u>
Total supplier payables	<u>75</u>	<u>452</u>

Settlement was usually made within 30 days.

Note 7B: Other Payables

Wages and salaries	258	245
Superannuation	22	15
Rent payable	50	67
GST payable	145	-
Other	-	27
Total other payables	<u>475</u>	<u>354</u>

Total other payables are expected to be settled in:

No more than 12 months	460	305
More than 12 months	<u>15</u>	<u>49</u>
Total other payables	<u>475</u>	<u>354</u>

Note 8: Provisions

	2012 \$'000	2011 \$'000
<u>Note 8A: Employee Provisions</u>		
Leave	1,664	1,210
Other	242	210
Total employee provisions	<u>1,906</u>	<u>1,420</u>
Employee provisions are expected to be settled in:		
No more than 12 months	489	426
More than 12 months	1,417	994
Total employee provisions	<u>1,906</u>	<u>1,420</u>

Note 9: Cash Flow Reconciliation

	2012 \$'000	2011 \$'000
Reconciliation of cash and cash equivalents as per Balance Sheet to Cash Flow Statement		
Cash and cash equivalents as per:		
Cash flow statement	69	52
Balance sheet	<u>69</u>	<u>52</u>
Difference	<u>-</u>	<u>-</u>
Reconciliation of net cost of services to net cash from operating activities:		
Net cost of services	(10,163)	(9,751)
Add revenue from Government	9,913	9,538
Adjustments for non-cash items		
Depreciation / amortisation	254	240
Loss / (gain) on disposal of assets	3	(2)
Write-down of assets	-	16
Changes in assets / liabilities		
(Increase) / decrease in net receivables	(437)	(316)
Decrease / (increase) in prepayments	74	(132)
Increase in employee provisions	486	125
(Decrease) / increase in supplier payables	(421)	108
Increase in grants and other payables	<u>229</u>	<u>2</u>
Net cash (used by) operating activities	<u>(62)</u>	<u>(172)</u>

Note 10: Contingent Assets and Liabilities

Quantifiable Contingencies

At 30 June 2012, ACIAR had no quantifiable contingencies (2011: \$Nil).

Unquantifiable Contingencies

At 30 June 2012, ACIAR had no unquantifiable contingencies (2011: Nil).

Significant Remote Contingencies

At 30 June 2012, ACIAR had no significant remote contingencies (2011: Nil).

Note 11: Senior Executive Remuneration**Note 11A: Senior Executive Remuneration Expenses for the Reporting Period**

	2012	2011
	\$	\$
Short-term employee benefits:		
Salary	378,429	222,771
Annual leave accrued	23,673	13,893
Performance bonuses	2,000	-
Allowances	83,241	56,199
Total short-term employee benefits	<u>487,343</u>	<u>292,863</u>
Post-employment benefits:		
Superannuation	45,903	26,196
Total post-employment benefits	<u>45,903</u>	<u>26,196</u>
Other long-term benefits:		
Long-service leave	19,853	4,413
Total other long-term benefits	<u>19,853</u>	<u>4,413</u>
Total employment benefits	<u>553,099</u>	<u>323,472</u>

Notes:

- Note 11A was prepared on an accrual basis (therefore the performance bonus expenses disclosed above may differ from the cash "Bonus paid" in Note 11B).
- Note 11A excludes acting arrangements and part-year service where remuneration expensed for a senior executive was less than \$150,000. In 2011 one position was held by two individuals, each for part of the year and each with a remuneration of less than \$150,000.

Note 11C: Other Highly Paid Staff

	2012				
	Staff No.	Reportable salary ² \$	Contributed superannuation ³ \$	Reportable allowances ⁴ \$	Total \$
Average annual reportable remuneration ¹					
Total remuneration (including part-time arrangements):					
\$150,000 to \$179,999	3	147,348	25,975	-	174,656
\$180,000 to \$209,999	8	151,649	34,647	-	188,296
Total	11				

	2011				
	Staff No.	Reportable salary ² \$	Contributed superannuation ³ \$	Reportable allowances ⁴ \$	Total \$
Average annual reportable remuneration ¹					
Total remuneration (including part-time arrangements):					
\$150,000 to \$179,999	7	142,956	27,607	-	172,277
\$180,000 to \$209,999	4	149,436	39,779	-	191,215
Total	11				

Notes:

- This table reports staff:
 - who were employed by ACIAR during the reporting period;
 - whose reportable remuneration was \$150,000 or more for the financial period; and
 - were not required to be disclosed in Tables A, B or director disclosures.
 Each row is an averaged figure based on headcount for individuals in the band.
- 'Reportable salary' includes the following:
 - gross payments (less any bonuses paid, which are separated out and disclosed in the 'bonus paid' column); and
 - reportable fringe benefits (at the net amount prior to 'grossing up' to account for tax benefits).
- The 'contributed superannuation' amount is the average actual superannuation contributions paid to staff in that reportable remuneration band during the reporting period, including any salary sacrificed amounts, as per the individuals' payslips.
- 'Reportable allowances' are the average actual allowances paid as per the 'total allowances' line on individuals' payment summaries.
- 'Bonus paid' represents average actual bonuses paid during the reporting period in that reportable remuneration band. The 'bonus paid' within a particular band may vary between financial years due to various factors such as individuals commencing with or leaving the entity during the financial year.
- Various salary sacrifice arrangements were available to other highly paid staff including superannuation, motor vehicle and expense payment fringe benefits. Salary sacrifice benefits are reported in the 'reportable salary' column, excluding salary sacrificed superannuation, which is reported in the 'contributed superannuation' column.

Note 12: Remuneration of Auditors

	2012	2011
	\$'000	\$'000
Financial statement audit services were provided free of charge to ACIAR by the Australian National Audit Office (ANAO).		
Fair value of the services provided		
Financial statement audit services	<u>23</u>	<u>21</u>
Total	<u>23</u>	<u>21</u>

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

Note 13: Financial Instruments

	2012 \$'000	2011 \$'000
Note 13A: Categories of Financial Instruments		
Financial Assets		
Cash	69	52
Loans and receivables:		
Trade and other receivables	150	3
Carrying amount of financial assets	219	55
Financial Liabilities		
At amortised cost:		
Trade creditors	75	452
Other	50	94
Carrying amount of financial liabilities	125	546

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 (2011: \$nil).

Note 13B: 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 (2012: \$150,000 and 2011: \$3,000). 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
	2012 \$'000	2011 \$'000	2012 \$'000	2011 \$'000
Trade and other receivables	150	3	-	-
Total	150	3	-	-

No assets have been individually assessed as impaired.

Note 13C: Liquidity Risk

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

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

Maturities for non-derivative financial liabilities 2012

	On demand \$'000	within 1 year \$'000	1 to 2 years \$'000	2 to 5 years \$'000	> 5 years \$'000	Total \$'000
Trade creditors	-	75	-	-	-	75
Other payables	-	35	15	-	-	50
Total	-	110	15	-	-	125

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
Trade creditors	-	452	-	-	-	452
Other payables	-	45	34	15	-	94
Total	-	497	34	15	-	546

ACIAR has no derivative financial liabilities in either 2012 or 2011.

Note 13D: Market Risk

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

Note 14: Financial Assets Reconciliation

		2012	2011
		\$'000	\$'000
<u>Financial assets</u>	Notes		
Total financial assets as per balance sheet		3,548	3,073
Less: non-financial instrument components:			
Appropriations receivable	<u>5B</u>	3,329	2,954
GST receivable from the Australian Taxation Office	<u>5B</u>	-	64
Total non-financial instrument components		<u>219</u>	<u>55</u>
Total financial assets as per financial instruments note		<u>219</u>	<u>55</u>

Note 15: Administered - Expenses

	2012	2011
	\$'000	\$'000
Note 15: International Development Assistance		
Research program	74,450	59,320
Multilateral program	23,029	28,994
Education and training	5,066	7,958
Communicating research results	690	668
Total international development assistance	103,235	96,940
International Development Assistance is made up of:		
Employee benefits	131	44
Supplier expenses	103,104	96,896
Total	103,235	96,940

Note 16: Administered - Income

	2012	2011
	\$'000	\$'000
OWN-SOURCE REVENUE		
Non-Taxation Revenue		
Note 16: External Funds		
External funds– related entities	24,343	35,876
External funds – external parties	67	33
Total external funds	24,410	35,909

Note 17: Administered - Financial Assets

	2012 \$'000	2011 \$'000
Note 17A: Cash and Cash Equivalents		
Special Account	24,326	10,866
Total cash and cash equivalents	24,326	10,866
Note 17B: Trade and Other Receivables		
External funds:		
External funds receivable - related entities	-	600
External funds receivable - external parties	-	117
Total receivables for external funds	-	717
Other receivables:		
GST receivable from Australian Taxation Office	1,403	829
Other	-	12
Total other receivables	1,403	841
Total trade and other receivables	1,403	1,558
Receivables are expected to be recovered in:		
No more than 12 months	1,403	1,558
More than 12 months	-	-
Total trade and other receivables	1,403	1,558
Receivables were aged as follows:		
Not overdue	1,403	1,470
Overdue by:		
0 to 30 days	-	88
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	-	-
Total trade and other receivables	1,403	1,558

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

Trade and other receivables credit terms were within 30 days (2011: 30 days).

Note 18: Administered - Non-Financial Assets

	2012 \$'000	2011 \$'000
Note 18: Other Non-Financial Assets		
Prepayments	30	27
Total other non-financial assets	30	27
Total other non-financial assets are expected to be recovered in:		
No more than 12 months	30	27
Total other non-financial assets	30	27

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

Note 19: Administered - Payables

	2012 \$'000	2011 \$'000
Note 19A: Suppliers		
Trade creditors and accruals	721	1,617
Total suppliers	721	1,617
Supplier payables expected to be settled within 12 months:		
Related entities	4	171
External parties	717	1,446
Total suppliers	721	1,617
Settlement was usually made within 30 days.		
Note 19B: Other Payables		
Unearned income	24,283	11,224
GST payable to OPA	1,355	698
Salaries and wages	4	3
Superannuation	1	-
Total other payables	25,643	11,925
Total other payables are expected to be settled in:		
No more than 12 months	25,643	11,925
Total other payables	25,643	11,925

Note 20: Administered - Provisions

	2012	2011
	\$'000	\$'000
<u>Note 20A: Employee Provisions</u>		
Leave	<u>1</u>	<u>3</u>
Total employee provisions	<u>1</u>	<u>3</u>
Employee provisions are expected to be settled in:		
No more than 12 months	<u>1</u>	<u>3</u>
Total employee provisions	<u>1</u>	<u>3</u>

Note 21: Administered - Cash Flow Reconciliation

	2012 \$'000	2011 \$'000
Reconciliation of cash and cash equivalents as per Administered Schedule of Assets and Liabilities to Administered Cash Flow Statement		
Cash and cash equivalents as per:		
Schedule of administered cash flows	24,326	10,866
Schedule of administered assets and liabilities	24,326	10,866
Difference	<u>-</u>	<u>-</u>
Reconciliation of net cost of services to net cash from operating activities:		
Net cost of services	(78,825)	(61,031)
Changes in assets / liabilities		
Decrease / (increase) in net receivables	155	(415)
(Increase) / decrease in prepayments	(3)	-
Increase / (decrease) in prepayments received	-	98
(Decrease) / Increase in employee provisions	(2)	3
(Decrease) / Increase in supplier payables	(896)	844
Increase / (decrease) in other payables	16	(131)
Increase / (decrease) in unearned income	13,059	(17,063)
Net cash (used by) operating activities	<u>(66,496)</u>	<u>(77,695)</u>

Note 22: Administered - Contingent Assets and Liabilities**Quantifiable Contingencies**

At 30 June 2012, ACIAR had no quantifiable administered contingencies (2011: \$Nil).

Unquantifiable Contingencies

At 30 June 2012, ACIAR had no unquantifiable administered contingencies (2011: Nil).

Significant Remote Contingencies

At 30 June 2012, ACIAR had no significant remote administered contingencies (2011: Nil).

Note 23: Administered - Financial Instruments

	2012	2011
	\$'000	\$'000

Note 23A: Categories of Financial Instruments**Financial Assets**

Cash	24,326	10,866
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Loans and receivables:

Trade and other receivables	-	729
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Total	-	729
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Carrying amount of financial assets	24,326	11,595
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Financial Liabilities

Other liabilities:

Trade creditors	721	1,617
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Total	721	1,617
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Carrying amount of financial liabilities	721	1,617
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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 (2011:\$nil).

Note 23B: Credit Risk

ACIAR is exposed to minimal credit risk as loans and receivables are external funds receivable. The maximum exposure to credit risk is the risk that arises from potential default of a debtor. This amount is equal to the total amount of external funds receivable (2012:\$nil and 2011: \$729,102).

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
	2012 \$'000	2011 \$'000	2012 \$'000	2011 \$'000
Loans and receivables				
Trade and other receivables	-	729	-	-
Total	-	729	-	-

No financial assets were past due but not impaired for 2012 (2011:\$nil).

No assets have been individually assessed as impaired.

Note 23C: Liquidity Risk

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

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

Maturities for non-derivative financial liabilities 2012

	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	-	721	-	-	-	721
Total	-	721	-	-	-	721

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

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

Note 23D: Market Risk

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

Note 24: Administered Financial Assets Reconciliation

		2012	2011
		\$'000	\$'000
<u>Financial assets</u>	Notes		
Total financial assets as per schedule of administered assets and liabilities		25,729	12,424
Less: non-financial instrument components			
GST receivable from the Australian Taxation Office	<u>17B</u>	<u>1,403</u>	829
Total non-financial instrument components		<u>24,326</u>	11,595
Total financial assets as per financial instruments note		<u>24,326</u>	11,595

Note 25: Appropriations**Table A: Annual Appropriations ('Recoverable GST exclusive')**

	2012 Appropriations							Appropriation applied in 2012 (current and prior years) \$'000	Variance \$'000
	<i>Appropriation Act</i>		<i>FMA Act</i>			Total appropriation \$'000			
	Annual Appropriation \$'000	Appropriations reduced ¹ \$'000	AFM ² \$'000	Section 30 \$'000	Section 31 \$'000		Section 32 appropriation \$'000		
DEPARTMENTAL									
Ordinary annual services	9,913	-	-	-	5	-	9,918	9,756	162
Other services	200	-	-	-		-	200	40	160
Equity									
Total departmental	10,113	-	-	-	5	-	10,118	9,796	322
ADMINISTERED									
Ordinary annual services	78,881	8	-	-			78,873	79,304	(431)
Administered items									
Total administered	78,881	8	-	-	-	-	78,873	79,304	(431)

Notes:

1. Appropriations reduced under Appropriation Acts (Nos. 1,3&5) 2011-12: sections 10, 11, and 12 and under Appropriation Acts (Nos. 2,4&6) 2011-12: sections 12,13, and 14. Departmental appropriations do not lapse at financial year-end. However, the responsible Minister may decide that part or all of a departmental appropriation is not required and request the Finance Minister to reduce that appropriation. The reduction in the appropriation is effected by the Finance Minister's determination and is disallowable by Parliament. The Finance Minister determined no reduction in departmental appropriation in 2011-12.

As with departmental appropriations, the responsible Minister may decide that part or all of an administered appropriation is not required and request that the Finance Minister reduce that appropriation. For administered appropriations reduced under section 11 of Appropriation Acts (Nos. 1,3&5) 2011-12 and section 12 of Appropriation Acts (Nos. 2,4&6) 2011-12, the appropriation is taken to be reduced to the required amount specified in Table D of this note once the annual report is tabled in Parliament. All administered appropriations may be adjusted by a Finance Minister's determination, which is disallowable by Parliament. The Finance Minister determined no reduction in administered appropriation in 2011-12.

2. Advance to the Finance Minister (AFM) - Appropriation Acts (Nos. 1,3&5) 2011-12: section 13 and Appropriation Acts (Nos. 2,4&6) 2011-12: section 15.

	2011 Appropriations							Appropriation applied in 2011 (current and prior years) \$'000	Variance \$'000
	<i>Appropriation Act</i>		<i>FMA Act</i>						
	Annual Appropriation \$'000	Appropriations reduced ¹ \$'000	AFM ² \$'000	Section 30 \$'000	Section 31 \$'000	Section 32 \$'000	Total appropriation \$'000		
DEPARTMENTAL									
Ordinary annual services	9,538	-	-	-	15	-	9,553	9,335	218
Total departmental	9,538	-	-	-	15	-	9,553	9,335	218
ADMINISTERED									
Ordinary annual services	61,035	-	-	-	-	-	61,035	60,626	409
Administered items	-	-	-	-	-	-	-	-	-
Total administered	61,035	-	-	-	-	-	61,035	60,626	409

Notes:

1. Appropriations reduced under Appropriation Acts (Nos. 1 & 3) 2010-11: sections 10, 11, 12 and 15 and under Appropriation Acts (Nos. 2&4) 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 appropriation in 2010-11.

As with departmental appropriations, the responsible Minister may decide that part or all of an administered appropriation is not required and request that the Finance Minister reduce that appropriation. For administered appropriations reduced under section 11 of Appropriation Acts (Nos. 1,3&5) 2010-11 and section 12 of Appropriation Acts (Nos. 2,4&6) 2010-11, the appropriation is taken to be reduced to the required amount specified in Table D of this note once the annual report is tabled in Parliament. All administered appropriations may be adjusted by a Finance Minister's determination, which is disallowable by Parliament. The Finance Minister determined no reduction in administered appropriation in 2010-11.

2. Advance to the Finance Minister (AFM) - Appropriation Acts (Nos. 1&3) 2010-11: section 13 and Appropriation Acts (Nos. 2&4) 2010-11: section 15.

Table B: Departmental and Administered Capital Budgets ('Recoverable GST exclusive')

	2012 Capital Budget Appropriations				Capital Budget Appropriations applied in 2012			
	Appropriation Act		FMA Act	Total Capital Budget Appropriations \$'000	Payments for non-financial assets ³ \$'000	Payments for other purposes \$'000	Total payments \$'000	Variance \$'000
	Annual Capital Budget \$'000	Appropriations reduced ² \$'000	Section 32 \$'000					
DEPARTMENTAL								
Ordinary annual services - Departmental Capital Budget ¹	316	-	-	316	391	-	391	(75)
ADMINISTERED								
Ordinary annual services - Administered Capital Budget ¹	-	-	-	-	-	-	-	-

Notes:

1. Departmental and Administered Capital Budgets are appropriated through Appropriation Acts (No.1,3,5). They form part of ordinary annual services, and are not separately identified in the Appropriation Acts. For more information on ordinary annual services appropriations, please see Table A: Annual appropriations.
2. Appropriations reduced under Appropriation Acts (No.1,3,5) 2011-12: sections 10, 11, 12 and 15 or via a determination by the Finance Minister.
3. Payments made on non-financial assets include purchases of assets, expenditure on assets which has been capitalised, costs incurred to make good an asset to its original condition, and the capital repayment component of finance leases.

	2011 Capital Budget Appropriations				Capital Budget Appropriations applied in 2011			Variance \$'000
	Appropriation Act		Total Capital Budget Appropriations \$'000	Payments for non-financial assets ³ \$'000	Payments for other purposes \$'000	Total payments \$'000		
	Annual Capital Budget \$'000	Appropriations reduced ² \$'000					FMA Act Section 32 \$'000	
DEPARTMENTAL								
Ordinary annual services - Departmental Capital Budget ¹	315	-	315	226	-	226	89	
ADMINISTERED								
Ordinary annual services - Administered Capital Budget ¹	-	-	-	-	-	-	-	

Notes:

1. Departmental and Administered Capital Budgets are appropriated through Appropriation Acts (No.1,3,5). They form part of ordinary annual services, and are not separately identified in the Appropriation Acts. For more information on ordinary annual services appropriations, please see Table A: Annual appropriations.
2. Appropriations reduced under Appropriation Acts (No.1,3,5) 2010-11: sections 10, 11, 12 and 15 or via a determination by the Finance Minister.
3. Payments made on non-financial assets include purchases of assets, expenditure on assets which has been capitalised, costs incurred to make good an asset to its original condition, and the capital repayment component of finance leases.

Table C: Unspent Annual Appropriations ('Recoverable GST exclusive')

Authority	2012 \$'000	2011 \$'000
DEPARTMENTAL		
Appropriation Act (No 1) 2009-10	2,519	2,546
Appropriation Act (No 1) 2010-11	319	372
Appropriation Act (No 1) 2010-11 Capital Budget (DCB) Non Operating	10	88
Appropriation Act (No 1) 2011-12	386	-
Appropriation Act (No 4) 2011-12 Non Operating - Equity Injection	160	-
Appropriation Act (No 1) 2011-12 Capital Budget (DCB) Non Operating	4	-
Total	3,398	3,006
ADMINISTERED		
Appropriation Act (No 1) 2009-10	13	13
Appropriation Act (No 1) 2010-11	-	1,085
Appropriation Act (No 1) 2011-12	662	-
Total	675	1,098

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

	Amount required ² - by Appropriation Act		Total amount required ²	Total amount appropriated ³	Total reduction ⁴
2012	Act (No.1)	Act (No.3)	Act (No.5)		
Ordinary Annual Services	75,372,724.02	3,500,000.00	-	78,872,724.02	8,275.98
Outcome 1					

Notes:

- Administered items for 2012 were reduced to these amounts when these financial statements were tabled in Parliament as part of the entity's 2012 annual report. This reduction was effective in 2013, but the amounts were reflected in Table A in the 2012 financial statements in the column 'Appropriations reduced' as they were adjustments to 2012 appropriations.
- Amount required as per Appropriation Act (Act 1 s. 11; Act 2 s. 12).
- Total amount appropriated in 2012.
- Total reduction effective in 2013.

	Amount required ² - by Appropriation Act		Total amount required ²	Total amount appropriated ³	Total reduction ⁴
2011	Act (No.1)	Act (No.3)	Act (No.5)		
Ordinary Annual Services	61,034,841.84	-	-	61,034,841.84	158.16
Outcome 1					

Notes:

- Administered items for 2011 were reduced to these amounts when these financial statements were tabled in Parliament as part of the entity's 2011 annual report. This reduction was effective in 2012, but the amounts were reflected in Table A in the 2011 financial statements in the column 'Appropriations reduced' as they were adjustments to 2011 appropriations.
- Amount required as per Appropriation Act (Act 1 s. 11; Act 2 s. 12).
- Total amount appropriated in 2011.
- Total reduction effective in 2012.

Note 26: Special Accounts

Note 26: Special Accounts (Recoverable GST exclusive)

	ACIAR Special Account ¹	
	2012 \$'000	2011 \$'000
Balance brought forward from previous period	10,866	28,159
Increases:		
Other receipts	38,174	18,361
Total increases	38,174	18,361
Available for payments	49,040	46,520
Decreases:		
Administered		
Payments made to suppliers	(24,714)	(35,654)
Total administered decreases	(24,714)	(35,654)
Total decreases	(24,714)	(35,654)
Total balance carried to the next period	24,326	10,866

1. 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.

Compliance with Statutory Conditions for Payments from the Consolidated Revenue

Section 83 of the Constitution provides that no amount may be paid out of the Consolidated Revenue Fund except under an appropriation made by law. The Department of Finance and Deregulation provided information to all agencies in 2011 regarding the need for risk assessments in relation to compliance with statutory conditions on payments from special appropriations, including special accounts. The possibility of this being an issue for ACIAR was reported in the notes to the 2010-11 financial statements and ACIAR undertook to investigate the issue during 2011-12.

During 2011-12, ACIAR developed a plan to review exposure to risks of not complying with statutory conditions on payments from appropriations. The plan included:

- identifying each special appropriation and special account;
- determining the risk of non-compliance by assessing the difficulty of administering the statutory conditions and assessing the extent to which existing payment systems and processes satisfy those conditions;
- obtaining legal advice as appropriate to resolve questions of potential non-compliance; and
- considering legislative or procedural changes to reduce the risk of non-compliance in the future to an acceptably low level.

ACIAR has one Special Account appropriation involving statutory conditions for payment.

As at 30 June 2012 this investigation had been completed (representing \$24.4 million of total \$103.2 million expenditure in 2011-12) and no issues of non-compliance with Section 83 were identified.

Note 27: Compensation and Debt Relief**Compensation and Debt Relief - Departmental**

No 'Act of Grace' payments were expensed during the reporting period (2011: 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* (2011: No waivers).

No payments were provided under the Compensation for Detriment caused by Defective Administration (CDDA) Scheme during the reporting period (2011: No payments).

No ex-gratia payments were provided for during the reporting period (2011: 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 (2011: No payments).

Compensation and Debt Relief - Administered

No 'Act of Grace' payments were expensed during the reporting period (2011: 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* (2011: No waivers).

No payments were provided under the Compensation for Detriment caused by Defective Administration (CDDA) Scheme during the reporting period (2011: No payments).

No ex-gratia payments were provided for during the reporting period (2011: 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 (2011: No payments).

Note 28: Reporting of Outcomes**Note 28A: Net Cost of Outcome Delivery**

	Outcome 1		Total	
	2012	2011	2012	2011
	\$'000	\$'000	\$'000	\$'000
Departmental				
Expenses	(10,191)	(9,783)	(10,191)	(9,783)
Own-source income	28	32	28	32
Administered				
Expenses	(103,235)	(96,940)	(103,235)	(96,940)
Own-source income	24,410	35,909	24,410	35,909
Net cost of outcome delivery	(88,988)	(70,782)	(88,988)	(70,782)

Note 28B: Major Classes of Departmental Expense, Income, Assets and Liabilities by Outcome

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

Note 28C: Major Classes of Administered Expenses, Income, Assets and Liabilities by Outcome

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

Note 29: Net Cash Appropriation Arrangements

	2012	2011
	\$'000	\$'000
Total comprehensive (loss) income less depreciation/amortisation expenses previously funded through revenue appropriations¹	4	410
Plus: depreciation/amortisation expenses previously funded through revenue appropriation	<u>(254)</u>	<u>(240)</u>
Total comprehensive (loss) income - as per the Statement of Comprehensive Income	<u>(250)</u>	<u>170</u>

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

A young child stands in a vast field of tall corn plants. The child is wearing a light-colored, long-sleeved shirt and has their hand resting on their chest. The background shows a line of acacia trees under a bright sky. The entire image has a warm, orange-toned overlay.

TRACKING PERFORMANCE

Tracking performance against the 2011–12 Portfolio Budget Statement

Vision

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

Mission

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

Outcome

ACIAR has a single outcome:

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

Under this outcome ACIAR has the single administered program: 'International agricultural research for development for more productive and sustainable agriculture'. The table below links administered program objectives, as outlined in the 2011–12 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. For more detailed reporting against administered program key performance indicators, also refer to the following section in this report: Tracking performance against the 2011–12 Annual Operational Plan.

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	<p>Trans-disciplinary research program implemented for rice-based farming systems in southern provinces</p> <p>Achieved—Project established and under active implementation.</p> <p>Development of policy proposals to improve rice-based farming systems</p> <p>Achieved—An ongoing project is developing policy proposals aimed at improving rice-based farming systems in Cambodia.</p>

Program objective	Deliverables	Key performance indicators: indicator/performance
Agricultural productivity growth in smallholder systems	New/adapted integrated production technologies leading to increased productivity, enhanced nutrition, better market-access opportunities, decreased water-use and resistance to pests and diseases	<p>Promising management practices for increasing productivity of soil-based cropping systems evaluated with at least five women's groups in Nanggroe Aceh Darussalam</p> <p>Achieved—Research and demonstration trials are progressing to assess the benefits of using various practices; 35 women groups are being trained through farmer field schools; 750 women have received training in integrated crop management (ICM) principles, making significant gains in vegetable production; 14 groups have already achieved financial and management independence.</p> <p>Various approaches tested in three projects to improve smallholder farmer livelihoods through improved productivity and market engagement</p> <p>Achieved—Livelihood-improvement opportunities have been demonstrated from improved competitiveness and market engagement for persimmon, vegetables and plums.</p>
Developing market integration for smallholder livelihoods to enable market participation	Improved access for farmers and agribusiness to new knowledge underpinning the production and marketing of agricultural outputs at higher levels of productivity and quality	<p>Increased access to institutional markets by vegetable-growing smallholders</p> <p>Achieved—Increased access has been achieved through the horticulture component of the program aimed at improving value-chains.</p> <p>Market-access strategies that address biosecurity problems developed for at least two crops and agribusiness projects</p> <p>Achieved—A market access strategy for smallholder cocoa growers in Vanuatu and Solomon Islands to sell into high-value niche markets is being developed. A strategy for a 'cleaner pathway' that addresses biosecurity concerns relating to the export of taro from Fiji to New Zealand has been developed and is being field tested.</p>

Program objective	Deliverables	Key performance indicators: indicator/performance
Human and institutional capacity building for developing-country national research institutions to enable sustainable follow-up research and adoption capabilities	Building capacity of agricultural research institutes in partner countries and in Australia	<p>At least 30 students successfully commenced postgraduate awards in 2011–12</p> <p>Achieved—30 new students commenced postgraduate study at Australian universities during 2011–12</p> <p>Management of the John Allwright Fellowship (JAF) program effectively maintained following significant increase in number of postgraduate students</p> <p>Achieved—There were 129 active students during 2011–12, including 30 new starters. Management of the JAF program, including student extensions and returnee awards was effectively maintained, in addition to a successful JAF week in September 2011.</p>
Adaptation to climate change for rice-based farming systems in the Mekong Delta	Utilisation of seasonal climate forecasting, crop modelling and water resource management in rice-based farming systems in the Mekong, with an additional focus on the Mekong Delta of Vietnam	<p>Diversification options, and options to increase productivity per unit of water, explored with a view to making rice-based production systems in the Mekong Delta more resilient to the negative impacts of climate change</p> <p>Achieved—A project is providing management options for rice-based cropping systems to minimise the effects of seawater intrusion and flooding in the Mekong Delta region. In addition a new project is under development to investigate management options for rice–shrimp farming systems.</p>

Program objective	Deliverables	Key performance indicators: indicator/performance
Developing high-value agriculture, forestry and fisheries products in the Pacific	Identification of markets and supply chains with potential to deliver substantial livelihood benefits to Pacific island communities	<p>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</p> <p>Achieved—An agribusiness project has been launched to develop commercial breadfruit production systems in Fiji. Another agribusiness project has been designed and initiated to help smallholder farmers in Solomon Islands and Fiji produce a range of high-value vegetables for the hospitality sector in those countries. In crop areas, projects have been designed and initiated to increase the productivity and explore diversification options for vegetable and coffee-based production systems. A new program including crop production and protection aspects of sweetpotato-based production systems is under consideration. A new project on <i>Canarium</i> nut processing in Vanuatu and Solomon Islands has commenced.</p>
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 characterising input and output value-chain systems to identify constraints and options for field testing in partner countries of East Africa	<p>Assessment of best bet conservation agriculture technologies in exploratory trials in five eastern and southern African countries undertaken</p> <p>Achieved—Community surveys and innovation platforms around the SIMLESA research sites (38 in total across five countries) identified constraints in market access in five countries, and participatory assessments in Zimbabwe identified value-chain issues. More than 50 scientists have stronger research and development knowledge and skills.</p>

Program objective	Deliverables	Key performance indicators: indicator/performance
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.
Ensure administered costs are maintained within agreed budget parameters	Ensure that administered costs are maintained within agreed budget parameters	Administered costs within specified budget parameters Achieved —administered costs were within specified budget parameters.
Establishment of the Australian International Food Security Centre (AIFSC)	New research partnerships established and projects commissioned—AIFSC	AIFSC launched and operational Achieved —The AIFSC is operational and will host a major international conference in 2012.

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 that 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 2011–12 Annual Operational Plan

ACIAR's 2011–12 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 corporate program areas

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

Corporate programs	
Departmental and administered costs maintained within agreed budget parameters	Achieved —All departmental and administered costs were maintained within agreed budget parameters.
All legislative and reporting requirements and requests for policy advice and information met in an efficient and timely manner	Achieved —All reporting requirements were met on time.
ACIAR corporate knowledge and information readily accessible to all staff	Achieved —Corporate knowledge and information was readily accessible to all staff.
Stakeholders have access to information on program and project outcomes, and impacts of past projects	Achieved —All concluded projects now have final reports available on the website, with annual reports also available through the website. A total of twelve research publications were produced, disseminating research outcomes and results. Two co-publications were undertaken and contributions made to global reports on Rio +20 and Forestry.
New staff enterprise bargaining agreement effectively implemented	Achieved —Enterprise Agreement (EA) negotiated and endorsed by FairWork Australia. All human resource policies have been updated to reflect new EA.

CGIAR and IARCs

Effective participation by ACIAR in CGIAR reform deliberations and implementation, with Australian perspectives and contributions recognised and acted upon by the Fund Council and Consortium Board	Achieved —All council meetings have been attended. ACIAR has provided proactive and extensive input to Fund Council and Consortium deliberations as acknowledged by the Consortium Chair. ACIAR funding through the three donor trust fund windows has been provided on a timely basis. ACIAR input into development of CGIAR research programs was well received.
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Capacity building

At least 30 students successfully commenced postgraduate awards in 2011–12	Achieved —30 new students commenced postgraduate study at Australian universities during 2011–12.
Management of the John Allwright Fellowship (JAF) program effectively maintained following significant increase in number of postgraduate students	Achieved —There were 129 active students during 2011–12, including 30 new starters. Management of the JAF program, including student extensions and returnee awards was effectively maintained, in addition to a successful JAF week in September 2011.

Corporate programs

High-quality of applicants for research management training programs in Australia continued, with at least eight John Dillon Fellowships awarded

Achieved—10 John Dillon Fellowship awardees received research management training in Australia. Feedback on the quality of the awardees from course providers and stakeholders who hosted them was excellent.

Research program impact assessment

At least five impact assessment studies of completed projects published

Achieved—Five were published and a further three sent to the Communications section by early May, plus a further four were completed including the Afghanistan and African reports.

2011–12 Project Leader Adoption Studies published

Partly achieved—Nine adoption study reports were completed but not published.

Pathway analysis of ACIAR's investment in oil palm research in PNG published

Achieved—Pathway analysis was completed and sent to the Communications section for publication.

Methods used to assess natural resource management research reviewed

Achieved—Review of methods used to assess natural resource management research was completed.

Returns to ACIAR's investment in agricultural research updated and published

Achieved—Returns to ACIAR's investment in agricultural research were updated and results published in a number of ACIAR's corporate publications such as the *2010–11 Annual Report* and *Partners* magazine.

Assessment of the benefits to Australia from ACIAR's Fisheries program completed

Achieved—Partly achieved. Postponed because the Africa and Afghan reports became higher priority.

One research evaluation and one impact assessment training workshop delivered

Achieved—Activities included: joint ACIAR–IRRI impact assessment training workshop; research evaluation training (Fiji); sponsored three current or past students to participate in events and with authors of an impact assessment; and one past JAF assisted with a project.

Improved working links established with partner-country, international centre and Australian impact assessment groups

Achieved—Considerable effort was made to develop or maintain: strong links with networks; links with five research program areas of CGIAR, including four with natural resource management in their scope (Forest and Trees; Land, Water and Environment; Aquatic Agricultural Systems; and Climate Change, Agriculture and Food Security) as well as Global Rice Science Partnership; Australian impact assessment specialists.

Communicating research results

Information on program and project achievements and impacts is widely available in print and web-based media

Achieved—All concluded projects now have final reports available on the website, with annual reports also available through the website. A total of nineteen research publications were produced, disseminating research outcomes and results. Two co-publications were undertaken and contributions were made to global reports on Rio +20 and Forestry.

Corporate programs	
Evidence is available of continuing demand for and appreciation of ACIAR's scientific and corporate publications	Achieved —Demand for a range of publications continues to arise, including key research publications, <i>Partners</i> magazine and hits on the ACIAR website. Copies of publications remain among the most downloaded items on the website. Fact sheets continue to be used and new communication modalities investigated.
Targeted stakeholder groups have received information that meets their identified needs	Achieved —Distribution of key publications, including corporate publications, is rising, with the Annual Operational Plan and the Annual Report widely disseminated to key stakeholders of research providers, Australian Government stakeholders and partners. Support has been provided to country offices and to activities by projects/programs and key staff.
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	Achieved —A refresh of the ACIAR website and move into social media (blogs, videos, twitter) has helped further the dissemination of agricultural research results emerging from ACIAR projects. This has also provided alignment and consistency with current Australian Government models.

Key performance indicators in each country

ACIAR measures its 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		
Key researchable issues for improving watershed management identified	Afghanistan	Achieved —A Record of Understanding (RoU) with AusAID was signed for the implementation of three projects. A watershed project, developed with ICARDA as commissioned organisation, is to commence 1 July 2012.
Robust, disease-resistant maize and wheat varieties released	Afghanistan	Achieved —Four open-pollinated maize varieties and 8 wheat varieties have been released. The released wheat varieties account for more than 50% of the total certified seed production target for Afghanistan.
Capacity of national scientists in crop management increased	Afghanistan	Achieved —In association with the wheat-improvement program, a substantial number of national scientists were trained in improved wheat agronomy/management.

Key performance indicator	Country	Comment
A critical mass of farmers using modified tillage methods to sustain the soil base reached	Iraq	Achieved —Adoption of zero-tillage conservation practices by farmers in Iraq has increased from a zero base in 2005–06 to approximately 6,000 hectares in 2011–12.
Initial characterisation of salinisation processes in central Iraq achieved	Iraq	Achieved —The first report that characterises the current status of salinity in Iraq, and its causes and extent, has been produced.
New/adapted integrated production technologies leading to increased productivity, enhanced nutrition, decreased water-use, or resistance to pests and diseases being field tested under commercial conditions in citrus	Bhutan	Achieved —The concept of demonstration orchards are being replicated in other citrus-growing regions. New demonstration orchards have been established in three administrative districts: Tsirang, Sarpang and Dagana, and 300 citrus-production guides have been distributed to farmers, extension agents and researchers. Phenology-based management calendar posters are being used by regional extension agents during their farm visits and field work.

Africa

Points of intervention for improved value-chain efficiency identified in five crop and livestock chains		Achieved —Community surveys and innovation platforms around the SIMLESA research sites identified constraints in market access in five countries, and participatory assessments in Zimbabwe identified value-chain issues.
Evidence provided of farmers adopting and testing new conservation agriculture technologies in five farming systems		Achieved —Farmers involved in the study have been testing various conservation agriculture practices in the 38 research sites.
Fifty crop and livestock scientists and development professionals provided with improved research skills and capacity to link more effectively to extension		Achieved —Across five countries of SIMELSA and South Africa more than 50 scientists have stronger research and development knowledge and skills.

Bangladesh

Traditional rice-based systems provided with viable options for diversification using maize and legumes	Bangladesh	Achieved —Short-duration pulses have been introduced into irrigated rice systems during the short winter fallow window, as a quick and low-cost rotation option. On-station and on-farm trials have been conducted on rice–maize–mungbean and rice–potato–maize systems.
Capacity of national agronomists to manage legumes between cereal crops improved	Bangladesh	Achieved —As part of the legumes screening project for intensification of rice-based systems, national agronomists have been trained in legume establishment and maintenance.

Key performance indicator	Country	Comment
Cambodia		
A new project developed to improve the resilience of fisheries-dependent communities in Laos and Cambodia to possible changes in water regimes, either through natural or human causes	Cambodia / Laos	Achieved —Work has started on culture-based fisheries in impoundments adjacent to rural communities. Using the impoundments for fish culture provides employment, income and nutrition for the communities.
A new project developed to integrate livestock within crop-based farming systems in north-western Cambodia	Cambodia	Achieved —A new project began on 1 January 2012 to integrate livestock within crop-based farming systems.
Development of policy proposals to improve rice-based farming systems	Cambodia	Achieved —An ongoing project is developing policy proposals aimed at improving rice-based farming systems.
Management of the Cambodian Agriculture Value-chain (CAVAC) program successfully integrated, complementing ACIAR and AusAID initiatives with respect to smallholder livelihoods	Cambodia	Achieved —ACIAR is collaborating with CAVAC to transfer promising technologies emanating from the research component for dissemination to the extension workers and smallholders. A 6-month extension of the ACIAR-AusAID RoU with regard to the CAVAC partnership has been requested until the end of 2012.
A new project established to build capacity for plant biosecurity research in Cambodia, Lao PDR and Thailand	Cambodia / Laos / Thailand	Achieved —A subcontract between the Plant Biosecurity Cooperative Research Centre and Charles Sturt University has been initiated and is under review. Partner countries have reviewed and agreed with the strategy. Equipment lists have been developed. Consultation with country partners has led to a planned visit to Laos and Cambodia, scheduled for October 2012, in which equipment will be installed and training workshops conducted for the remote microscope network.
Livestock traders educated to avoid high-risk practices that facilitate the spread of animal disease	Cambodia	Achieved —The project has led to cooperation between livestock traders, the Cambodian Department of Animal Health and Production and the Lao Department of Livestock and Fisheries. The work was undertaken in collaboration with a cross-border movement study and was valued by major stakeholders.
A series of policy briefs developed to assist authorities with the management of disease spread via livestock movement	Cambodia	Partially achieved —Research work in Cambodia during the past 4 years has provided a better understanding of the economic imperatives that drive livestock traders to adopt high-risk trading behaviours and avoid official border-crossing pathways. This knowledge will assist policymakers to develop movement protocols that are more effective in reducing disease spread, yet less costly and protracted for traders.
Enhanced capacity of farming households in Svay Rieng to enable them to adapt their systems to climate change	Cambodia	Achieved —Ongoing activities in building resilience of smallholder farmers to climate change/variability in Cambodia is evidenced in the comprehensive report produced by the proponents. Key adaptation strategies include direct-seeded rice, strategic irrigation, improved fertiliser application, and the development of farmer typologies and associated adaptation interventions.

Key performance indicator	Country	Comment
China		
Promising integrated crop–fodder–forage systems trialled and adapted on farms in Tibet Autonomous Region	China	Achieved —The promising integrated crop–fodder–forage systems are being analysed and published through a series of articles in China and internationally.
Opportunities identified for using remote-sensing to develop an index-based market incentive of payments to individual herders for improved grassland management	China	Achieved —A scoping team outlined the opportunities, potential partners and way forward for a project using remote-sensing to develop an index-based market incentive of payments to individual herders for improved grassland management. Funds have been allocated in 2013–14 to conduct preliminary work based on these recommendations.
Key traits from spring wheat to underpin conservation agriculture incorporated into Chinese winter wheat	China	Achieved —Trait-based methods are being applied to improve wheat water-use efficiency and to pyramid desired traits into Chinese winter wheat germplasm. These traits include high transpiration efficiency, long coleoptiles, early vigour and deep root system.
Effectiveness of new market-based payment systems to achieve farm-level land-use changes assessed, and assistance with defining suitable policy options provided	China	Achieved —A significant collaborative project on payment for environmental services in China was completed and a high-level policy workshop in Beijing has enabled options to be provided to senior policy advisers and research managers in the Chinese Government. Subsequent publications in Chinese professional journals have acknowledged the options and analysis from the ACIAR project.
East Timor		
At least one new staple food crop variety candidate identified for release	East Timor	Achieved —A white maize variety (P07) will be renamed and released in 2012. An improved rice variety with farmer appeal (Matatag) is being multiplied and tested more widely with a view to release.
An integrated set of cattle management and feeding technologies identified for local adaptation, and multisite field testing commenced	East Timor	Achieved —A broad range of feeding, breeding and management options have been identified for on-farm testing by East Timorese, Indonesian and Australian researchers. Twelve forage varieties have been identified for on-station testing at three to five locations.
Community-based seed production groups for selected staple food crop varieties established	East Timor	Achieved —280 informal seed production groups have been established. A review by the Technical Advisory Group of the Seeds of Life program in May 2012 found that the delivery strategy for informal seed production was appropriate and starting to yield promising results.
Capacity of Ministry of Agriculture and Fisheries to guide national programs of research and development in crop and livestock systems strengthened through formal and on-the-job capacity building of at least 50 individuals	East Timor	Achieved —Substantial capacity building has been delivered through the Seeds of Life program, working with government research staff and district extension officers. More than 480 on-farm demonstration trials were established for extension worker and farmer training.

Key performance indicator	Country	Comment
India		
Semi-dwarf wheat varieties with long coleoptiles evaluated under Indian conditions	India	Achieved —Lines with different dwarfing genes and long coleoptiles were grown at two planting depths and two planting times in India over the 2011–12 season. Emergence and final height were measured and tissue was harvested for DNA and marker analysis at Karnal.
The nature of the water stress environments experienced in Rabi sorghum production characterised and classified	India	Achieved —Drought scenarios have been characterised for the major Rabi growing areas and modelled successfully. Modelled and observed yields show a good correlation across a range of geographic regions and drought types.
Advanced rice lines and integrated weed management practices tested in Punjab, Haryana and Bihar	India	Achieved —Improved rice and weed management packages under direct-seeded rice have produced equal yields to conventional transplanted rice.
Area of land using zero-tillage practices increased	India	Achieved —Area of zero-tillage wheat is substantial in Punjab, Haryana and Uttar Pradesh; and some farmers have begun adopting direct-seeded rice.
Harmonisation achieved of Indian cluster of water projects to support the delivery of multiscale strategies and recommendations underpinning a more rational policy approach to watershed development (WSD) in Andhra Pradesh and rainfed central India	India	Achieved —Two meetings were undertaken between the leaders of the four projects as a means of harmonising key messages generated through project activities. Funding support for the Water and Climate Forum was established and is currently implementing activities with senior decision-makers.
Fully integrated zero-tillage/direct-seeding technologies scaled out for rice–wheat systems adapted to the different socioeconomic and environmental conditions of the Indo-Gangetic Plain	India	Achieved —Scaling out has been successful, not only in the north-western region, but there is growing interest in eastern states.
Definition of alternative policy and institutional arrangements to deliver agricultural greenhouse gas abatements defined	India	Achieved —A large research partnership program addressing greenhouse gas offsets in agriculture has commenced and has been welcomed by Indian partners.
In-depth understanding developed of farmers' capacity to adapt to climate change, underpinning the choice of feasible crop, water and nutrient management adaptation option	India	Achieved —Key insights into farmer typologies and associated strategies for climate change adaptation have been developed and are currently being disseminated.
New institutional arrangements defined to increase sustainability of groundwater extraction, and cost–benefit analysis completed	India	Achieved —A project was implemented that addresses the issue of community-based institutions in the management of groundwater.
Selected scientists trained in crop modelling using Agricultural Production System Simulator (APSIM-Oryza) and its application to enhance water-use efficiency in rice	India	Achieved —Training workshops have been undertaken with a cohort of trainee modellers in APSIM within the LWR/2010/033 project. Further improvements in the predictive ability of the APSIM-Oryza model have been achieved through better simulation of standing water in paddy systems.

Key performance indicator	Country	Comment
Indonesia		
Soil chemical, physical and biological factors influencing the soil-suppression effect on banana-root diseases identified	Indonesia	Achieved —Soil chemical and biological properties have been related to infection severity and even bunch weight. Studies in Australia showed that increasing cation exchange activity of the soil was inversely related to disease incidence. Higher microbial activity was also associated with soils collected from Indonesia.
Baseline data studies (yields and losses due to fruit flies) on mango completed for Indramayu	Indonesia	Achieved —Baselines on yields and loss due to pest fruit flies on mango in Indramayu have been completed and wide area management strategies are now being developed and tested.
An integrated program of research developed for smallholder cattle livelihoods in West Nusa Tenggara aimed at linking productivity improvements with more-transparent markets and effective policy support	Indonesia	Achieved —A scoping team produced a draft report outlining a program to increase returns to smallholder cattle producers by providing cattle market services and assisting farmers to integrate into markets. The proposal is to increase the accuracy and clarity of market signals, and to assist farmers to respond to the signals through marketing, production and financial decision-making.
Commercial recommendations for control of quality disorders in mangosteen (yellow sap, flesh hardening etc.) developed and ready for commercial testing	Indonesia	Achieved —Work has examined the links between harvest and transportation on the incidence of external damage. This has led to the introduction of plastic crates for handling product.
Integrated Pest Management (IPM) recommendations for the control of stem and tip borers in sugarcane developed and being tested commercially	Indonesia	Achieved —IPM recommendations have been developed and are now being treated commercially with growers in eastern Java. This includes the production and distribution of grower field guides for identification of borer pests and natural pest predators.
Recommendations for the improved management of ducks and biosecurity of Sector 3 poultry (to reduce the threat of avian influenza) submitted to the Directorate General of Livestock Services as policy options for the Indonesian Veterinary Plan (INDOVETPLAN)	Indonesia	Partly achieved —Recommendations have been developed and published on the improved management of ducks and biosecurity. They are yet to be considered as policy options for INDOVETPLAN.
Recommendations on enhancing participation of smallholders in commercial markets for at least two cash crops (coffee, vegetables) documented	Indonesia	Achieved —The Eastern Indonesia Agribusiness Development Opportunities (EI-ADO) study provided detailed analysis of 15 candidate commodity chains in eastern Indonesia. The reference group for the study selected 5 commodity chains for further analysis (beef, tropical pulses, mango, maize and vegetables).

Key performance indicator	Country	Comment
A strategy developed to improve integration of research and development programs for smallholder livestock, coffee and cacao producers in Papua and West Papua provinces with AusAID, IFAD and PNPM Mandiri	Indonesia	Partly achieved —The intention of the EI-ADO study (above) was to expand the analyses to include Papua and West Papua. During the year, security constraints in Indonesia prevented Australian researchers from being able to travel to these two provinces. This prevented the development of a strategy for better integration of the research and development programs. AusAID is developing a Framework for Indonesia-Australia Cooperation in Papua to overcome this difficulty. ACIAR's programs on cacao, coffee and livestock will be included in the framework. In addition, ACIAR has developed an agreement with AusAID to expand the analyses of EI-ADO to include Papua and West Papua.
Promising management practices for increasing productivity of soil-based cropping systems evaluated with at least five women's groups in Nanggroe Aceh Darussalam	Indonesia	Achieved —Research and demonstration trials are progressing to assess the benefits of using various practices in rice-based farming systems. Promising results have been obtained in improving the use efficiency of nitrogen 'fertiliser,' saving input costs by 25%; 35 women groups are being trained through farmer field schools; 750 women have received training in ICM principles, making significant gains in vegetable production; 14 groups have already achieved financial and management independence.
New options for protecting and diversifying livelihoods of coastal communities, through brackish-water ponds, mariculture and marine fisheries management, identified and being evaluated	Indonesia	Achieved —A program of work on developing alternative species for aquaculture in brackish-water ponds (formerly used for shrimps) is well underway. A mid-term review verified good progress and extensive interest in the results in south-eastern Indonesia and Aceh. Further work on management of marine capture fisheries, particularly for pelagic fishes and those fisheries focused on fish aggregating devices, has been initiated.
Social dimensions of three alternative systems for community-based commercial plantation forestry analysed and documented	Indonesia	Achieved —Fifteen researchers collected the social dimensions data. A workshop was held and a synthesis report prepared.
At least two novel grain–legume systems for improved management of water and soil fertility in eastern Indonesia documented and being trialled by farmers	Indonesia	Achieved —Tropical pulse–grain systems are being trialled by farmers in Timor and Lombok. Forage legume–grain systems are being trialled by farmers in Timor and Flores. In the tropical pulse systems, new private-sector partnerships have been forged to help enable uptake and overcome credit barriers.
A research program devised to support development of sustainable cocoa systems in Indonesia through improved soil management and reduction of pesticide use by development of pest-resistant clones	Indonesia	Achieved —Several field trials have been established in the northern part of South Sulawesi province (Luwu, the main area of cocoa production) to test the effect of added mineral fertilisers, compost, lime and combinations on the growth and production of cocoa and the main pest and disease problems. A workshop on the project will be held in early July.

Key performance indicator	Country	Comment
A strategy for assisting the Indonesian Agency for Agricultural Research and Development (IAARD) with a major revitalisation of Indonesia's agricultural research and development system developed and implementation commenced	Indonesia	Partly achieved —Throughout the year, ACIAR has been in discussions with AusAID, the World Bank and IAARD to identify a role and mechanism for ACIAR to assist IAARD with a major revitalisation of Indonesia's agricultural research and development system (known as SMARTD). AusAID has provisionally allocated \$5 million to ACIAR in anticipation of approval from IAARD.
Capacity building for leadership in research management provided for at least 10 senior Indonesian research agency heads	Indonesia	Achieved —Twenty-two research leaders from Indonesia were supported by ACIAR and IAARD for a two-week study tour to Australia in late June 2012. The aim of their visit was to experience a range of approaches to managing agricultural research and research resources (human, natural and financial) as well as research priority setting, monitoring and evaluation, and collaboration between research institutes.
Capacity of national and regional research and development agencies strengthened in technical and methodological aspects of research through formal and on-the-job capacity building of at least 100 individuals	Indonesia	Achieved —Capacity building focusing on improving research skills has exceeded the target through focused training programs in several of ACIAR's discipline areas. Farmer training has also been active.

Lao People's Democratic Republic (PDR)

Fish passage technology implemented in the Lower Mekong Basin	Laos	Achieved —The project is well underway and is attracting considerable national and regional interest. Results to date are very promising in terms of providing successful fishway designs. Monitoring of community benefits is underway.
New project commenced on agricultural policy, with special emphasis on rice	Laos	Achieved —An ongoing project is developing policy proposals aimed at improving rice-based farming systems.
New plantation forestry value-chain project commenced, integrating log supply and processing research with exploration of payments for environmental services across different land use	Laos	Achieved —One new project on planted log value-chains has been designed and an inception workshop was held in June 2012. A second project on payments for environmental services has been designed.
Analysis of provincial-level extension systems completed and documented	Laos	Achieved —A research proposal on scoping provincial extension systems is still active. A new project is to commence in September 2012 on enhancing district delivery and management of agricultural extension in Laos.
Trans-disciplinary research program implemented for rice-based farming systems in southern provinces	Laos	Achieved —A project has been established and is under active implementation.
Cost analysis of risks to human health in pig production systems completed	Laos	Achieved —This activity was completed.

Key performance indicator	Country	Comment
Integrated program for ACIAR-supported livestock health and production research planned and documented	Laos	Achieved – Livestock industry participant consultation was undertaken, themes completed and priorities presented at a country consultation meeting in June 2012
Projects moved from being largely 'training-oriented' to become more outcomes focused	Laos	Achieved – All training activities are being conducted to become more outcome focused. The program will be reviewed at the next country consultation meeting

Myanmar

A new program established to improve productivity in the crop, fisheries and livestock sectors	Myanmar	Achieved – The research framework for the new program has been established and component proposals developed and reviewed.
A partnership created with the World Organisation for Animal Health (OIE), South-East Asia and China Foot and Mouth Disease (SEACFMD) campaign and participating countries to assess and control livestock biosecurity risks	Myanmar / Cambodia / China / Laos / Thailand / Vietnam	Achieved – Partnerships have been created and a project proposal submitted to ACIAR for consideration.

Pacific island countries

New/adapted integrated production technologies leading to increased productivity, enhanced nutrition, decreased water-use, or resistance to pests and diseases being field tested under commercial conditions in at least three crops and agribusiness projects	Fiji / Samoa / Vanuatu	Achieved – The soil health project has established a third pilot site, in Kiribati, to sustainably increase productivity of vegetables (in addition to sites in Fiji and Samoa to enhance the sustainability of taro production). The cocoa rehabilitation project is improving the management of black pod disease and rats in commercial cocoa smallholdings in Vanuatu. The project for strengthening integrated crop management research has begun work with vegetable producers in the Sigatoka Valley of Fiji. Field experiments in Milne Bay, Oro and West New Britain have been established to investigate integrated soil, nutrient and water management practices.
At least three projects designed and initiated to increase agricultural production or investigate diversification in crops, fisheries and forestry projects	Fiji / Solomon Islands	Achieved – An agribusiness project has been launched to develop commercial breadfruit production systems in Fiji. Another agribusiness project has been designed and initiated to help smallholder farmers in Solomon Islands and Fiji produce a range of high-value vegetables for the hospitality sector in those countries. In crop areas, projects have been designed and initiated to increase the productivity and explore diversification options for vegetable and coffee-based production systems. A new program including crop production and protection aspects of sweetpotato-based production systems is under consideration. A new project on <i>Canarium</i> nut processing in Vanuatu and Solomon Islands has commenced.

Key performance indicator	Country	Comment
At least two projects (fisheries and forestry) designed and being implemented to increase community engagement and co-management in fisheries and forestry natural resources management	Solomon Islands	Achieved —A new small research activity in Solomon Islands has commenced to investigate opportunities for collaborative marketing of teak logs from smallholder plantations.
Quarantine and/or market-access strategies that address biosecurity problems developed for at least two crops and agribusiness projects	Vanuatu / Solomon Islands / Fiji	Achieved —A market access strategy for smallholder cocoa growers in Vanuatu and Solomon Islands to sell into high-value niche markets is being developed. A strategy for a 'cleaner pathway' that addresses biosecurity concerns relating to the export of taro from Fiji to New Zealand has been developed and is being field tested.
At least one agricultural project designed and being implemented with the aim of environmental sustainability, reduced carbon emissions, reduced water-use and enhanced biodiversity in crops and/or forestry	Pacific islands	Achieved —A project has been designed and initiated to better understand the sensitivity of key Pacific food crops (taro and cassava) to climate change, and thus explore strategies to adapt cropping systems based on these crops so as to improve their resilience in the face of climate variability and change.
At least 12 postgraduate thesis projects developed in collaboration with the University of the South Pacific (USP) and active ACIAR Pacific region projects, and two John Allwright postgraduate scholarships in crops, livestock, fisheries, forestry and agribusiness projects	Pacific islands	Achieved —More than 12 postgraduate thesis projects have been developed under the USP scholarship program, in collaboration with ACIAR projects in the Pacific islands.
The capacity of two regional institutions strengthened in using market-chain analysis to identify entry points for improving the competitiveness of Pacific commodity supply chains	Pacific islands	Achieved —In a 'learn-by-doing' approach, the capacity to undertake value-chain analysis has been strengthened, mainly through work on high-value niche markets for cocoa. Capacity has also been strengthened through work on high-value aquaculture products (tilapia and sea grapes) and on sea cucumbers.

Pakistan

New/adapted integrated production technologies leading to increased productivity, enhanced nutrition, decreased water-use, and resistance to pests and diseases being field tested under commercial conditions in citrus and mangoes	Pakistan	Achieved —The pruning training has been held for the extension officers and the growers. Fruit thinning demonstrations were delivered in May 2012 in Punjab. These demonstrations have been held at a citrus growers' conference with 200 growers, while 500 growers were trained in field days in Sargodha district. Integrated crop management trials are being conducted in all mango-growing areas.
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Key performance indicator	Country	Comment
Low-input extension approaches for improved small-scale dairy production identified and being trialled in at least two provinces	Pakistan	Achieved —Based on Phase 1, low-cost extension approaches have been implemented in six new areas in Sindh and Punjab provinces. These approaches have been supplemented with new extension training material that has been developed within the project.
Social, economic and environmental constraints to industry development by poor smallholder farmers and women identified and documented in at least two agricultural commodities	Pakistan	Achieved —The primary constraints to industry development have been identified in a preliminary analysis of data gathered across the dairy, citrus and mango sectors.
At least one agricultural project designed and being implemented with the aim of environmental sustainability, reduced water-use, reduced soil salinity and improved irrigation/water management	Pakistan	Partly achieved —A preliminary proposal was approved to go forward to full proposal; however, this proposal has not gone to Phase 2 due to several constraints (strategy finalisation and funding).
Capacity constraints of farmers, researchers and extension staff in the citrus, mango, irrigation and dairy sectors identified and addressed through the design of an appropriate short-course training project	Pakistan	Achieved —A short course was conducted on mango diseases, citrus huanglongbing and communications for selected Pakistan industry and government participants. Additional opportunities for short courses have been identified and will be run in 2013–14. A farmer festival was conducted and attended by 800 farmers and their families. A workshop involving 40 Pakistan students who represented every veterinary faculty within Pakistan covered topics in animal health and gender.

Papua New Guinea

New/adapted integrated production technologies being field tested under commercial conditions in at least three crops and fisheries projects	Papua New Guinea	Achieved —The use of 'pathogen-treated' sweetpotato planting material has been shown to offer considerably increased yields under field conditions. The cost-effectiveness of coffee green scale management has been tested and the management of cocoa pod borer intensified.
At least three projects designed and initiated to increase agricultural production or investigate diversification in crops, fisheries and poultry	Papua New Guinea	Achieved —A project has been designed and signed off to increase productivity in sweetpotato through better management of sweetpotato weevils and viruses. An inception meeting was held in September 2011. A business case has been developed for mini feed mills for poultry and fish.
Social, economic and environmental constraints to industry development by smallholder farmers identified and documented in at least two crops and fisheries projects and a women's business acumen project	Papua New Guinea	Achieved —Social and economic constraints are being investigated in the coffee, oil palm and cocoa industries.

Key performance indicator	Country	Comment
Risk-management strategies, management programs or awareness programs relating to exotic pest, disease or weed incursion developed for at least two crop, livestock or across-commodity projects	Papua New Guinea	Achieved – The surveillance and awareness strategy developed for coffee berry borer was successful in identifying an incursion in the Telefomin region, leading to eradication measures being taken.
At least two John Allwright postgraduate scholarship students, one John Dillon management training scholarship and contributions made towards three University of Technology (Unitech) postgraduate degree scholarships	Papua New Guinea	Partly achieved – Papua New Guinean scientists have contributed to two John Allwright Fellowships, no John Dillon fellows and three scholarships to Unitech Lae.

Philippines

Commercial adoption of protected cropping systems in at least three districts of Leyte to provide extended seasonality of vegetable crop production	Philippines	Achieved – Protected cropping has been adopted commercially in the Leyte regions of Cabintan, Ormoc, Maasin and Bontoc (southern Leyte).
Nutrient budgeting evaluated, and fertiliser management and appropriate agronomic practices for increasing vegetable production identified, in the southern Philippines	Philippines	Achieved – Conventional and improved agronomic practices are being tested at five contrasting sites to identify promising integrated soil and crop nutrient management practices best suited to the local conditions. A key achievement based on the results of this project is the development and provision of a framework to researchers, advisors and farmers for the use of organic amendments as inputs to vegetable production systems.
Commercial adoption of ICM packages developed by the Philippines Fruits Program in papaya, mango and durian in Mindanao and jackfruit in Leyte	Philippines	Achieved – Mango ICM strategies were developed and are being used in Samal Island and Davao del Sur districts. ICM packages were developed for papaya. In durian/jackfruit, integrated disease management packages have been developed and disseminated through leaflets, videos, field days, training for nurserymen and growers' associations.
Sea-ranching options for enhancing livelihoods of village-level fishers identified and being tested in at least two new locations	Philippines	Achieved – Three new sites are being evaluated for sea-ranching of sea cucumbers. The major research focus is on governance arrangements, which vary slightly from community to community. Based on the results, models for both sea-ranching and sea-pen culture are being developed.

Key performance indicator	Country	Comment
Increased access to institutional markets by vegetable-growing smallholders in selected regions of Mindanao	Philippines	Achieved —Increased access has been achieved through the horticulture component of the program aimed at improving value-chains.
Program of research and development initiated for management of sloping-land agriculture in the Philippines from biophysical and socioeconomic perspectives	Philippines	Achieved —A program with a biophysical and socioeconomic component was initiated, working at a common site.
Capacity of national and regional agencies strengthened in agriculture, fisheries, livestock and environmental management research through formal and on-the-job capacity building of at least 50 individuals	Philippines	Achieved —Training programs have been delivered for more than 50 individuals.

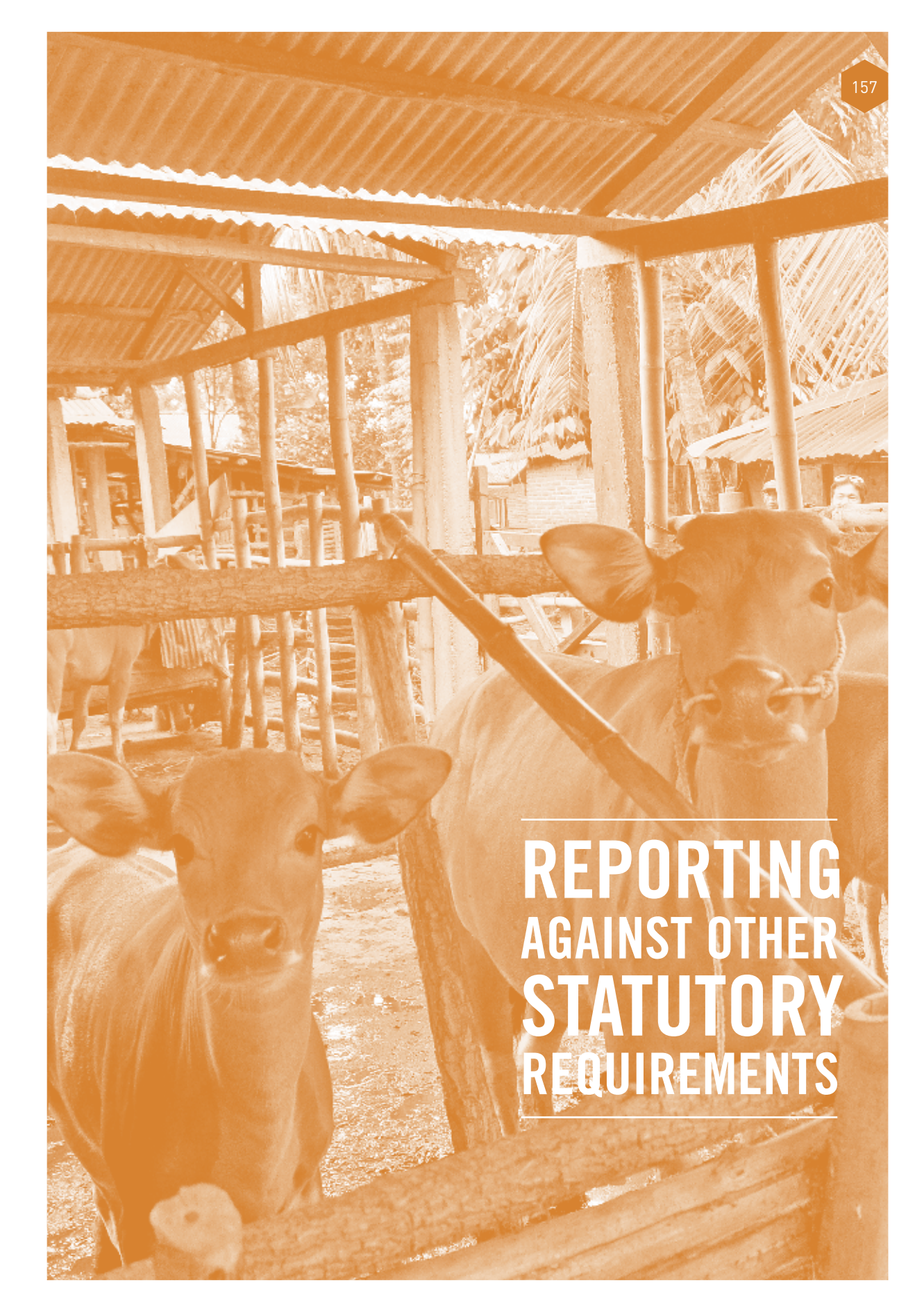
Thailand

A partnership created with the World Organisation for Animal Health (OIE), South-East Asia and China Foot and Mouth Disease (SEACFMD) campaign and participating countries to assess and control livestock biosecurity risks	Myanmar / Cambodia / China / Laos / Thailand / Vietnam	Achieved —Partnerships have been created and a project proposal submitted to ACIAR for consideration.
A new project established to build capacity on plant biosecurity research in Cambodia, Lao PDR and Thailand	Thailand	Achieved —A subcontract between the Australian Cooperative Research Centre for National Plant Biosecurity and Charles Sturt University has been initiated and is under review. Partner countries have reviewed and agreed with the strategy. Equipment lists have been developed. Consultation has taken place with country partners, allowing the organisation of a visit to Laos and Cambodia, scheduled for October 2012.

Vietnam

Integrated food/tree crop management practices developed for improving productivity in the south-central coast region	Vietnam	Achieved —Integrated systems have been evaluated in on-farm participatory research on 45 farms across three provinces. Biophysical and socioeconomic impacts of cattle management interventions on smallholder farms are being evaluated.
Diversification options, and options to increase productivity per unit of water, explored with a view to making rice-based production systems in the Mekong Delta more resilient to the negative impacts of climate change	Vietnam	Achieved —The project is providing management options for rice-based cropping systems to minimise the effects of seawater intrusion and flooding in the Mekong Delta region. In addition a new project is under development to investigate the management options for rice–shrimp farming systems.

Key performance indicator	Country	Comment
Various approaches tested in three projects to improve smallholder farmer livelihoods in the south-central coast region and north-western highlands through improved productivity and market engagement	Vietnam	Achieved —Livelihood-improvement opportunities have been demonstrated from improved competitiveness and market engagement for persimmon, vegetables and plums.
New high-value markets investigated for agroforestry and plantation products	Vietnam	Achieved —A value-chain analysis was conducted for Son Tra. Work commenced on expanding markets for acacia and eucalyptus logs for veneer production.
A partnership created with the World Organisation for Animal Health (OIE, South-East Asia and China Foot and Mouth Disease (SEACFMD) campaign and participating countries to assess and control livestock biosecurity risks	Myanmar / Cambodia / China / Laos / Thailand / Vietnam	Achieved —Partnerships have been created and a project proposal submitted to ACIAR for consideration.
Improved tripartite linkages established between Vietnamese regional institutions, Vietnamese national institutions and Australian researchers in the three target geographic regions	Vietnam	Achieved —An effective network has been developed for the south-central coast, Mekong Delta and north-western highlands of Vietnam to interact with a range of Australian and CGIAR research providers.



**REPORTING
AGAINST OTHER
STATUTORY
REQUIREMENTS**

Management of human resources

At 30 June 2012 the Centre employed 74 employees, of whom 55 are employed under the *Public Service Act 1999* and are located in Canberra and 19 are at overseas missions and embassies. ACIAR has 1 male Senior Executive Service (SES) Band 1 employee.

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

Snapshot of ACIAR staff as at 30 June 2012

Staff employed under the PS Act 55 ^a (51.6 FTE) ^b	
Median length of APS service	5 years
Median age (years)	49
Females as % of total	61.8%
NESB ^c staff as % of total	7.3%
Part-time staff as % of total	20%
Non-ongoing staff as % of total	38%
Employee turnover for 2011–12	16.6%

^a excludes CEO and three inoperative employees

^b FTE = full-time equivalent

^c NESB = non-English-speaking background

ACIAR 4-year perspective

Staff employed under the *Public Service Act 1999*

	2008–09	2009–10	2010–11	2011–12
Staff at 30 June	47	49	49	55
Staff (FTE)	43.84	46.52	45.2	51.6
Female	60.0%	67.34%	63.0%	61.8%
Base salaries	\$3,892,196	\$4,227,052	\$4,488,987	\$4,752,020
Cessations	8	7	9	9
Staff turnover	17.2%	14.23%	18.36%	16.6%
Part-time	22.2%	24.48%	20.4%	20.0%
Non-ongoing	37.8%	36.73%	30.6%	38.0%
Learning and development activities	\$24,561	\$47,752	\$64,502	\$71,614

Overseas staff

	2008–09	2009–10	2010–11	2011–12
Staff (FTE)	19.5	18.5	16.25	16.25
Base salaries	\$837,659	\$625,552	\$562,563	\$581,998
Learning and development activities	\$2,130	\$2,952	\$1,018	\$8,478

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 2012 there were 44 completed assessments and all were rated as 'meets expectations' or higher. Of these, 5 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 9 months and who were still employed by ACIAR on 30 June 2012 received a bonus of \$2,000 in recognition of ACIAR's achievements against the 2011–12 Annual Operational Plan. Part-time employees received a pro-rata payment based on hours worked. Forty-four employees received the performance bonus, with payments totalling \$78,800.

Learning and development

In 2011–12 ACIAR spent \$71,614 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 also offers generous assistance for formal study and in 2011–12 two employees received study assistance.

Work health and safety

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.

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.

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.

There were no accidents or dangerous occurrences giving rise to the issue of any formal notices or directions under the *Work Health and Safety Act 2011*.

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 2012 no staff had identified as having a disability.

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 annual salary increases of 3.0%, with an initial 2.6% increase being effective on commencement.

Compliance with Freedom of Information / Information Publication Scheme

ACIAR and other Australian Government agencies, subject to the *Freedom of Information Act 1982* (FOI Act), are required to publish information to the public as part of the Information Publication Scheme (IPS). This requirement is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. A plan showing what information ACIAR publishes in accordance with the IPS requirements is available on the website at <aciarc.gov.au/IPS>

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, which 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 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

The ACIAR Act outlines the mandate and functions of the Centre under Section 5, including the formulation of policies to deliver against this mandate. Agricultural research is linked explicitly with sustainability. The link is maintained and implemented in the key planning document—the Annual Operational Plan (AOP). At the operational level project development, evaluation and monitoring delivers on this mandate.

Effect of the organisation's activities on the environment

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 Sub-Saharan 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; developing sustainable aquaculture technologies to minimise wild capture and harvest in ACIAR's mandated 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

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	
	2010–11	2011–12
Energy (kilowatt hours)	216,961	222,219
Water (kilolitres)	270	241

Mechanisms for reviewing and increasing the effectiveness of these measures

Formal reporting guidelines on environmental management and associated activities are used for an internal review of environment management processes. These include:

- National Government waste reduction and purchasing guidelines (2004)
- Environmental Purchasing Guide (2004)
- Environmental Purchasing Checklist (2004)
- Energy Use in Commonwealth Operations (annual publication)
- ANAO Green Office Procurement Survey



APPENDIXES

Appendix 1: Basis of authority

ACIAR's governing legislation is the *Australian Centre for International Agricultural Research Act 1982* (the Act), proclaimed on 3 June 1982 as Act No. 9 of 1982. The Act was described as 'an Act to encourage research for the purpose of identifying, or finding solutions to, agricultural problems of developing countries'.

The Act was amended in 2007, coming into effect from 1 July 2007. The principal purpose of the amendments introduced in the *Australian Centre for International Agricultural Amendment Act 2007* (the Amendment Act) was to change the governance arrangements of ACIAR. This replaced the Board of Management with an executive management structure involving a Chief Executive Officer (CEO) and a seven-member Commission. The functions of the CEO are set out at Section 5 of the legislation.

5. Functions of the CEO

H. 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

- I. 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 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.

Resources for outcome

Financial performance

In 2011–12 ACIAR's direct expenditure on international development assistance represented 90.9% of total expenditure. In 2010–11 it represented 90.8%.

Price of departmental outcomes

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

	Actual expenses 2011–12 \$'000	Budget ^a 2012–13 \$'000
Administered expenses		
ordinary annual services	78,825	89,932
special account	24,410	34,572
Total administered expenses	103,235	124,504
Departmental expenses	10,191	10,741
Total for outcome 1	113,426	135,245

^a Budget prior to additional estimates. For more details see the ACIAR Annual Operational Plan 2011–12

Appendix 4: Active research projects 2011–12

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.

Country	Project
Algeria	
	CSE/2010/043 Testing equipment and crop monitoring for conservation agriculture in northern 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
	LWR/2011/066 Scoping study to assess constraints and opportunities for future research into intensification of cropping systems in southern Bangladesh
	LWR/2010/080 Overcoming agronomic and mechanisation constraints to development and adoption of conservation agriculture in diversified rice-based cropping in Bangladesh
	LWR/2010/033 Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in southern Asia
	LWR/2005/001 Addressing constraints to pulses in cereals-based cropping systems, with particular reference to poverty alleviation in north-western Bangladesh
Bhutan	
	HORT/2010/089 Adapting integrated crop management technologies to commercial citrus enterprises in Bhutan and Australia
	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 southern Asia
Cambodia	
	ASEM/2010/049 Market-focused integrated crop and livestock enterprises for north-western 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 (PDR) 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
	AH/2011/032 Soil fingerprinting approaches for improving biosecurity and the livestock sector in the Mekong region

Country	Project
	AH/2010/046 Domestic and international market development for high-value cattle and beef in south-east Cambodia
	AH/2006/025 Understanding livestock movement and the risk of spread of trans-boundary animal diseases
	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
	FIS/2011/013 Culture-based fisheries development in Lao PDR and Cambodia
	HORT/2012/027 Establishing a remote microscope network for pest identification in Cambodia, Lao PDR and Thailand
	HORT/2012/018 Assessment of mango production and supply chain practices and research, development and extension capacities 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

China

	ADP/2010/070 Assessing farmer responses to climate change—adjustment policy options in China and Vietnam
	CIM/2005/111 More effective water-use by rainfed wheat in China and Australia
	LWR/2007/191 Improving farmer livelihoods through efficient use of resources in crop–livestock farming systems in western China
	LPS/2012/034 Use and impact of systems modelling in research for development
	LPS/2010/028 Improving the mineral nutrition of Tibetan livestock
	LPS/2006/119 Integrated crop and dairy systems in Tibet Autonomous Region, China
	LPS/2005/048 Sustainable livestock grazing systems on Chinese temperate grasslands

East Timor

	AH/2012/036 Rabies risk assessment in eastern Indonesia, East Timor, Papua New Guinea and northern Australia
	AH/2011/029 Brucellosis in West and East Timor
	CIM/2009/049 Seeds of Life 3
	HORT/2011/006 Biological control of papaya mealy bug (<i>Paracoccus marginatus</i> , Hem: Pseudococcidae) in East Timor and Oriental scale (<i>Aonidiella orientalis</i> , Hem: Diaspididae) on papaya in Northern Territory
	LPS/2011/004 UNRAM East Timor—cattle adaptive research
	LPS/2009/036 Enhancing smallholder cattle production in East Timor
	SMAR/2007/063 Enhancing farmer engagement with specialty coffee chains in eastern Indonesia

Country	Project
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	
FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific islands region and tropical Australia
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities
HORT/2008/011	Strategies for using floriculture to improve livelihoods in Indigenous Australian and Pacific island communities
PC/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production
PC/2012/050	Developing capacity to assess and disseminate high-quality cocoa in the Pacific islands
PC/2012/049	Assessing next steps in developing a commercial fruit sector in Tonga
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/2007/072	Postgraduate Scholarship Scheme for University of South Pacific, Fiji
PC/2004/063	Integrated pest management in a sustainable production system for Brassica crops in Fiji and Samoa
India	
ADP/2011/021	An extension of research on Indian agricultural markets and competition issues
ADP/2010/008	Capturing the potential for greenhouse gas offsets in Indian agriculture
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/2006/071	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
LWR/2010/033	Developing capacity in cropping systems modelling to promote food security and the sustainable use of water resources in southern Asia
LWR/2010/015	Improved village-scale groundwater recharge and management for agriculture and livelihood development in India

Country	Project
	LWR/2007/113 Impacts of climate change and watershed development (WSD) 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/2012/006	Eastern Indonesia agribusiness development opportunities—analysis of mango value-chains
AGB/2012/005	Eastern Indonesia agribusiness development opportunities—analysis of beef value-chains
AGB/2011/010	Improving milk supply, competitiveness and livelihoods in smallholder dairy chains in Indonesia
AGB/2010/018	The effect of research on agricultural productivity in Indonesia
AH/2012/036	Rabies risk assessment in eastern Indonesia, East Timor, Papua New Guinea and northern Australia
AH/2010/039	Surveillance tools and strategies for improved control, monitoring and eradication of avian influenza in Indonesia
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
FIS/2011/038	Scoping study for fish health-mariculture and rabbitfish aquaculture development in Indonesia
FIS/2011/030	Strategic plan for ACIAR engagement in developing Indonesia's capture fisheries research and management capacity
FIS/2010/016	Application of aquaculture planning tools in Indonesia
FIS/2009/059	Developing research capacity for management of Indonesia's pelagic fisheries resources
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
FST/2011/028	Biological control of eucalypt pests overseas and in Australia
FST/2009/051	Increasing productivity and profitability of Indonesian smallholder plantations

Country	Project
	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
	HORT/2011/006 Biological control of papaya mealy bug (<i>Paracoccus marginatus</i> Hem: Pseudococcidae) in East Timor and Oriental scale (<i>Aonidiella orientalis</i> , 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/2009/056 Sustainable productivity improvements in allium and solanaceous vegetable crops in Indonesia and subtropical Australia
	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/2012/034 Use and impact of systems modelling in research for development
	LPS/2011/004 Strategies to improve Bali cattle productivity in East Timor
	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/2006/003 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-eastern Asia
	SMAR/2008/021 Spiny lobster aquaculture development in Indonesia, Vietnam and Australia
	SMAR/2007/203 Integrated tropical passionfruit production systems in South Sulawesi
	SMAR/2007/202 Benchmarking the beef supply chain in eastern Indonesia

Country	Project
	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/2010/090 Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production
	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/2011/009 Defining intervention points for improving Lao People's Democratic Republic (PDR) extension
	ASEM/2010/059 Overview of smallholder fish livelihoods in Lao PDR
	ASEM/2009/055 Facilitating livelihood adaptation to natural resource pressures in Lao PDR
	ASEM/2009/039 Agricultural policies affecting rice-based farming systems in Cambodia, Lao PDR and Bangladesh
	ASEM/2009/023 Developing agricultural policies for rice-based farming systems in Lao PDR and Cambodia
	ASEM/2006/060 Lao Agricultural Research Fund (LARF)
	AH/2009/001 Increased productivity and reduced risk in pig production and market. Component 1: animal and human health
	AH/2006/159 Best practice health and husbandry of cattle and buffalo in Lao PDR
	AH/2006/025 Understanding livestock movement and the risk of spread of trans-boundary animal diseases
	CSE/2009/004 Developing improved farming and marketing systems in rainfed regions of southern Lao PDR
	CSE/2006/041 Increased productivity and profitability of rice-based lowland cropping systems in Lao PDR

Country	Project
	FIS/2011/072 Pilot study for development of fish-friendly irrigation and mini-hydro design criteria for application in the Mekong and Murray–Darling Basins
	FIS/2011/013 Culture-based fisheries development in Lao PDR and Cambodia
	FIS/2009/041 Development of fish-passage technology to increase fisheries production on floodplains in the lower Mekong and Murray–Darling river basins
	FST/2010/012 Enhancing key elements of the value-chains for plantation-grown wood in Lao PDR
	FST/2004/057 Enhancing on-farm incomes through improved silvicultural management of teak and paper mulberry plantations in Luang Prabang province of Lao PDR
	HORT/2012/027 Establishing a remote microscope network for pest identification in Cambodia, Lao PDR and Thailand
	SMCN/2010/084 Scoping study to assess needs and options to redevelop NAFRI's analytical laboratory
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
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
	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
	LPS/2010/007 Strengthening dairy value-chains in Pakistan through improved farm management and more effective extension services

Country	Project
Papua New Guinea	
ASEM/2012/046	Market diversification and sweetpotato processing in Papua New Guinea: a pre-feasibility study
ASEM/2011/048	An integrated approach for systemic change and sustained development of the Papua New Guinea sweetpotato value-chain
ASEM/2010/053	Enhancing role of small-scale feed milling in the development of the monogastric industries in Papua New Guinea
ASEM/2010/052	Examining women's business acumen in Papua New Guinea: working with women smallholders in horticulture
ASEM/2009/042	Improving women's business acumen in Papua New Guinea: working with women smallholders in horticulture
ASEM/2008/036	Improving livelihoods of smallholder families through increased productivity of coffee-based farming systems in the highlands of Papua New Guinea
ASEM/2006/127	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/2005/094	Improving the profitability of village broiler production in Papua New Guinea
AH/2012/036	Rabies risk assessment in eastern Indonesia, East Timor, Papua New Guinea and northern Australia
AH/2006/157	Animal health surveillance systems for Papua New Guinea
FIS/2011/071	Scoping potential livelihood benefits and costs of sport fisheries in Papua New Guinea
FIS/2011/049	Evaluation of the potential for commercial aquaculture of the freshwater prawn <i>Macrobrachium rosenbergii</i> in Papua New Guinea
FIS/2010/054	Mariculture development in New Ireland, Papua New Guinea
FIS/2010/035	Asia-Pacific tropical sea cucumber aquaculture research symposium
FIS/2010/017	Building mariculture capacity in 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/2011/058	Facilitating the establishment of charcoal producer groups in Papua New Guinea
FST/2010/044	Community forestry in Papua New Guinea
FST/2010/013	Developing markets and products for the Pacific island and Papua New Guinea <i>Canarium</i> nut industry
FST/2009/016	Improving the Papua New Guinea balsa value-chain to enhance smallholder livelihoods

Country	Project
	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/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/2012/053 Feasibility study on novel lures for pest fruit flies that are non-responsive to known male attractants
	PC/2011/056 Identifying potential vectors of Bogia Coconut Syndrome in Madang province, Papua New Guinea
	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 <i>Ganoderma</i> in Solomon Islands
	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/2004/067 Soil fertility management in the Papua New Guinea highlands for sweetpotato-based cropping systems

Philippines

	ASEM/2011/061 Institutional mentoring of the Landcare Foundation of the Philippines
	ASEM/2011/050 Opportunities to improve climate-risk management for smallholder farmers in the Philippines: a scoping study
	ASEM/2010/050 Improving watershed rehabilitation outcomes in the Philippines using a systems approach
	AH/2009/022 Improved investigation, diagnosis and technical support for the control of respiratory diseases of pigs in the Philippines and Australia
	FIS/2012/037 Preliminary trials on giant grouper maturation, spawning and juvenile production in Vietnam, the Philippines and Australia
	FIS/2011/031 Coral reef restoration using mass coral larval reseedling
	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/2007/067 Improved domestic profitability and export competitiveness of selected fruit value chains in the southern Philippines and Australia

Country	Project
	HORT/2007/066 Enhanced profitability of selected vegetable value-chains in the southern Philippines and Australia program
	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

Samoa

FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific islands region and tropical Australia
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities
PC/2012/050	Developing capacity to assess and disseminate high-quality cocoa in the Pacific islands
PC/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production
PC/2010/063	Feasibility study on increasing the consumption of nutritionally rich leafy vegetables by Indigenous communities in Samoa, Solomon Islands and northern Australia
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/2004/063	Integrated pest management in a sustainable production system for brassica crops in Fiji and Samoa

Solomon Islands

FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific islands region and tropical Australia
FST/2009/062	Development of advanced veneer and other products from coconut wood to enhance livelihoods in south Pacific communities
FST/2007/020	Improving silvicultural and economic outcomes for community timber plantations in Solomon Islands by interplanting with <i>Flueggea flexuosa</i> and other Pacific agroforestry species
HORT/2008/011	Strategies for using floriculture to improve livelihoods in Indigenous Australian and Pacific island communities
PC/2012/050	Developing capacity to assess and disseminate high-quality cocoa in the Pacific islands
PC/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production
PC/2010/063	Feasibility study on increasing the consumption of nutritionally rich leafy vegetables by Indigenous communities in Samoa, Solomon Islands and northern Australia

Country	Project
	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 <i>Ganoderma</i> 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/2004/034	Use and impact of systems modelling in research for development
LPS/2004/022	Pasture development for community livestock production in the Eastern Cape province of South Africa

Tanzania

FIS/2011/069	Technical support for pearl culture in coastal Tanzania
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Thailand

CSE/2006/041	Increased productivity and profitability of rice-based lowland cropping systems in Lao People's Democratic Republic
HORT/2012/027	Establishing a remote microscope network for pest identification in Cambodia, Lao PDR and Thailand
HORT/2006/170	Plant biosecurity: technological research and training for improved pest diagnostics in Thailand and Australia
SMCN/2007/215	Improving the reliability of rainfed, rice–livestock-based farming systems in north-eastern Thailand

Tonga

FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific islands region and tropical Australia
PC/2012/049	Assessing next steps in developing a commercial fruit sector in Tonga
PC/2010/090	Strengthening integrated crop management research in the Pacific islands in support of sustainable intensification of high-value crop production
PC/2008/044	Pacific Agribusiness Research for Development Initiative

Tunisia

CSE/2010/043	Testing equipment and crop monitoring for conservation agriculture in North Africa
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Vanuatu

FIS/2006/138	Developing aquaculture-based livelihoods in the Pacific islands region and tropical Australia
FST/2012/010	Growth and wood properties of <i>Terminalia catappa</i> from agroforestry systems in Vanuatu
FST/2008/010	Development and delivery of germplasm for sandalwood and whitewood in Vanuatu and northern Australia

Country	Project
	FST/2005/089 Improved silvicultural management of <i>Endospermum medullosum</i> (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

ADP/2010/070	Assessing farmer responses to climate change—adjustment policy options in China and 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/2011/042	Research support to improve regional livestock biosecurity in the Mekong region
FIS/2012/037	Preliminary trials on giant grouper maturation, spawning and juvenile production in Vietnam, the Philippines and Australia
FIS/2011/073	Vietnamese molluscan biosecurity and veterinary diagnostic capacity review
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
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
SMAR/2008/021	Spiny lobster aquaculture development in Indonesia, Vietnam and Australia

Country	Project
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Zimbabwe

LWR/2011/015	Potential incentives for sustainable farming for food and water security and poverty reduction in southern Africa
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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/2010/019	Increased productivity and reduced risk in pig production and market chains. Component 2: animal production
AH/2011/040	Rapid assessment of potential benefits to human health and nutrition from research on livestock and fish market chains in Asia and Africa
ASEM/2010/051	Coffee green scales in Papua New Guinea: highland arabica coffee and yield loss
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
CSE/2009/024	Sustainable intensification of maize–legume cropping systems for food security in eastern and southern Africa (SIMLESA)
CSE/2010/022	Integrating crops and livestock for improved food security and livelihoods in rural Zimbabwe
CSE/2011/025	Adapting conservation agriculture for rapid adoption by smallholder farmers in northern Africa
FIS/2003/059	Sea-ranching and restocking sandfish (<i>Holothuria scabra</i>) in the Asia–Pacific region
FIS/2010/056	Scaling out community-based marine resource governance in Solomon Islands, Kiribati and Vanuatu
FIS/2010/057	Developing inland aquaculture in Solomon Islands
FIS/2010/058	Assessing economic and welfare values of fish in the lower Mekong Basin
FIS/2011/068	Strategy for investment in fisheries in East Timor
FSC/2012/001	A preliminary study to improve income and nutrition in eastern and southern Africa by enhancing vegetable-based farming and food systems
FSC/2012/014	Improving sustainable productivity in farming systems and enhanced livelihoods through adoption of evergreen agriculture in eastern Africa (Trees for Food Security)

Multilateral	
FSC/2012/024	Identifying socioeconomic constraints to and incentives for faster technology adoption: pathways to sustainable intensification in eastern and southern Africa
FST/2007/119	Mahogany and teak furniture: action research to improve value-chain efficiency and enhance livelihoods
FST/2010/034	Agroforestry for livelihoods of smallholder farmers in north-western Vietnam
HORT/2008/040	Integrated crop production of bananas in Indonesia and Australia
IAP/2011/070	Reducing disease risks and improving food safety in smallholder pig value-chains in Vietnam
LPS/2010/047	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
LWR/2011/074	Scoping study to assess constraints and opportunities for sustaining the tank irrigation ecosystems and smallholder livelihoods in east India and Nepal
LWR/2012/013	Investing in water management to improve productivity of rice-based farming systems in Cambodia
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/2007/111	Incursion prevention and management of coffee berry borer (CBB) in Papua New Guinea and Indonesia (South Sulawesi and Papua)
SMCN/2009/021	Climate change affecting land use in the Mekong Delta: adaptation of rice-based cropping systems (CLUES)

Appendix 5: Publications 2011–12

Code	Title	Authors	Year	Pages
Monographs				
MN 146	A guide to upland cropping in Cambodia: soybean	Stephanie Belfield, Christine Brown and Robert Martin	2011	72
MN 147	Practical methods for the quality control of inoculant biofertilisers	Rosalind Deaker, Mihály László Kecskés, Michael Timothy Rose, Khanok-on Amprayn, Ganisan Krishnen Thi Kim Cuc, Vu Thuy Nga, Phan Thi Cong, Nguyen Thanh Hien and Ivan Robert Kennedy	2011	102
MN 148	Membuat Rantai Nilai Lebih Berpihak pada Kaum Miskin: Buku Pegangan bagi Praktisi Analisis Rantai Nilai [Indonesian translation of: Making value-chains work better for the poor: a toolbook for practitioners of value-chain analysis]	M4P (Making Markets Work Better for the Poor)	2012	146
Proceedings				
PR 135	Native forest management in Papua New Guinea: advances in assessment, modelling and decision-making	Julian C. Fox, Rodney J. Keenan, Cris L. Brack and Simon Saulei (eds)	2011	201
PR 136	Asia–Pacific tropical sea cucumber aquaculture	Cathy A. Hair, Timothy D. Pickering and David J. Mills	2012	209
PR 137	Animal biosecurity in the Mekong: future directions for research and development	L.B. Adams, G.D. Gray and G. Murray (eds)	2012	114
Impact Assessment Series reports				
IAS 74	International Rice Research Institute's contribution to rice varietal yield improvement in South–East Asia	John P. Brennan and Arelene Malabayabas	2011	111
IAS 75	Extending rice crop yield improvements in Lao PDR: an ACIAR–World Vision collaborative project	David N. Harris	2011	56
IAS 76	The contribution of agricultural growth to poverty reduction	Bhajan Grewal, Helena Grunfeld and Peter Sheehan	2012	59
IAS 77	Rice–wheat cropping systems in India and Australia, and development of the 'Happy Seeder'	Clare Saunders, Lee Davis and David Pearce	2012	48

Code	Title	Authors	Year	Pages
IAS 78	A methodology for assessing the poverty-reducing impacts of Australia's international agricultural research	David Carpenter and Mark McGillivray	2012	46
IAS 79	Developing and testing a tool for measuring capacity building	Anni Dugdale, Chris Sadleir, Robin Tennant-Wood and Mark Turner	2012	36

Corporate publications

	Annual Report 2010–11	ACIAR	2011	184
	Strategic framework for international agricultural research within Australia's aid program	Ian Chubb et.al.	2011	24
	Partners in Research for Development magazine (June 2011 – August 2011, Summer 2012, 30th Anniversary 2012)	ACIAR		32/32/64
	ACIAR Annual Operational Plan 2012–13	ACIAR	2012	130
	ACIAR Annual Operational Plan 2012–13: Indonesian (24 pp.) and Vietnamese (16 pp.) translations of country extracts (online only)	ACIAR	2012	

Appendix 6: Staffing statistics

Employee numbers 2011-12

Public Service Act 1999 employee numbers (ongoing and non-ongoing)

	Ongoing staff	Non-ongoing staff	Total
Full-time			
Male	7	11	18
Female	20	6	26
Part-time			
Male	1	2	3
Female	7	1	8
Total	35	20	55

Staff turnover

ACIAR maintained good retention rates in 2011-12. Nine employees ceased employment, with three staff remaining on leave without pay. The table below shows a comparison of employee turnover over the past 4 employment periods.

	2008-09	2009-10	2010-11	2011-12
Retrenched				
Promotions/ transfers	1		1	2
End of contract		1		1
Resigned	3	3	6	5
Retired	2	3	1	1
Leave without pay	2	2	2	3
Temporary movement				
Other			1	
Total	8	9	11	12

Non-APS employees employed overseas

ACIAR employs 19 contract and locally engaged staff in Australian overseas missions to provide program support locally, as detailed below.

Post	Male	Female	Full-time	Part-time	Total
Bangkok	1	1	2	0	2
Beijing	1	0	1	0	1
Hanoi	2	2	3	1	4
Jakarta	1	3	4	0	4
Manila	1	2	3	0	3
New Delhi	1	2	2	1	3
Port Moresby	0	2	2	0	2
Total	7	12	17	2	19

Classification structure

ACIAR employees by broadband (excludes LWOP)

ACIAR broadband	APS classification	Employees by classification	Ongoing	Non-ongoing	Female	Male
Band 4	EL 2	1	1	0	0	1
Band 3	EL 1	9	9	0	6	3
Band 2	APS 6	5	5	0	5	0
	APS 5	4	4	0	2	2
	APS 4	19	13	6	17	2
Band 1	APS 3	1	1	0	0	1
	APS 2	No employees at this level				
	APS 1	No employees at this level				

Research Program Manager structure

ACIAR broadband	APS classification	Employees by classification	Ongoing	Non-ongoing	Female	Male
Band 4	EL2—RPM	15	1	14	3	12

Appendix 7: Compliance checklist

Part of report	Description	Requirement	Page #
	Letter of transmittal	Mandatory	iii
	Table of contents	Mandatory	v
	Index	Mandatory	188
	Glossary	Mandatory	190
	Contact officer(s)	Mandatory	ii
	Internet home page address and internet address for report	Mandatory	ii
Review by Secretary		Mandatory	
	Review by departmental secretary	Mandatory	5
	Summary of significant issues and developments	Suggested	6
	Overview of department's performance and financial results	Suggested	6, 9
	Outlook for following year	Suggested	9
	Significant issues and developments—portfolio	Portfolio departments—suggested	6
Departmental overview		Mandatory	
	Role and functions	Mandatory	55
	Organisational structure	Mandatory	165
	Outcome and program structure	Mandatory	166
	Where outcome and program structures differ from Portfolio Budget Statements / Portfolio Additional Estimate Statements or other portfolio statements accompanying any other additional appropriation bills (other portfolio statements), details of variation and reasons for change	Mandatory	N/A
	Portfolio structure	Mandatory for portfolio departments	54
Report on performance		Mandatory	
	Review of performance during the year in relation to programs and contribution to outcomes	Mandatory	12
	Actual performance in relation to deliverables and KPIs set out in Portfolio Budget Statements / Portfolio Additional Estimate Statements or other portfolio statements	Mandatory	134

Part of report	Description	Requirement	Page #
	Where performance targets differ from the Portfolio Budget Statements / Portfolio Additional Estimate Statements, details of both former and new targets, and reasons for the change	Mandatory	N/A
	Narrative discussion and analysis of performance	Mandatory	12
	Trend information	Mandatory	6
	Significant changes in nature of principal functions/services	Suggested	N/A
	Performance of purchaser/provider arrangements	If applicable, suggested	65
	Factors, events or trends influencing departmental performance	Suggested	6
	Contribution of risk management in achieving objectives	Suggested	62
	Social inclusion outcomes	If applicable, mandatory	159
	Performance against service charter customer service standards, complaints data and the department's response to complaints	If applicable, mandatory	N/A
	Discussion and analysis of the department's financial performance	Mandatory	66
	Discussion of any significant changes from the prior year, from budget or anticipated to have significant impact on future operations	Mandatory	6
	Agency resource statement and summary resource tables by outcomes	Mandatory	166

MANAGEMENT ACCOUNTABILITY

Corporate governance

	Agency heads required to certify that their agency complies with the Commonwealth Fraud Control Guidelines	Mandatory	64
	Statement of the main corporate governance practices in place	Mandatory	54
	Names of the senior executive and their responsibilities	Suggested	57
	Senior management committees and their roles	Suggested	62
	Corporate and operational planning and associated performance reporting and review	Suggested	128
	Approach adopted to identifying areas of significant financial or operational risk	Suggested	62
	Policy and practices on the establishment and maintenance of appropriate ethical standards	Suggested	63

Part of report	Description	Requirement	Page #
	How nature and amount of remuneration for SES officers is determined	Suggested	55
External scrutiny			
	Significant developments in external scrutiny	Mandatory	62
	Judicial decisions and decisions of administrative tribunals	Mandatory	62
	Reports by the Auditor-General, a Parliamentary Committee or the Commonwealth Ombudsman	Mandatory	63
Management of Human Resources			
	Assessment of effectiveness in managing and developing human resources to achieve departmental objectives	Mandatory	158
	Workforce planning, staff turnover and retention	Suggested	158
	Impact and features of enterprise or collective agreements, individual flexibility arrangements (IFAs), determinations, common law contracts and AWAs	Suggested	159
	Training and development undertaken and its impact	Suggested	159
	Work health and safety performance	Suggested	159
	Productivity gains	Suggested	159
	Statistics on staffing	Mandatory	184
	Enterprise or collective agreements, IFAs, determinations, common law contracts and Australian Workplace Agreements (AWAs)	Mandatory	159
	Performance pay	Mandatory	55, 159
Assets management	Assessment of effectiveness of assets management	If applicable, mandatory	N/A
Purchasing	Assessment of purchasing against core policies and principles	Mandatory	65
Consultants	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.	Mandatory	65

Part of report	Description	Requirement	Page #
Australian National Audit Office Access Clauses	Absence of provisions in contracts allowing access by the Auditor-General	Mandatory	62
Exempt contracts	Contracts exempt from the AusTender	Mandatory	65
Financial Statements	Financial Statements	Mandatory	69

Other mandatory information

	Work health and safety (section 74 of the <i>Work Health and Safety Act 1991</i>)	Mandatory	159
	Freedom of information for the period 1 July 2010 to 30 April 2011 inclusive (see terms of subsection 8(1) of the <i>Freedom of Information Act 1982</i> as it existed prior to 1 May 2011)	Mandatory	160
	Advertising and Market Research (Section 311A of the <i>Commonwealth Electoral Act 1918</i>) and statement on advertising campaigns	Mandatory	66
	Ecologically sustainable development and environmental performance (Section 516A of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>)	Mandatory	160
	Compliance with the agency's obligations under the <i>Carer Recognition Act 2010</i>	If applicable, mandatory	66
	Grant programs	Mandatory	159
	Disability reporting—explicit and transparent reference to agency-level information available through other reporting mechanisms	Mandatory	160
	Information Publication Scheme statement	Mandatory	N/A
	Correction of material errors in previous annual report	If applicable, mandatory	186
	List of Requirements	Mandatory	159

LIST OF ACRONYMS AND ABBREVIATIONS

ACIAR	Australian Centre for International Agricultural Research
AIFSC	Australian International Food Security Centre
ANAO	Australian National Audit Office
AOP	Annual Operational Plan (of ACIAR)
APS	Australian Public Service
APSIM	Agricultural Production System Simulator
ASLP	Agriculture Sector Linkages Program (Australia–Pakistan)
ATSE	Academy of Technological Sciences and Engineering (Australia)
AusAID	Australian Agency for International Development
CAPF	Comprehensive Aid Policy Framework
CAVAC	Cambodian Agriculture Value-chain (program)
CEO	Chief Executive Officer
CGIAR	Consultative Group on International Agricultural Research
CIFOR	Center for International Forestry Research
CIMMYT	International Maize and Wheat Improvement Center (Mexico)
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
DAFF	Department of Agriculture, Fisheries and Forestry (Australia)
DFAT	Department of Foreign Affairs and Trade (Australia)
FAO	Food and Agriculture Organization (of the United Nations)
FMA Act	Financial Management and Accountability Act 1997
FMOs	Finance Minister's Orders
FOI	freedom of information
FTE	full-time equivalent (staff)
IARCs	International Agricultural Research Centres
ICARDA	International Center for Agricultural Research in the Dry Areas (Syria)
ICM	integrated crop management
ICRISAT	International Crop Research Institute for the Semi-arid Tropics (India)
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute (USA)
INDOVETPLAN	Indonesian Veterinary Plan
IPM	integrated pest management
IRRI	International Rice Research Institute (Philippines)
IUU	illegal, unreported and unregulated (fishing)
KPI	key performance indicator
LARF	Lao Agricultural Research Fund
MDGs	Millennium Development Goal
NARS	National Agricultural Research Systems
NGO	non-government organisation
ODA	official development assistance
ODE	Office of Development Effectiveness
OIE	World Organisation for Animal Health

PNG	Papua New Guinea
R&D	research and development
RPM	Research Program Manager
SES	Senior Executive Service (of APS)
SMAR	Support for Market-Driven Adoptive Research
SME	small-medium enterprise
SoL	Seeds of Life (program)
Unitech	University of Technology (PNG)
USP	University of the South Pacific
WHS	workplace health and safety
WSD	watershed development
WTO	World Trade Organization

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