Dear Mr Farmer,

Independent Review of the Australian Centre for International Agricultural Research

The University of Sydney is very pleased to provide input to the first independent review of the Australian Centre for International Agricultural Research (ACIAR) in more than a decade.

Our submission comprises this covering letter and substantive input from the following areas of the University that have close associations with, or keen interests in the ACIAR, its programs, processes and objectives:

- Our International Portfolio (Appendix 1)
- The Faculty of Agriculture and Environment (Appendix 2)
- The Faculty of Veterinary Science (Appendix 3)
- The School of Geosciences within the Faculty of Science (Appendix 4)
- The Sydney Medical School (Appendix 5)
- The Sydney Emerging Infections and Biosecurity Institute (SEIB) (Appendix 6 and submitted separately)
- Our Office of General Counsel (Appendix 7)

Our Research Portfolio, which is closely involved with ACIAR project development, contract negotiations, administration and reporting, has also contributed data and other information referred to below.

The University has had a long and significant association with the ACIAR over many years; leading or partnering in collaborative research, development and capacity building projects across the region that have served to alleviate poverty in diverse and innovative ways.
The University's statement of purpose reads:

“We aim to create and sustain a university in which, for the benefit of both Australia and the wider world, the brightest researchers and the most promising students, whatever their social or cultural background, can thrive and realise their full potential.”

There are many synergies between ACIAR’s key objectives relating to food security and economic development, and the University’s strategic focus on research and education that make lasting differences in the Asia Pacific region and beyond.

Since 2004 University of Sydney academics from our faculties of Agriculture and Environment, Veterinary Science and our School of Geosciences have led some 32 ACIAR funded projects, and partnered in many more. A sampling of recent University-led project titles suggests the diversity and importance of the activity, both in terms of the challenges being addressed and the countries involved:

- “Improving productivity and profitability of smallholder shrimp aquaculture and related agribusiness in Indonesia”
- “Best practice health and husbandry of cattle and buffalo in Lao”
- “Monitoring mycotoxins and pesticides in grain and food production systems for risk management in Vietnam and Australia”
- “Cost effective biosecurity for non-industrial commercial poultry in Indonesia”
- “Strengthening food security through family poultry and crop integration in Eastern and Southern Africa”
- “Extension methodologies for smallholder producers of cocoa and other tree crops in the Pacific”

Without the more than $14 million in funding provided by ACIAR for projects such as these over this period, it is doubtful that the research would have occurred. While the outcomes from such projects have been important in addressing what are often local as well as international challenges, ACIAR has also played a critical role in initiating new research partnerships, strengthening existing linkages, fostering lasting people-to-people and organisational relationships, building capacity in communities in the region, and sustaining capacity in Australia’s education and research organisations. In addition to the input provided by our faculties and schools, we would briefly emphasise the following points.

The fundamental importance of building capacity in the target countries

As the Colombo Plan demonstrated, providing education, training and experience is the key to cementing strong relationships between Australia and our region. ACIAR already funds some scholarships for PhD study, and leadership awards for training here and in-country. The long term dividend from a relatively modest additional investment in capacity and relationship building would be substantial. We recommend that the Review Panel consider initiatives such as:

a. A larger ACIAR PhD scholarships program with opportunities for two way exchange of students participating in ACIAR projects.

b. Work based placements “internships” - funding for students in animal science, veterinary science, agriculture and other disciplines, to undertake fieldwork based
placements as part of ACIAR projects. Participants would contribute to the projects, and greatly expand the range of Australian professionals with links, understanding and capacity to partner in our region.

c. Funding for postgraduate coursework “interns” to undertake a year of work/research with an ACIAR project, e.g. for students in agriculture, human or veterinary public health management programs. ACIAR currently provides some capacity in this area but there is great potential to do more. Such interns provide a valuable future resource for ACIAR, its research partners and communities, and help guarantee a succession of young scientists with hands-on experience in developing countries.

Supporting such initiatives would come at a relatively small cost, but would add substantially to the impact of existing and new ACIAR projects. The emphasis would be on bringing students to Australia for a period and sending Australian students to participate in ACIAR projects overseas to develop language, cultural and professional skills in-country. This would build long term relationships of respect and collaboration and be consistent with strategies proposed by the Minister for Tertiary Education, Science and Research following the release of the Asian Century White Paper.

Supporting cross-sectoral, multi-disciplinary “One Health” approaches

As the Sydney Medical School (Appendix 5) and its Sydney Emerging Infections and Biosecurity Institute (SEIB) (Appendix 6) emphasise in their respective submissions, addressing poverty is a complex process, requiring multi-factorial and cross-disciplinary approaches to the challenges faced by communities in developing regions. Using case studies and other evidence, the SEIB submission makes a strong case for enabling ACIAR to broaden its remit to collaborate with other agencies to foster research and development projects that seek to improve the health of human and animal populations and the environment simultaneously. The proposed approach would be based on the need to ensure productive crop and animal agriculture/aquaculture systems in order to provide food security and improve economic sufficiency, but also on recognition that such outcomes are most likely in communities where people, animals and environment are healthy. We commend these suggestions to the Panel.

Streamlining administration and simplifying contracting

While most of the appended submissions are generally positive about the efficiency of ACIAR’s operations compared to other agencies, they also make some practical suggestions about areas for improvement. Both our faculties of Agriculture and Veterinary Science emphasise the desirability of allowing more ACIAR project funding to support the salaries of dedicated project managers to deal with paperwork, budgets, ethics approvals and other administrative requirements, freeing up the time of academic staff to focus on the research and implementation. This warrants serious consideration. It does not seem efficient to have a large amount of academic staff time consumed by project administration.

As an administrating organisation for many ACIAR grants the University is required under the terms of the ACIAR “Standard Conditions for Project Agreements” to enter into agreements with all collaborating organisations, many of which are organisations based overseas. Given the often large number of parties, the range of organisations and international locations, cultural differences, the
complexity of issues and resulting communication issues that must be overcome, putting these agreements in place takes significant time and resources from all parties. The more complex and onerous ACIAR’s standard conditions are, the more difficult the task of establishing the collaboration agreements becomes. In Appendix 7 our Office of General Counsel has provided comment on these issues and provided suggestions for improvement. We would be keen to continue to work with ACIAR and other stakeholders to further simplify and streamline its contractual and administrative requirements.

In conclusion, the University of Sydney believes that ACIAR has played, and must continue to play, a critical role in Australia’s approach to foreign aid and capacity building initiatives for poverty alleviation through improved food security and sustainable economic development. Through its work over many decades ACIAR has also played a vital role in strengthening the quality of Australia’s organisational and people-to-people links with the developing world. The population and environmental challenges the world faces are significant and incredibly complex. As the attached submissions from experts in our faculties and schools directly involved with ACIAR projects suggest, addressing these challenges will require long term cross-disciplinary approaches and multi-sectoral partnerships supported by adequate resources. We trust that the Review will result in outcomes that allow ACIAR to build on its achievements to date to ensure that in the future Australia makes an even stronger contribution to the alleviation of poverty the Asia Pacific region and beyond.

Given the breadth and depth of the University’s relevant research expertise and its long history of collaboration with ACIAR, if the Review Panel saw value in doing so, we would be delighted to host it for a visit on campus for a roundtable discussion with staff from the various faculties, schools and other areas who have contributed to the preparation of the appended submissions. If you would like to hold such discussions, please contact Jane Oakeshott, Senior Adviser, Government Relations in my office (jane.oakeshott@sydney.edu.au, 02 9036 5273).

Yours sincerely

(Signature removed for electronic distribution)

Michael Spence

Appendices          PDF page reference
1 International Portfolio submission                               5-6
2 Faculty of Agriculture and Environment submission         7-10
3 Faculty of Veterinary Science submission                                                  11-14
4 School of Geosciences submission                                                            15-16
5 Sydney Medical School submission                                                            17-18
6 Sydney Emerging Infections and Biosecurity Institute submission             19-23
7 Summary of Office of General Counsel advice on contractual matters       24
Submission to the External Review of the
Australian Centre for International Agricultural Research (ACIAR)

Thank you for the opportunity to contribute to the External Review of the Australian Centre for International Agricultural Research (ACIAR) to assess ACIAR’s appropriateness, effectiveness and efficiency in response to the changing global context.

Our submission does not directly address the three questions raised in the Review’s Terms of Reference; rather it comments on ACIAR’s strategic role in Australian’s international efforts to build multilateral partnerships that can effectively address poverty alleviation and improve rural livelihoods.

The International Portfolio has a longstanding partnership with ACIAR in accordance with its mandate to facilitate university-wide engagement with international agencies and government departments. Over the last year, this engagement has centered on the establishment of the Australia International Food Security Centre (AIFSC) and the Australia-Africa Universities Network (AAUN).

The model ACIAR has utilised through the AIFSC in centralising efforts around the priority needs of in-country partners is a welcome initiative and an excellent model for sustainability and productive and lasting relationships. The focus on people-centred impact, where ACIAR targets its support at the community level, also underpins initiatives to overcome poverty, and this should continue in future programs.

We note that the regional spread of ACIAR activities is well aligned with the current aid program and Australia’s Comprehensive Aid Policy Framework to 2015-16 (CAPF). We commend AusAID for its Framework and believe it provides a strong basis for demonstrating the linkages between ACIAR’s poverty reduction programs in improving livelihoods and sustainable agriculture within the Framework.

In Africa, we have seen real opportunities to contribute to ACIAR’s expanding program of engagement through the Australia-Africa Universities Network (AAUN). Led by the undersigned Professor John Hearn from the University of Sydney and Professor Cheryl de la Rey from the University of Pretoria, the network foster the growing relationship between Australia and Africa by building on current educational links between the two continents.

Food security is one of AAUN’s five priority themes. The planned establishment of a development fund to catalyse collaborations between African and Australian universities within this theme will be an important milestone to enable international knowledge transfer and capacity development. We hope it can also provide guidance and support to ACIAR’s continued operations in the future.

In conclusion, we recognise the complexities of today’s global environmental challenges. The questions facing international agricultural research are multi-faceted, and we strongly believe cross-disciplinary approaches and cross-sectoral alliances are required to find sustainable solutions.

Should you wish to discuss any aspect of the submission, please feel free to contact the following:

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For matters of International Portfolio engagement with ACIAR;

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For matters regarding AAUN;

Prof John Hearn  
Deputy Vice-Chancellor (International), University of Sydney  
Chief Executive, World University Networks  
Phone +61 2 9351 4461; email: john.hearn@sydney.edu.au

Yours sincerely,

[Signature]

Professor John Hearn  
Deputy-Vice Chancellor (International)
Professor Mark Adams  
Dean, Faculty of Agriculture and Environment

28 November 2012

External Review of Australian Centre for International Agricultural Research

Submission from Faculty of Agriculture and Environment, The University of Sydney

Objective

“To examine the appropriateness, effectiveness and efficiency of the Australian Centre for International Agricultural Research and make recommendations for improvements.”

Focus

“Within the context of ACIAR’s enabling legislation, the review will focus on:

1. the appropriateness of ACIAR’s goals and strategies in supporting the fundamental purpose of Australian aid, namely, helping people overcome poverty;”

Poverty alleviation means improving access to food, housing, education and health services. ACIAR supports poverty alleviation directly by commissioning research partnerships that sustainably increase food production, and generate wealth through increasing the yields, quality and profitability of agricultural commodities. ACIAR’s focus on agriculture is appropriate, given that food security is the first step towards poverty alleviation, and provides a platform for other programs to build on.

Our projects in Indonesia, Vietnam, PNG, China and the Philippines have realised tangible benefits for smallholder farmers that are indicated by improved nutrition, housing, health, education and increased discretionary spending (such as purchases of electronic goods, donations to churches, increased participation in Haj pilgrimages etc.).

Our current project in Sulawesi aims to improve the productivity of cocoa farmers, and we are using our networks there to assist with the delivery of health services under a separate AusAID-funded partnership with the Faculties of Medicine and Veterinary Science.
While training and extension is not seen as part of ACIAR’s mandate for research and development, some activities can be included in projects if part of a larger scientific study. However extension services in most countries are increasingly morbid and underfunded and a gap is widening between research outcomes and farmer practice. Perhaps communication of research outcomes to farmers should be given greater emphasis? Perhaps ACIAR could take a greater role in supporting extension programs aimed at increasing adoption of research outcomes?

This is why ACIAR’s expanding role in supporting the Australian Government’s substantial commitment to assist African countries achieve lasting food security through its involvement in running the Australian International Food Security Centre, could not have come at a better time. The emphasis on building nexus between research and practice through effective extension activities based on innovative knowledge mining and community engagements should be supported and promoted.

Tensions with ACIAR’s mandate have been created when ACIAR has been asked to prioritise research programs proposed for political rather than scientific reasons. Often these activities are tied to delivering AusAID-funded programs, rather than through brokering scientific partnerships that address needs identified through regular consultation. While ACIAR’s activities should support Australia’s foreign policy objectives, projects should be developed where research partnerships deliver the greatest potential benefits to poverty alleviation.

Further tensions may arise when the balance of project activities appears to support research that would otherwise be considered a “core” responsibility of State departments that produces little obvious benefit to the partner country. To some extent this is a consequence of expectations arising from the significant in-kind support provided to ACIAR projects by Universities, State Government departments and CSIRO, and support to Australian researchers is essential to provide opportunities for new research and capacity building, and to secure ongoing commitments.

A similar tension arises from the allocation of funds to the International Agricultural Research Centres. Not all IARCs are the same, and at least one beneficiary of ACIAR funding operates more as a commercial consultancy than as an IARC.

Flexibility is a key to ACIAR’s success, however transparency in budget allocations within and across programs might alleviate these tensions.

2. “ACIAR’s effectiveness in improving livelihoods through more-productive and sustainable agriculture, and in achieving intermediate knowledge generation and capacity building outcomes; and”

Our project in Vietnam assisted farmers in the Mekong to transform rice paddies to high-value tropical fruits. In many countries rice farming, while seen as a key to food security, is a poverty trap for farmers constrained by capped market prices, high costs and low profit margins. Fruit crops, on the other hand, are not regulated and provide much higher incomes. Over the course of our project there
in 1999-2003 participating farmers built new houses, acquired new motorcycles and appeared to access health and education services.

ACIAR’s partnership model supports team building within projects and capacity building more widely. In our recent Philippines project (HORT/2007/067/2), one of our project leaders emerged with multiple awards from her university, PCARRD and other agencies for the work undertaken in our project. She is now undertaking a postdoc in the USA before joining other projects. This project also developed collaborations between scientists and industry stakeholders that will guide further research and development in the high-value tropical fruit industry there.

We have been fortunate to supervise postgraduate students who have received John Allwright Fellowships. JAFs allow students to participate in ACIAR projects while studying for a higher degree. This arrangement supports both the project and the student by enabling deeper, more fundamental studies that complement the applied aspects of projects. Training in Australia, particularly if combined with field trips to project sites, lays a solid foundation for ongoing collaborations beyond the tenure of specific projects.

Our ACIAR projects have been the start of a number of continuing collaborations in many countries including Thailand, Vietnam, Indonesia, PNG and the Philippines. In 2011 participants of one of Professor Guest’s projects in Thailand and Vietnam that ran from 1999-2003 travelled to the Philippines at their own cost to contribute to another ACIAR workshop there. This has led to further exchanges of information and networking. Partners in former ACIAR projects have since become collaborators in other projects funded by a range of national and international agencies, and corporations.

“3. the efficiency of ACIAR’s operations and arrangements for managing research programs and building capacity, including internal capability and systems, risk management, performance oversight, and transparency.”

ACIAR maintains a lean corporate profile that provides two great advantages over related organisations. Firstly, administrative overheads are minimised so that more funds are available for research. Secondly, reporting and compliance workloads on project staff are minimised, enabling project staff to focus on project activities. ACIAR achieves this through the partnership model that involves RPMs and their assistants, the commissioned agency and research partners. This model provides flexibility and close communication, alleviating the need for micromanagement and excessive reporting.

The project development process is an excellent example of how the partnership model works. ACIAR RPMs identify potential Australian and partner collaborators and work with them to prepare the project document and budget. A limitation of this model is that it may preclude the recruitment of young project staff, however careful management of training and succession planning can provide the required experience for younger project staff to develop into project leaders.

ACIAR projects require a significant commitment to manage research partnerships, funds, travel and training activities. In some cases a Project Manager can be resourced from the project budget, maximising the benefits of
the partnership. ACIAR-funded project managers facilitate the participation of university academics in ACAIR projects when their other commitments to teaching, research and administration would otherwise preclude their involvement.

One of the highlights of the ACIAR operations has been the recruitment of graduate interns to assist with project development and program management. Not only do these internships provide a valuable resource for ACIAR, they help guarantee a succession of young agricultural scientists with hands-on experience in developing countries.
Submission to Review of the Australian Centre for International Agricultural Research (ACIAR) and how it will continue to operate in the future, November 2012

The Faculty of Veterinary Science has worked closely with ACIAR for many years, with a number of current ACIAR-funded projects working on a range of food security issues, mainly located in Indonesia, Cambodia, Laos and Pakistan, although there has been a new initiative to commence work in Africa. Within the context of ACIAR’s enabling legislation, this review is to focus on the following 3 key questions. Comments from the main project leaders and staff involved in ACIAR projects (Professors Peter Windsor, Richard Whittington and Michael Ward, Dr Russell Bush and A/Professors Robyn Alders and Jenny-Ann Toribio) are delivered below.

1. The appropriateness of ACIAR's goals and strategies in supporting the fundamental purpose of Australian aid, namely, helping people overcome poverty;

ACIAR has a critical role in capacity building for future poverty alleviation, food security, food safety/quality and strengthening of Australian relationships in the developing world. The goals of ACIAR are sound especially for countries in our region. Politicisation of geographic focus in recent times has raised questions about the potential for effective outcomes as a relatively small national budget allocated for projects is spread even thinner globally. Despite this, where ACIAR projects have been delivered successfully, there is very high regard for the ACIAR brand, particularly as there has been more emphasis in recent years on capacity building of applied research and the impact and sustainability of projects. In our experience, stakeholders from across a broad spectrum of the food security community, from smallholder farmers through to high level government officials, are well aware of the importance of ACIAR research in assisting national institutions help their people address rural poverty. It is the focus of ACIAR projects in capacity building research for sustainable rural development that is contributing most to the recognition of the ACIAR brand.

ACIAR has endeavoured to support long-term and meaningful engagements and this should continue. To achieve significant impacts with sustainable adoption pathways, it is important that as many of the key national (i.e. government and private sector agricultural services in addition to national agricultural research organisations) and regional stakeholders (i.e. regional economic communities in addition to multilateral agencies) are closely associated with the development, implementation and scaling out of the project. The ability of research findings to contribute to positive impacts is facilitated by undertaking the research within the regulatory and administrative environment in which...
the findings are to be applied. It is considered appropriate that ACIAR projects engage with national agencies beyond the national agricultural research systems whenever appropriate.

Good R&D requires resources and it is important for donors, government and the private sector to invest in sound, long-term agricultural R&D. Experience of ACIAR R for D is that many modestly funded programs have led to sustainable and positive changes, particularly if they are linked to larger D programs. The ACIAR project development process requires one to think carefully about the best use of funds and identifying co-funding opportunities within existing frameworks. This approach is more likely to result in an output that is adapted to the financial and administrative system(s) in which it must continue to operate and is why if a choice is to be made between high levels of funding for short periods or moderate levels of funding for longer periods, the latter option would almost always be the best choice.

The bulk of ACIAR’s support has been directed to Asia and the Pacific and this is important considering the understandable strategic priority of the region. The number of malnourished people in Asia continues to be of concern and despite the economic gains in many regional countries, rural communities have largely been bypassed by the recent developments; an issue that ACIAR projects are helping to address. The recent return of significant investment by ACIAR for Agricultural R&D in Africa is to be lauded as many countries in Africa are also rapidly urbanising, populations are increasing and with some agro-ecological systems in Africa very similar to those in Australia, mutual benefits will flow to both Australia and the countries of Africa through collaborative agricultural research. However with the enormous growth in the other southern hemisphere continent, maintaining a watching brief on agricultural R&D in Latin America would be wise even if the amount of funding contributed to the region is minor.

2. ACIAR’s effectiveness in improving livelihoods through more-productive and sustainable agriculture, and in achieving intermediate knowledge generation and capacity building outcomes; and

The ACIAR approach is to assess the needs of stakeholders and develop appropriate strategies in order to provide solutions. There is and needs to be a reasonable amount of flexibility within project management to provide opportunities to adjust approaches in order to meet emerging issues. This is extremely important as when situations change, inflexible project management can lead to ineffective project outcomes. This has been the recent experience in Pakistan (eg buffalo dairying) and also the Mekong (eg FMD
management) where our projects required changes with a broadening of collaborators to enable a more effective learning community to be developed. The increasing emphasis on research for ‘extension’ and alignment with larger development projects to ensure key messages are disseminated to a broader community, is proving to be very effective in achieving intermediate knowledge generation and capacity building outcomes. The importance of capacity building and inclusion of training programs in-country to enable field research to occur is emphasised. In addition, there is an increasing need for provision of additional resources for postgraduate training of students from recipient countries in Australia, plus support for placement of Australian students for collaborative learning with in-country students working within ACIAR projects. Australian students from this Faculty are generally very keen to contribute to ACIAR projects and have made substantial contributions, mostly providing their own funds to do this.

Sustainable agriculture is built upon healthy agricultural, ecological, cultural, and administrative systems which all need to function efficiently and effectively. Consequently, the composition of the R for D team should reflect this complexity by including where appropriate, value chain specialists, ecologists, anthropologists and gender specialists, in addition to those from more commonly recognised or traditional agricultural disciplines (including the farmers themselves). ACIAR may wish to consider placing more emphasis on systems analysis and social aspects of agriculture as it moves into its next phase. Gender is regularly included in programs as a cross cutting issue but does not always receive the attention it deserves; inclusion of gender experts or social anthropologists in project teams would help to address this situation.

Agricultural R&D is a complex process of continuous community learning and very significant contributions have frequently be made because the work of a committed team of folk that involved long term partnerships was enabled to flourish over decades. Research teams really do need time to learn together and to share the failures as well as the successes, building strong trusting partnerships that can make huge contributions to capacity building with support and mentorship that continues well beyond the initial aims of the project. ACIAR has an excellent track record in supporting enduring and productive partnerships that have led to significant research outcomes. The control of Newcastle disease (ND) in village chickens is an example that has spanned over 20 years and is now yielding remarkable results in many countries, especially in Sub-Saharan Africa.
3. The efficiency of ACIAR’s operations and arrangements for managing research programs and building capacity, including internal capability and systems, risk management, performance oversight, and transparency.

The process for applying for and administering ACIAR grants is clear and although prolonged with Phase 1 and Phase 2 processes, generally efficient. However ACIAR research projects require a great deal of administration. This aspect seems to be competent and efficient within ACIAR despite the enormous number of projects that are required to be managed by ACIAR research program managers (RPM). With the apparent expansion of work-loads of the RPM’s, to enable ACIAR personnel to achieve sustainable work levels, the creation of additional professional positions across the spectrum of research areas may be beneficial.

For the Australian service providers, there is increasing recognition of the need for a dedicated full time project manager to deal with the paperwork, budgets, ethics approvals and other administrative processes in managing ACIAR projects. The costs of the latter are seldom adequately met from project funds and project sustainability is an increasing concern as Australian service providers are increasingly placed under financial stresses and are forced to move towards full cost recovery. However working in the aid arena provides ample opportunity to compare the approach of ACIAR with other global aid development organisations, operating with considerably larger budgets. In reflection, the modest ACIAR budgets for research are possibly an advantage, as the development phase of any ACIAR project is thorough enough to produce the necessary methodological detail to ensure successful initiation and implementation. The mid-term review process ensures projects remain on track and the detailed final reporting requirement encourages the wider dissemination of information. This is valuable to not only the stakeholders directly involved in the project but to subsequent agencies that may be tempted to ‘reinvent’ the wheel. One issue is project duration, with expectations of project deliverables within 3-4 years proving to be overly optimistic. A 5 year project timeline appears more realistic for the majority of projects in our experience.
Submission to the External Review of the Australian Centre for International Agricultural Research (ACIAR)

Thank you for the opportunity to submit to the External Review of the Australian Centre for International Agricultural Research (ACIAR) to assess ACIAR’s appropriateness, effectiveness and efficiency in response to the changing global context.

Our submission does not directly address the three questions raised in the Review’s Terms of Reference; rather it articulates our strong support of ACIAR in enabling the continued conduct of international research in agriculture and related disciplines that can effectively address poverty alleviation and improve rural livelihoods.

The School of Geosciences has a longstanding and well-established collaboration with ACIAR, having conducted numerous projects in areas of our specialisation. These include projects in countries such as Indonesia, Lao PDR and Papua New Guinea (as outlined on the attached page). These projects have been important not only to address pressing international challenges; they have helped initiated new research partnerships and strengthened established ones, and enabled international knowledge transfer and capacity development. ACIAR has been an effective partner of the School in its international research endeavours and we believe it has a critical role in Australia’s aid and capacity building initiatives for future poverty alleviation, improved food security, safety and quality, and in the strengthening of Australian bi-and multilateral relationships in the developing world.

We also note and recognise the complexities of today’s global environmental challenges. The questions facing international agricultural research are multi-faceted, and we strongly believe cross-disciplinary approaches and cross-sectoral alliances are required to find sustainable solutions.

Should you wish to discuss any aspect of the submission, please feel free to contact the following:

Yours sincerely

Jonathan Aitchison
School of Geosciences
Australian Centre for International Agricultural Research (ACIAR) Projects

Prof Phil Hirsch
1997-1999 Indigenous Fisheries Management in Lao PDR (co-funded with IDRC)
1999-2001 Small-scale wetland indigenous fisheries management in Lao PDR (Co-funded with IDRC)
2009-2010 Change and adaptation in smallholder fisheries livelihoods in Lao PDR
2012-2015 Facilitating adaptation to resource pressures in Lao PDR

Our current project funding is $1.375 million June 2012 – May 2015. Our project partners are Faculties of Agriculture, Environment and Forestry at the National University of Laos and Nam Ngum River Basin Committee. From USyd other than myself Dr Yayoi Lagerqvist, and Ms Natalia Scurrah from Geosciences are working on the project, as is Assoc Prof Michael Dibley from School of Public Health.

Dr Jeff Neilson
I’ve been involved in the 5 ACIAR projects listed below. Projects 2 and 3 are large collaborative projects also involving David Guest from the Faculty of Agriculture (USYD) and researchers from La Trobe University. I am the project leader on the other 3 projects. Bill was also a CI on Project 4. These projects are all in Indonesia. My research expertise on these projects is livelihoods and value chains. ACIAR projects are distinguished from other funding agencies I have worked with by their considerable support provided to international collaborators from countries where funding can be otherwise difficult. There are also 3 postgraduate research students in the school who are being funded by ACIAR scholarships.

1. 2007-2008: Securing the profitability of the specialty coffee value chains in eastern Indonesia
2. 2007-2012: Improving cocoa production through farmer involvement in demonstration trials of potentially superior and pest/disease resistant genotypes and integrated management practices
3. 2012-2015: Improving the sustainability of cocoa production in eastern Indonesia through integrated pest, disease and soil management in an effective extension and policy environment
4. 2008-2012: Enhancing farmer engagement with specialty coffee chains in Eastern Indonesia
5. 2013-2016: Improving smallholder livelihoods and sustainability in Indonesian coffee and cocoa value chains (pending final approval)

Dr Robert Fisher
My experience with ACIAR was carried out as a consultancy for UQ and was not done as a Geosciences project, although my name was linked with Sydney on the proposal as a collaborating scientist. It was a scoping mission for a project in PNG - what ACIAR calls a Small Research Activity (SRA). The project title is "Community Forestry in Papua New Guinea".
Submission to Review of the Australian Centre for International Agricultural Research (ACIAR) and how it will continue to operate in the future, November 2012

The Sydney Medical School has only recently become aware of the work of ACIAR as a result of a research collaboration being developed between the Faculty of Medicine and Hasanuddin University Makassar, Sulawesi, Indonesia. The partnership involves a unique multi-professional collaboration comprising a multi disciplinary academic team from public health, veterinary science, agriculture from the two universities and includes The Australian Centre for International Agricultural Research (ACIAR) as well as MARS International. This collaboration culminated in a grant application for the AusAID Development Research Awards Scheme 2012 Funding Round. The results will be available in December 2012.

ACIAR will be facilitating access to the low-income farmer communities who will be engaged in our research to improve access to health care. In addition the academic employed by ACIAR will be assisting in the design the interventions to be tested, data gathering, analysis and writing. The aim of the study is to reduce poverty in three low-income rural communities in South Sulawesi. On completion of the research we will have data comparing access to health services by the non-randomised study households and the households in the study; data showing attendance rates to health services and trending information about health improvement and health literacy generally for those populations. The main transferable output will be a multidisciplinary integrated framework for providing vital health information to low-income rural communities thus providing governments and service providers with an evidenced-base for delivering appropriate health information in ways that attend to the context and environments in which communities live and work in. Improving the health status of rural households will positively impact on social, economic and environmental indicators.

Reducing poverty is a complex process; one requiring a multifactorial and multidisciplinary approach that recognises the context that low income and often hard-to-reach communities live in. Health and medicine is only now beginning to utilise the knowledge and skills of other disciplines. One untried yet significant area of research is combining health messages with information and education to low-income farmer households about sustainability and income generation. ACIAR is in a prime position to assist the development of this innovative approach.
To date we have been impressed with the flexibility and willingness of ACIAR to participate in innovative research. Because ACIAR is in the country where the work is happening ACIAR had a central role in facilitating our counterparts at Hasanuddin University in the initial meetings and discussions about the research. They will also play a significant role in facilitating access to the communities that currently underutilise existing health services.

Because of the short time frame we have not had time to consult with our entire faculty. Should you be interested in greater understanding of the role ACIAR can play in health care we would be happy to provide further information if required. Professor Merrilyn Walton, Associate Dean (International) is leading the research involving ACIAR and she can be contacted on 0293513678.

Yours sincerely

Bruce Robinson
Dean

22 November 2012
Submission to the ACIAR review committee
From the Sydney Emerging Infections and Biosecurity Institute (SEIB), University of Sydney
Sorrell TC, Ward M, Mor S, Marais BJ
www.sydney.edu.au/seib

We thank you for the opportunity to make this submission, the focus of which is closely aligned with the remit of SEIB, namely to reduce the high socioeconomic and health impacts of emerging and re-emerging infectious diseases, especially in the Asia-Pacific region.

In summary, we suggest that initiatives incorporating cross-sectoral/multi-disciplinary expertise and which meet ACIAR’s remit to alleviate poverty should be promoted. This suggestion is predicated on the need to ensure productive crop and animal agriculture/aquaculture systems in order to provide food security to communities and countries, but also to maintain a healthy environment and protect the health of human populations and those of farmers and their families on whom the system ultimately depends.

We know that:
- There is a strong association between poverty, hunger, livestock keeping and diseases transmitted between animals and humans (zoonoses)1
- Zoonoses contribute to a dual burden in farming communities – causing illness in livestock keepers and their families as well as impacting their livelihood through losses in productivity and death of their animals
- Poor farmers are often unable to access important diagnostic and treatment services for these and other infections because they live in under-served, rural locations
- The distribution of poverty/hunger/livestock keeping/zoonoses is not evenly distributed throughout the world, with the most vulnerable communities living in South Asia (particularly India), East/Central Africa and Southeast Asia1
- Demand for animal-source foods (meat, milk, eggs) is increasing – consistent with rising population numbers and economic growth of poor countries
- Rising population numbers, economic uncertainty, poverty and environmental change provide the setting for disease emergence and spread – including zoonoses – and is expected to increase
- Many factors contribute to disease emergence – intensified agricultural practices, increased (wild and food) animal-human contact; environmental degradation, global commerce; population displacement; malnutrition and increased antimicrobial resistance due to poorly regulated use of antibiotics/other chemicals

Based on the above points – which highlight the complexity of agricultural systems and their impacts on people, pathogens and the environment – we believe that integrated, whole-of-ecosystem approaches need to be fostered in future research and development activities funded by ACIAR.

HOW TO ADVANCE “ONE HEALTH” APPROACHES

ACIAR has a mandate to conduct agricultural research in developing countries. The metric that is used to assess success is the improvement of livelihoods via increased agricultural production and marketability. ACIAR achieves this aim very well. The ACIAR mandate is not to directly improve the health of people, even though research on zoonotic agents that adversely affect animal health (e.g. brucellosis, avian influenza H5N1) is within scope. Consideration should be given to permitting (and encouraging, if needed) ACIAR to collaborate with other agencies such as ARC, NHMRC, AusAID and WHO to commission research that simultaneously improves the health of human and animal populations and the environment within integrated projects i.e. a One Health approach. The metric of success would be the combined improvement of health of people, animals and the environment. It would be a more effective way of spending aid funds, and would also promote collaborative, cross-disciplinary research within Australian institutions as well as their overseas counterparts.
A relevant example of this issue can be seen in Timor Leste. Cysticercosis is a tape-worm of pigs, which can cause severe disease when humans are infected. Control of this parasite in pigs is probably not of high priority to ACIAR, since the gains in pig production would likely be modest. AusAID could fund capacity building to improve diagnosis and treatment options for people. The environmental issues that allow pigs to be exposed to the parasite might not be fundable at all. Without a program that encourages integrated research into the entire disease ecosystem, progress in controlling and eliminating this disease in one of the world’s poorest countries will be difficult. It represents a research gap.

Examples of programs that could advance One Health approaches include:

1. **Zoonoses – assessing human impacts and advancing the case for control**

   Research and capacity building across discipline boundaries are essential to unravel the complex interactions driving transmission and emergence of zoonotic diseases and to develop better strategies for their prevention and control. In 2010 the World Bank estimated that over the preceding decade the direct costs attributable to zoonoses exceeded $20 billion, with indirect costs to local economies in excess of $200 billion (World Bank, 2010). A report commissioned by the Department for International Development (DFID) in the UK found that 19 countries account for 75% of the burden of zoonoses in the Global Burden of Disease study.

   As noted above, there is a strong association between poverty, hunger, livestock keeping and zoonoses. Because they fall at the interface between human and animal health, zoonoses have received a low prioritization for research funding by NHMRC (human focussed, medical research) and ARC (potentially animal focussed, non-medical research). Programs that have been successfully funded by these organizations have had a strong domestic focus (e.g. Hendra virus), which have limited application elsewhere in the world. Animal health has also been a fairly low priority of development agencies, who have favoured research into crop agriculture despite the importance of livestock as a cash reserve and source of income for poor people. In the view of WHO and FAO, control of zoonoses is a “very real and highly-cost effective opportunity for alleviating poverty.”

   Research needs that are essential for controlling, preventing and mitigating zoonoses can be summarised as follows:
   a. Conduct basic, applied and translational research into the origins and ecology of pathogens, and the interaction between microbial ecology, nutrition and infectious diseases, to better understand how these agents spread and cause disease in animals and humans;
   b. Identify social/behavioural, legal and political drivers of societal and individual responses to the threat of infectious disease outbreaks and spread;
   c. Develop and evaluate better strategies, for prediction, prevention and control, diagnosis, management and mitigation of infectious disease threats.
   d. Increase local and regional capacity to detect and respond to zoonotic infectious diseases, including outbreaks and spread of these diseases, and biosecurity threats, through education and capacity building.
   e. Provide data to inform, and advise on, government policies and strategies to prevent, contain and control emerging infectious diseases.

   A report commissioned by the Department for International Development (DFID) in the UK provides valuable summary of the issues in need of investigation with respect to preventing, controlling and managing zoonoses (see text box included at the end of this document).

2. **Integrated service delivery – packaging initiatives designed to improve farming practices with those that will improve human and animal health**

   Research into the adoption of new technologies for agriculture represents an opportunity to explore broader opportunities for improving livelihoods, health and well-being of farmers and their animals by employing human health promotion approaches. The following is an example of a proposal under consideration by AusAID that
links human health improvement to current ACIAR initiatives. Programs of research of this type could be developed and tailored to specific settings in developing countries in our region:

“Health messaging that builds on existing ACIAR initiatives - Improving access to health services for rural and low-income farming households”

ACIAR currently funds programs in development of sustainable cocoa farming and aquaculture in South Sulawesi, Indonesia. For the cocoa farmers, this includes text messaging market information through mobile phone technology. The capacity of these low-income farming households in Indonesia to achieve better livelihoods is compromised through illness and poor health. Access to health care could be improved by investigating the provision of basic health information alongside farming instructions delivered by veterinary and agriculture colleagues. Different modes of providing health information to these ‘hard-to-reach’ communities could be tested. The hypothesis is that timely health information for farmers and their families (about prevention, early symptom recognition, access to health care and sanitation) will help to address existing health inequalities.

RECOMMENDATIONS

1. ACIAR is uniquely positioned to invest in research on zoonoses because it has a mission to serve farming communities in developing countries through collaborative research. However, ACIAR’s current mandate does not support a focus that extends beyond research into the impacts of disease on animal populations. ACIAR should explore opportunities to establish programs with other agencies (NHMRC/ARC/AusAID) so that projects contributing equally to human and animal health in developing countries can be funded.

2. The Asia-Pacific region is an important “hot spot” for emerging infectious diseases and antimicrobial resistance, with favourable climatic conditions, high population densities and poorly regulated industries. ACIAR has invested heavily in this region and should continue to do so. However, the current geographic focus of ACIAR (and arguably all Australia’s research funding agencies) is missing important opportunities to make a large impact in other parts of the world, the influence of which is expected to grow in coming years. The African focus of the new Australian International Food Security Centre is a positive step toward engaging in other regions. Indeed ACIAR is the only Australian organization that consistently funds research in Africa. Again though, the limited focus on agricultural production (as noted in the point above) constrains the work that can be done there.

3. In recent years there have been major investments by funding agencies in research and capacity building around emerging diseases and rightly so given their global significance. Longer term investments are also needed for control of endemic zoonotic diseases (diseases which exist all the time) – such as rabies, brucellosis and bovine tuberculosis. Such investments will also strengthen the capacity of personnel and surveillance systems to detect, report and respond to emerging diseases, while also being more immediately responsive to the needs of people in developing countries. Australian researchers have immense capacity in this area but there are relatively few opportunities to fund in research in this domain. ACIAR does currently support research in this area, although again it is limited to the animal health and production impacts.
**Issues in need of investigation with respect to preventing, controlling and managing zoonoses** (summary from DFID report)

<table>
<thead>
<tr>
<th>Research gaps and opportunities in zoonotic diseases</th>
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<tbody>
<tr>
<td>a. Constraints on implementation of known solutions in LMIC settings.</td>
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<td>b. Biology and epidemiology of poorly-known zoonotic disease systems, including appropriate tools to monitor the impacts of disease control.</td>
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<tr>
<td>c. Policy, political and professional governance for improved zoonoses control.</td>
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<tr>
<td>d. Socioeconomics of zoonotic disease control and cost/benefits to different sectors.</td>
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<tr>
<td>e. Education and awareness methods targeting zoonoses, suitable for application in poor, often illiterate, communities and in government systems.</td>
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<tr>
<td>f. Targeted surveillance and sociological surveys of poor communities and high risk environments.</td>
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<tr>
<td>g. Food safety measures applicable in poor communities to reduce food borne infections.</td>
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<tr>
<td>h. Role of intensification of livestock production and prioritisation of food security in LMIC, impacts on the emergence and incidence of zoonotic disease.</td>
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<tr>
<td>i. Drivers of zoonosis emergence and persistence e.g. land use change, settlement patterns, agroecology, transportation links.</td>
</tr>
<tr>
<td>j. Benefits of integrative approaches to human, animal (including domestic and wild animals) and environmental health sectors, and clarification of the structural and institutional relationships required for implementation of this approach in LMIC.</td>
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**Diagnostics**
Given that;
- the ability to detect and identify infection and disease is crucial for surveillance and as a prelude to intervention for controlling the disease.
- For all diseases studied access to accurate diagnostic tests was found to be sub optimal, this was due to the unsuitability of the current technology for developing country and field settings or because accurate tests have yet to be developed. T
- the lack of regulation for human in vitro diagnostic devices (IVDs) and inadequate evaluation of tests results in the use of tests of uncertain quality and performance.

It was concluded that;
- Development of rapid ‘field friendly’ diagnostic tests that improve access should be considered a priority.
- New technology has yet to be explored/exploited/evaluated.

**Drugs**
Given that;
- The ability to treat infection prophylactically or therapeutically is desirable and can form an important component in certain integrated intervention strategies.
- For the majority of the diseases studied a drug intervention approach is not considered to be appropriate relative to the alternatives.

It was concluded that;
- For (some) of the diseases considered there are realistic research and development opportunities with respect to the available drugs or candidates.
- For (some) parasitic diseases studied, we found evidence for potential opportunities to address existing Gaps.
- The risk of antimicrobial resistance and the opportunity to prevent the development of antimicrobial resistance should be considered.

**Vaccines**
Given that;
- Progress in vaccine development, epidemiological and economic considerations, vector dynamics and policy issues vary across the 20 priority zoonotic diseases that have been targeted in this study.
- In each case, it is impossible to consider deployment of vaccines in isolation. In no case is it apparent that deployment of a vaccine in isolation would achieve control.
- No option can be effective in the absence of appropriate management measures, which in turn are reliant on sound epidemiological understanding.
- There are several examples where vaccines and therapeutic interventions are complementary, and both depend on reliable diagnostics for effective deployment.

It was concluded that;
- Available vaccines are not always adequate e.g cattle vaccines for bTB are not efficacious and vaccines for leptospirosis or leishmaniasis may not block transmission. (several other points on vaccines are included in the DFID report)
Key references

3) DFID (UK) Report 6. (2012) Prioritising the need for new diagnostics, medicine, vaccines and management practices of zoonoses which have significant impact in the developing world. www.bbsrc.ac.uk
Appendix 7

Summary of advice on contractual issues received from our Office of General Counsel

As an administrating organisation for many ACIAR grants the University is required under the terms of the ACIAR “Standard Conditions for Project Agreements” to enter into agreements with all collaborating organisations, many of which are organisations based overseas. For example, for projects managed by the University we have had to enter into agreements with research organisations, government and private entities in countries including India, China and Vietnam. Putting these arrangements in place is required by a specific clause in ACIAR’s standard contract (10.9), which outlines the issues relating to IP and other matters that must be covered in such agreements with collaborators. Given the often large number of parties, the range of organisations and international locations, cultural differences, the complexity of issues and resulting communication issues that must be overcome, putting these agreements in place takes significant time and resources for all parties.

The more complex and onerous ACIAR’s standard conditions are, the more difficult the task of establishing the collaboration agreements becomes. In our view some of the IP requirements set by the ACIAR standard terms are overly complex and onerous, and as result hinder quick negotiations and finalisation of sub-contracts with collaborators. For example, the following terms are sometimes difficult for the University to accept and to negotiate with partner organisations:

a. ownership of Project IP created by the primary recipient and collaborators is allocated based on geography rather than the more typical model based on creative or inventive contribution which is more broadly accepted in the research sector;
b. the requirement to grant broad upfront licences to Background IP;
c. broad warranties and indemnities which are required relating to IP and its use by ACIAR and third parties; and
d. the requirement to obtain ACIAR’s express consent to any sub-licence or assignment by the grant recipient of Project IP to any third party, which may include any conditions which ACIAR sees fit.

An example of a simplified position may include allowing Project IP to be owned by the recipient and/or any collaborating partner as agreed between the Commissioned Organisation and Collaborators, provided that a licence is provided to ACIAR to use all Project IP for government purposes including a licence to use any reports provided to ACIAR. Should ACIAR identify that it has a need to take a broader licence to use Project IP and any Background IP relating to a project the parties will meet and negotiate an outcome in good faith. By way of example of the inclusion of a more balanced approach, ACIAR has included in its standard terms a clear and simple approach to the management of ‘moral rights’ in clause 11, which is acceptable to the University and generally facilitates a quick agreement of that issue with partner organisations.

Our Office of General Counsel would be keen very to continue to work with ACIAR and other stakeholders to further simplify and streamline its contractual and administrative requirements for the benefit of all parties. For further advice on these specific issues, please contact Jane Oakeshott, Senior Adviser, Government Relations in the Vice-Chancellor’s Office in the first instance:

(jane.oakeshott@sydney.edu.au, 02 9036 5273).