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# **REVIEW OF ACIAR'S RESEARCH ON AGRICULTURAL POLICY**

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The Australian Centre for International Agricultural Research (ACIAR) operates as part of Australia's international development cooperation program, with a mission to achieve more-productive and sustainable agricultural systems, for the benefit of developing countries and Australia. It commissions collaborative research between Australian and developing-country researchers in areas where Australia has special research competence. It also administers Australia's contribution to the International Agricultural Research Centres.

▶▶▶▶ ACIAR seeks to ensure that the outputs of its funded research are adopted by farmers, policy makers, quarantine officers and other intended beneficiaries.

▶▶▶▶ In order to monitor the effects of its projects, ACIAR commissions independent assessments of selected projects. This series reports the results of these independent studies.

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## Foreword

Over the years ACIAR has supported a number of research projects with varying degrees of policy emphasis, although our investment in policy research was generally limited to a few projects at a time.

In 1999, ACIAR established a specific Agricultural Development Policy program while continuing to support projects with policy components in several other program areas, particularly in the Land and Water Resources, Forestry, Fisheries, Animal Sciences and Agricultural Systems Economics programs.

After five years it was timely to review the balance and directions of ACIAR's investment in policy research.

This review by the Centre for International Economics (CIE) includes a framework for assessing future 'ideal' policy projects; a meta-analysis of ACIAR's policy portfolio and a more detailed analysis of clusters of projects completed over the past decade in three partner countries: China (beef and wool industry policy projects); Indonesia (policy modelling methods) and India (trade reform).

This report includes ACIAR's response to the recommendations. It is number 31 in ACIAR's Impact Assessment Series and is also available for free download at <[www.aciar.gov.au](http://www.aciar.gov.au)>.



Peter Core  
Director  
Australian Centre for International Agricultural Research



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## Recommendations and summary discussion

This section provides a summary of the findings of this report in the form of eight key (R1–R8) and related recommendations. In what follows, we:

- summarise each key recommendation
- note the arguments (found in the main body of the report) supporting the recommendation
- discuss the implementation of the recommendation
- discuss some of the related issues.

Before setting out these recommendations, it is useful to outline the context within which they are made. From our examination of ACIAR policy projects, and our knowledge of this area of research in other agencies, it is evident that ACIAR successfully manages a wide variety of policy-research projects covering a broad range of issues. There are good reasons to believe that ACIAR's overall policy portfolio is very successful. Indeed, if we were undertaking a review for another agency, there are a number of valuable lessons that we might pass on from ACIAR's research, particularly:

- the advantages of ACIAR's collaborative approach to research, which means that ownership issues are resolved right from the outset of research
- ACIAR's relatively low administrative overheads and approach to procurement, factors that make it easier for project partners to work effectively
- the clear gains that have resulted from ACIAR's ability to develop long-term relationships with both Australian and partner-country researchers.

Thus, our recommendations are aimed to improve a program that is already working well.

## **RI: Maintain a focus on policy research**

### *Core recommendation*

Policy research of a number of kinds is a legitimate and important focus of ACIAR's activities. There are good reasons to believe that this research brings significant benefits, even though these are difficult to quantify.

ACIAR should continue its pursuit of policy and economic research and build on the expertise and experience it has developed. In doing so, there are a number of ways in which the impact of policy research could continue to be improved. These are the focus of further recommendations made below.

### *Reasoning behind the recommendation*

#### *In-principle reasons*

ACIAR is concerned with improving the productivity and sustainability of agriculture in developing countries and Australia.

While agricultural productivity is clearly influenced by technical and scientific knowledge, there is also considerable evidence to suggest that it is influenced by institutional and policy settings (see Chapter 2).

Sustainability is a broad concept, but is usually considered to have both environmental and economic elements, which are, of course, closely related. Economic sustainability of an activity refers to its ability to provide a long-term and stable source of income to households and communities. There is also considerable evidence to suggest that the sustainability of a particular activity is influenced by policy and institutional settings.

#### *Empirical evidence*

The empirical evidence on returns from different types of projects suggests that the returns from policy research are of the same order of magnitude as those from technical or scientific research.

There are many difficulties in estimating returns from policy research, and fewer estimates of such returns have been made. Nevertheless, meta-analysis of these suggests that there are good reasons to expect similar returns (see Chapter 2 and the discussion around Tables 1 and 2).

Thus, policy research is an important contributor to the project portfolio.



### *Practical implementation*

The obvious questions when recommending continued policy research are: how much money, in which countries and in what areas of research? Chapter 3 summarises how these questions have been answered in the past.

### *Magnitude of funds for policy projects*

The average funding for ACIAR's policy projects in the past has been \$440,000 (in today's dollars), with matching funding averaging \$230,000 per project (Chapter 3). While this level of funding is smaller than some of the recent project funding by other agencies, it has been sufficient to ensure a good product from appropriately targeted projects, while avoiding the risks involved in committing larger sums of money. With project funding of this order of magnitude, it is also possible to gradually build up a substantial area of research, as ACIAR has done. Funding smaller than this amount, however, is unlikely to be sufficient, particularly in view of some of the further recommendations made below.

### *Country coverage of policy projects*

ACIAR's research has had a broad country coverage, within a framework of priorities for particular countries (see Figure 6). Setting aside political constraints, this broad funding is understandable, although it is important not to jeopardise the average size of projects by having too many targets. Indeed, there are good reasons to expect that, in line with some of the other recommendations set out below, a narrower country focus would increase the potential benefits from the research.

The principles for ensuring good policy projects set out in Chapter 2 provide broad guidance as to the choice of countries.

- It is important to ensure a receptive policy environment within a country chosen for research. Without such engagement, policy research is unlikely to have an impact.
- The existence of appropriate expertise in Australia is crucial, and it is important to build upon it.
- Good contacts within the target country are essential to assist in dissemination and adoption of the results of the research.
- A good understanding of the policy processes and constraints in partner countries is crucial.

The appropriate country focus is likely to change over time as countries develop. It is difficult to predict which countries will be the best prospects from ACIAR's viewpoint, but it is clear that the country focus may need to change in the future, as it has in the past. Recommendations 7 and 8 have an important bearing on the provision of information to assist in the selection of countries.

#### *Content of policy projects*

The discussion in Chapter 2 sets out a number of different types of policy research. ACIAR's focus has been broad in the past, and again this is understandable. The case studies that are part of this review indicate that useful outcomes can emerge from a range of very different types of policy research. What seems to be more important is the overall conduct of the policy project. As in the case of country coverage, there are likely to be gains from increased focus on a number of policy areas in order to ensure impact.

The content of the project depends very much on the country, its stage of development and how its policy environment is evolving. The content of policy projects should be informed by regular reviews (as per recommendation 7) as well as through interactions with other agencies (recommendation 8).

ACIAR should also continue to use its own ex-post economic-impact evaluations to inform the development of new policy projects. The growing list of projects for which the actual impact has been closely analysed is an extremely valuable resource for ACIAR and other development assistance agencies.

#### *Discussion*

It is possible to be cynical about policy research, and to point out that those who evaluate such research are also those who are likely to undertake it, and so have a potential conflict of interest. As Chapter 2 points out, the circularity problem in policy project evaluation is a significant one. In our view, however, it is not sufficiently serious to negate other evidence that suggests policy factors have a significant influence on outcomes for the agricultural sector.

In terms of allocating funding to policy projects, it is interesting to note that ACIAR's processes are quite different from some of the ex-ante portfolio allocation exercises undertaken by some other research agencies. These exercises involve, for example, calculating expected marginal returns from projects or programs of different kinds, and then allocating

total funds across these different projects or programs so as to maximise the value of the whole portfolio.

While this approach seems to have worked well for some domestic R&D corporations (which are generally concerned with research in one or two commodities within Australia), it is extremely difficult to apply in a cross-country and development context. Therefore, we are not recommending wholesale changes to ACIAR's allocation processes, but rather some enhancements to the current procedure.

## **R2: Recognise the differences between policy research and technical and scientific research**

### *Core recommendation*

It is important to recognise that policy research is in many ways different from technical or scientific research. The scientific model of dissemination of findings (publication in journals, conference papers etc.) is likely to be less effective for policy research. This is not to say that publications are not important, only that they are generally not sufficient to ensure real impacts from the research.

### *Reasoning behind the recommendation*

Policy research is designed to lead to changes in policies and institutions, or to concrete changes in the understanding and behaviour of policy makers. Research that does not have this effect is unlikely to have any impact.

It is a common view among those who have examined the impact of policy research that it is the *process* of undertaking the research, and the *interactions* with policy makers—both during and after the research—that are crucial determinants of the impact of the research. Indeed, in some cases, policy change can be achieved even before the final results are published.

Policy-development processes do not necessarily follow publication of ideas in the literature particularly closely, as is evident from experience in Australia and overseas. Indeed, policy appreciation and investigation of issues generally precedes academic analysis: it often identifies and solves the problem and moves on, whereas much academic input tends to be fine tuning.

*Practical implementation*

This recommendation could be implemented by including in the development phase of policy projects explicit plans for disseminating, *to policy makers*, the results of research, as well as explicit plans for ongoing interaction between researchers and policy makers.

This recommendation relates closely to recommendations 3, 4 and, in some cases, 5.

*Discussion*

There is evidence from the development of ACIAR's policy-research program that this point is well understood. The steadily changing approach to impact assessment and the ways in which benefits are sought in the development of newer projects are starting to require researchers to at least think about more than getting a set of publications from the project. Nevertheless, there is scope to take this further.

It is also important to note that the ways in which policy research has an impact are likely to vary considerably between countries, and this will have an important influence on choice of researchers.

Another key difference between policy research and scientific research is that it is generally very difficult to prove that a particular policy prescription is right or wrong. Policy science does not have controlled experiments in its toolkit. The crucial aspect of policy research is the way in which it is implemented.

### **R3: Include within projects more expertise from policy practitioners**

*Core recommendation*

Many of the projects examined for this report had a strong academic focus, particularly in terms of presentation and reporting of key results. To ensure that the policy research will have real impacts, it will be necessary in many cases to include input from policy practitioners to ensure that the project results have meaning for policy makers.

### *Reasoning behind the recommendation*

A number of the projects reviewed for the meta-analysis had quite theoretical outputs, without a clear pathway for getting from the outputs to policy outcomes.

It is appropriate for ACIAR to undertake 'basic' policy research, development of new techniques and so on. However, there needs to be a clear sense as to how these techniques will ultimately help policy makers. It is important to ensure that these techniques are placed properly within the policy context of the country in question.

The ability to phrase research findings in a way that is likely to influence policy makers is in many cases quite different from the ability to undertake that research in the first place.

In the Indonesian case study, the research partners expressed a strong preference for research that involved the adoption of tried and true techniques for policy analysis, rather than more esoteric approaches.

### *Practical implementation*

This recommendation is easily adopted during both project development and implementation. It involves including in the project individuals with policy experience in the country and issue concerned.

This recommendation is not so much about 'academics' versus others as, in many cases, individuals currently working as academics have considerable policy experience. The important point is to find project participants whose task it is to very specifically draw out the relevance of the research for policy making.

While this recommendation has the potential to increase the cost of projects, if its acceptance increases the potential benefits, the additional resources will have been well employed.

### *Discussion*

This point is particularly relevant to many of ACIAR's earlier projects. In more recent projects (including a number not examined for this report), we understand that the focus on policy outcomes is increasing. This should be encouraged.

Some of the projects we examined (for example in the Indonesian case study) did have a strong sense of producing readable policy briefs. This

approach is very useful and is likely to become more so as it is further developed.

This recommendation is also likely to have implications for the choice of partner agencies. It is quite likely that supporters of policy change will not be in the line or sectoral ministries. Some choices of partner organisation will make it difficult to work towards policy changes.

#### **R4: Allow for more technical assistance within policy projects**

##### *Core recommendation*

As well as for undertaking research, ACIAR funds could be used to disseminate research findings in a very specific and targeted way through providing direct technical assistance to individuals or departments within developing countries that are concerned with policy issues in their daily work.

This technical assistance could involve, for example, having a researcher or policy advisor 'sitting with' personnel from the partner country and working directly with them as they go about their work. The technical advisor would draw upon the results of the research (perhaps a particular policy tool or technique) in helping address the 'live' issues facing policy makers.

##### *Reasoning behind the recommendation*

Some of the case studies indicated a need for this type of assistance, particularly in projects involving the development of tools for policy analysis. It is an approach supported by a number of international agencies and seems to be very useful.

Technical assistance in policy projects is analogous to extension services for agricultural techniques and is a way of ensuring that research is disseminated and implemented to the greatest degree possible.

##### *Practical implementation*

Approaches for implementing this type of technical assistance are well developed within a number of international agencies and adopting these models would be relatively straightforward. The key challenge is in linking the technical assistance to particular avenues of ACIAR-funded research.

Clearly, such technical assistance would not be appropriate for all policy projects—either for practical reasons or because of the type of research. Nevertheless, it should be considered as part of the overall adoption strategy for each project.

*Discussion*

This type of recommendation has the potential to blur the distinction between funding research and funding general aid programs. Funding aid per se is not the role of ACIAR. However, it is ACIAR's role to fund research to solve problems, and this role is not fully enacted until the problems are solved.

What is proposed here is that the technical assistance be very closely related to the research that has been undertaken within the ACIAR project concerned.

This recommendation has the potential to link with ACIAR's fellowship and scholarship programs, enabling ACIAR to put together unique technical-assistance packages.

**R5: Provide opportunities for short-term projects**

*Core recommendation*

Most ACIAR projects have a relatively long lead time, which is entirely appropriate for most kinds of research. There are instances, however, when opportunities for policy research arise unpredictably, perhaps from a particular area of research. ACIAR should consider providing resources to allow some such opportunities to be exploited.

*Reasoning behind the recommendation*

It is in the nature of policy processes that there are times—often only brief—when a particular issue receives the attention of policy makers, such as, for example, a plan to build a new mill or processing plant, a decision by a trading partner to change import rules, or an outbreak of a livestock disease subject to quarantine restrictions. At such times, the ability to make an immediate input to the policy process is likely to significantly increase the overall impact of ACIAR's policy research.

Delivering policy makers with insights when they need them is a key requirement for policy research to have an impact. Currently, ACIAR

research projects tend to rely on relatively slow dissemination methods. While this is appropriate in most cases, for those times when advice is needed quickly there is a risk that ACIAR's research may miss the mark.

#### *Practical implementation*

There appears to be some difficulty in incorporating such an idea within ACIAR's project-development process, which entails allocating funds in advance. However, its implementation could simply involve setting aside discretionary funds that could be used for short-term tasks satisfying particular criteria.

Criteria would include:

- a clearly defined policy issue where a case can be made that ACIAR-related expertise could help clarify the issue
- a clear method for building on ACIAR research or networks or, in appropriate cases, on ACIAR technical research
- the ability to demonstrate the independence of ACIAR research.

## **R6: Include policy analysis within technical projects**

#### *Core recommendation*

ACIAR should develop mechanisms to allow the results and understanding emerging from policy research to inform both the development and, in some cases, the implementation of technical and scientific projects.

#### *Reasoning behind the recommendation*

As noted above, policy settings can have a major influence on outcomes in agriculture. They also have the potential to be a major influence on the effectiveness and impacts of particular technical research projects.

An example is the case of Indian agriculture, in which it is generally considered that lack of adoption of new techniques, and lack of investment funds for implementing new techniques, is a result of particular policy settings. Understanding these settings is crucial to understanding whether or not technical research will be able to generate valuable outcomes.



Further, activities in many of the industries where ACIAR undertakes technical research are subject to considerable policy distortions that significantly change farmer and processor incentives. In these cases, the introduction of new techniques can often have counter-intuitive (and in some cases counterproductive) effects.

Understanding the ways in which policies can influence the adoption and outcome of technical research is likely to considerably enhance the overall impact of ACIAR's programs.

The adoption of this recommendation would also lead to the generation of much information of value in planning future policy research. In discovering the policy constraints facing particular technical research impacts, ACIAR will learn more about where it may be appropriate to focus policy research in the future.

#### *Practical implementation*

This recommendation could be implemented at the project development stage, the project dissemination stage and through the ultimate impact evaluation of projects.

Implementation at the project development stage would involve seeking explicit policy input from appropriate researchers or practitioners. Depending on the nature of the project, this may simply be a matter of pointing out the policy constraints or distortions that are currently operating within a particular activity and country. Depending on the nature of the constraints, this may lead to recommendations for changes in the design of the projects and/or in the plan for dissemination of its results.

Implementation at the results dissemination stage would involve seeking advice about policy constraints affecting the uptake of new technologies or techniques and whether there are any perverse incentives that need to be accounted for.

To a degree, implementation at the evaluation stage is already in place. Evaluation is typically undertaken by researchers with some policy experience and so, in those cases where policy is likely to have a significant influence on project outcomes, this effect is pointed out in the impact evaluation report. What is important, however, is to ensure that these findings feed back into the processes of policy design.

*Discussion*

This recommendation is not in any way meant as a criticism of ACIAR's technical and scientific research; rather it is about promoting dialogue between people on the policy and technical arms of ACIAR research projects.

Clearly, it will be important to ensure that this recommendation does not simply become a 'tick box' bureaucratic requirement that slows down the process of project development. However, we think it is entirely feasible to close the loop between the policy and technical aspects of ACIAR's research portfolio in a way that enhances overall returns.

## **R7: Undertake regular reviews of policy settings in key countries of interest**

*Core recommendation*

ACIAR should undertake regular stocktakes of policies (agricultural and related) in the countries in which it undertakes research. Such stocktakes should identify key policy settings that are likely to affect the outcomes of technical projects. They should also identify key researchable policy areas.

ACIAR should also have a watching brief on policy in countries in the region where it does not currently undertake research, to identify areas where there is potential for new research.

*Reasoning behind the recommendation*

There is currently within ACIAR a great deal of implicit information about country policy settings. This recommendation is about making some of this knowledge more explicit and using it to inform ACIAR's project-development processes.

A common resource for ACIAR researchers and project managers to draw upon will increase the knowledge base upon which research investment decisions are made. This will contribute to increasing the impacts of ACIAR's research, particularly if the importance of the interaction between technical research outcomes and policy settings is acknowledged.

### *Practical implementation*

This recommendation need not involve significant costs, as there is a large amount of existing material that can be drawn on to fairly rapidly and efficiently put together an overview of policy developments (this also relates closely to recommendation 8).

The disadvantage of much existing policy material is that it has been assembled for a variety of different purposes that do not necessarily relate to what ACIAR wants to achieve. The World Bank, for example, puts together its research with a view to assessing the impact of its lending programs, as well as compliance with lending conditions. Re-expressing available information in a way that allows it to focus on ACIAR's interests should deliver a very useful product.

### *Discussion*

The adoption of this recommendation will involve a product that gives ACIAR a broader perspective on policy research. Understanding the implications of ongoing policy developments in a range of countries is the core work of a large number of researchers, including those often engaged by ACIAR.

## **R8: Continue to build relationships with other agencies**

### *Core recommendation*

There are many agencies undertaking policy research and analysis. They include, for example, the World Bank and AusAID, and they are custodians of vast amounts of information.

At the same time, ACIAR and its networks generate a large amount of information of interest to other development assistance agencies.

ACIAR should continue to work—both formally and informally—to ensure that this information and knowledge continues to flow in both directions.

This recommendation is clearly related to recommendation 7, as the work of other agencies will be a major source of policy information.

*Reasoning behind the recommendation*

ACIAR already works with many other international agencies, particularly through CGIAR. Further, individual researchers usually have a range of relationships with other agencies and often work on projects funded by other agencies at the same time as working on ACIAR-funded projects. While the proposition that ACIAR should continue to work with other agencies is obvious, we consider it worth emphasising the importance of the relationships.

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## **ACIAR's response to the review**

**At ACIAR Board of Management meeting 97, December 2004, the Board endorsed the following approach for ACIAR's agricultural policy research project activities:**

**ACIAR will, with respect to:**

### **Program balance**

- Maintain an emphasis on policy research, including a program dedicated to policy research. However, most increase in investment in policy research will come through integration of policy research with biophysical projects.
- Undertake an independent, ex-ante, portfolio allocation analysis to inform the development of the next ACIAR Corporate Plan.
- In 2005–06, concentrate policy research investment in China, Vietnam, India, Indonesia and possibly the Philippines (with emphasis on constraints to the implementation of policies). ACIAR will work with Australian partners, partner countries and the International Food Policy Research Institute (IFPRI) in a flexible manner.
- Place a greater emphasis on examining policy settings in preparation of background papers for country consultations, to ensure that both policy and biophysical research projects are set in a context where likelihood of delivery is high.
- Be open to approaches from individual partner countries if they request research assistance in the synthesis of agricultural or rural policy settings.

### **Project design**

- Recognise we may need to involve different types of partners in projects, including greater input from policy practitioners to ensure that project partners in partner country agencies have a close influence on the policy process.

- Include in project development, explicit plans for both the dissemination of the results of research to policy makers and for ongoing interaction between researchers and policy makers.
- Rather than encourage the development of separate or parallel policy and biophysical projects, ACIAR will develop a greater number of projects that integrate policy and biophysical issues, co-planned and co-managed by managers from economics and biophysical disciplines.
- Provide more funding for small follow-up activities for teams involved in policy projects. We will also increase the use of short-term contracts rather than projects for more timely application of previous ACIAR-funded project work on highly topical policy issues.
- Explore ways to increase the comment by economist program managers in project assessment at In-House Review and encourage the greater use of policy practitioners in the design and external review of full project proposals in biophysical projects.

### **Project outputs**

- Ensure that, where appropriate, projects emphasise the production of readable policy briefs and other dissemination strategies, and rely less on production of research papers.
- Collaborate closely with advisors from other donors, development banks and AusAID who may serve in 'in-line' roles in policy departments in partner countries.
- Maintain close relationships to ensure that the proposed policy research is relevant and also that it does not duplicate the activities of other donors, particularly the development banks. In addition, ACIAR policy/economics research program managers will maintain a closer relationship with AusAID and the Department of Foreign Affairs and Trade (particularly the Economic Analytical Unit). ACIAR's policy research projects and AusAID's governance programs bear a number of conceptual relationships, and greater effort will be made to align this work.

## Background

ACIAR has supported a number of research projects with varying degrees of policy emphasis since its establishment in 1982, although our investment in policy research was generally limited to a few projects at a time. In 1999, ACIAR reorganised its two economics research programs and established a specific Agricultural Development Policy Program, with a full program of projects. ACIAR also continues to support projects with policy components in several other program areas, particularly in the Land and Water Resources, Forestry, Fisheries, Animal Sciences and Agricultural Systems Economics programs. In 2004, ACIAR commissioned the Centre for International Economics, Canberra to review the balance and directions of ACIAR's investment in policy research.

ACIAR also works closely with the International Food Policy Research Institute (IFPRI, part of the Consultative Group for International Agricultural Research) through support of multilateral and bilateral projects as well as through provision of core funding. However it was felt that consideration of IFPRI involvement was best handled on a project-by-project basis, based on IFPRI's comparative advantage in particular policy sub-disciplines and the current level of activity and nature of IFPRI's programs in that country. The recommendations of the consultants thus address the broad sweep of ACIAR's involvement in policy work rather than how they are to be funded (through bilateral, multilateral or both sources).

### **The terms of reference for the review were as follows:**

ACIAR was interested in examining the impacts and options for future directions of its policy-related research, in particular:

- the nature of the impacts of its policy work
- whether the current research portfolio focuses on relevant policy issues
- whether the current project development processes are appropriate to enable key, researchable policy issues to be addressed in a timely manner
- whether the policy portfolio is appropriately balanced (between theoretical and practically based and directed policy research)
- whether current research partners in Australia and partner countries are appropriate for delivering valuable outcomes.

In order to examine these issues, and to provide advice on the future structure of any policy work, the contractor was required to conduct an analysis of policy research that ACIAR has undertaken to date. This summary provides the recommendations of the consultants (and a summary of arguments underpinning these recommendations), along with ACIAR responses to the recommendations.

The analysis of policy research had three components:

- establishment of a framework for assessment of future 'ideal' policy projects
- a meta-analysis of ACIAR's policy portfolio using reports and documentation from previous projects
- a more detailed analysis of clusters of projects completed over the last decade in three partner countries—China (beef and wool industry policy cluster), Indonesia (policy modelling methods cluster) and India (trade reform cluster).

To complete the third component, the contractor visited each of the countries for discussions with research and policy personnel.

## Recommendations and ACIAR responses

### Recommendation I. Maintain a focus on policy research

Policy research of a number of kinds is a legitimate and important focus of ACIAR's activities. There are good reasons to believe that this research brings significant benefits, even though these are difficult to quantify. **ACIAR should continue its pursuit of policy and economic research and build on the expertise and experience it has developed. In doing so, there are a number of ways in which the impact of policy research could continue to be improved. These are the focus of further recommendations.**

**ACIAR response: Accept (in the main). ACIAR will:**

- Maintain an emphasis on policy research, including a program dedicated to policy research.
- ACIAR will undertake an independent ex-ante portfolio allocation analysis to inform the development of the next ACIAR Corporate



Plan. In developing the current 2001–06 Corporate Plan and 2002–05 International Agricultural Research Centres investment strategies, ACIAR did conduct ex-ante portfolio allocation analyses, although these were driven largely by senior staff rather than by external analysts.

- Regarding the choice of countries, the appropriate country focus is likely to change over time as countries develop and evolve. Based on the criteria above, we believe that, considering the ACIAR partner countries, the environments in China, Vietnam, India, Indonesia and possibly the Philippines are most receptive to policy research in 2004–06, and we will concentrate our policy research investment in these countries. Recent country consultations did not provide a strong case for a major investment in policy projects in Papua New Guinea at this stage, but some small studies may be appropriate. The need for a good understanding of policy processes and constraints in particular countries and a strong network of policy contacts means that ACIAR will focus its policy work on a small number of countries (< 5) at any one time.
- ACIAR will use the country-consultation priority-setting process, likelihood of impacts and availability of Australian and partner country skills in determining the subject matter balance of the policy portfolio. The extent to which a project is demand driven is also critical, although some important ACIAR policy projects have originated from Australian 'supply'.

**Recommendation 2: Recognise the differences between policy research and technical and scientific research**

It is important to recognise that policy research is in many ways different to technical or scientific research. **The scientific model of dissemination of findings (publication in journals, conference papers etc.) is likely to be less effective for policy research. This is not to say that publications are not important, only that they are generally not sufficient to ensure real impacts from the research.**

**ACIAR response : Accepted. ACIAR will:**

- Implement this recommendation by including in the development phase of policy projects explicit plans for both the dissemination of the results of research to policy makers and for ongoing interaction between researchers and policy makers.

- Provide more funding for small follow-up activities for teams involved in policy projects.
- Recognise that some 'traditional' ACIAR project partners may find a reduction in emphasis on publications unattractive and we may need to involve different types of partners in projects.

**Recommendation 3: Include within projects more expertise from policy practitioners**

Many of the projects examined for this report had a strong academic focus, particularly in terms of presentation and reporting of key results. **In order to ensure that the policy research will have real impacts, it will be necessary in many cases to include input from policy practitioners to ensure that the project results have meaning for policy makers.**

**ACIAR Response: Accepted. ACIAR will:**

- Include input from policy practitioners (individuals with practical policy experience in the country and issue concerned) both at the project development stage and while the project is undertaken.
- Ensure that project partners in partner country agencies have a close and ongoing input to the policy process.
- Recognise that testing of policy options through dissemination workshops and investigation of the likely public support of particular policy options before presentation to policy makers is sometimes important.
- Ensure that, where appropriate, projects emphasise the production of readable policy briefs and other dissemination strategies, and rely less on production of research papers.

**Recommendation 4: Allow for more technical assistance within policy projects**

**As well as for undertaking research, ACIAR funds could be used to disseminate research findings in a very specific and targeted way through providing direct technical assistance to individuals or departments within developing countries that are concerned with policy issues in their daily work.** This technical assistance would involve, for example, having a researcher or policy advisor ‘sitting with’ personnel from the partner country and working directly with them as they go about their work. The technical advisor would draw upon the results of the research (perhaps a particular policy tool or technique) in helping address the ‘live’ policy issues facing policy makers.

**ACIAR response: Not accepted.** ACIAR accepts the importance of increasing dissemination efforts for the results of its policy research, and that ‘learning by doing’, such as provision of training of developing country researchers through placements in Australian organisations can be an important part of projects. However, we believe that supporting in-line technical assistance to departments would blur the ‘arms length’ nature of collaborative research on policy options, especially in transition economies. The costs of such positions are also usually rather high. Rather, we prefer to collaborate closely with advisors from other donors (such as the World Bank and the Asian Development Bank, or AusAID in the case of PNG and the Pacific) who may serve such an ‘in-line’ role.

**Recommendation 5: Provide opportunities for short-term projects**

Most ACIAR projects have a relatively long lead time, which is entirely appropriate for most kinds of research. There are instances, however, when opportunities for policy research arise unpredictably, perhaps from a particular area of research. **ACIAR should consider providing resources to allow some such opportunities to be exploited.**

**ACIAR response—Accept in part. ACIAR will:**

- Provide more funding for small follow-up activities for teams involved in policy projects. We will also increase the use of short-term contracts rather than projects for more timely application of previous ACIAR-funded project work on highly-topical policy issues.
- Recognising that ACIAR’s role is research not consulting, criteria for short-term contracts would include:

- a clearly defined policy issue where a case can be made that ACIAR-related expertise could help clarify the issue
  - an clear method for building on other ACIAR-funded research
  - the ability to maintain the independence of ACIAR research.
- Additionally, there may be cases where a mini-project facility addressing a broad theme (e.g. World Trade Organization accession for Vietnam) is defined within an ACIAR project.

**Recommendation 6: Include policy analysis within technical projects**

**ACIAR should develop mechanisms to allow the results and understanding emerging from policy research to inform both the development and, in some cases the implementation of technical and scientific projects.**

**ACIAR response: Accepted. ACIAR is already linking policy and technical research in a number of program areas, such as fisheries, forestry, livestock production and land and water resource management, but we need to explore further options and incentives for establishing such linkages.**

- Rather than encourage the development of ‘parallel’ policy and biophysical projects, ACIAR will develop a greater number of projects that integrate policy and biophysical issues, co-planned and co-managed by managers from economics and biophysical disciplines.
- In May 2004, as part of an overall strategy to increase project impact, the Board of Management approved a strategy wherein ACIAR will make greater use of pilot or scoping studies (which particularly assess policy issues) before making major technical research investments.
- We will place a greater emphasis on examining policy settings in preparation of background papers for country consultations.
- ACIAR will explore ways to increase the involvement of comment by economist research program managers at in-house reviews and encourage the greater use of policy practitioners in the design and external review of full project proposals.

- Implementation at the project dissemination stage would involve seeking advice about policy constraints affecting the uptake of new technologies or techniques and whether there are any perverse incentives that need to be accounted for.
- Implementation at the evaluation stage is already in place. Evaluation is typically undertaken by researchers with some policy experience and so in those cases where policy is likely to have a significant influence on project outcomes, this effect is pointed out in the impact evaluation report. What is important, however, is to ensure that these findings are fed back into the processes of policy design.

**Recommendation 7: Undertake regular reviews of policy settings in key countries of interest**

**ACIAR should undertake regular stocktakes of policies (agricultural and related) in the countries in which it undertakes research.** Such stocktakes should identify key policy settings that are likely to affect the outcomes of technical projects. They should also identify key researchable policy areas. **ACIAR should also have a watching brief on policy in countries in the region where it does not currently undertake research, to identify where there is potential for new research.**

**ACIAR response: Accept in part.** ACIAR does not believe that a significant effort to separately and formally synthesise material on rural policy settings in each partner country is justified, particularly from countries in which we do not currently support research.

- There are a number of syntheses of agricultural policy issues freely available (e.g. from the Asian Development Bank, the World Bank, the Australian National University, and from related work of several ACIAR project leaders), and we will strengthen processes to encourage that these are available to relevant research managers and project leaders.
- ACIAR will require staff managing policy research to have a greater role in the sourcing and internal and external dissemination of this material, and the recent establishment of regional coordinators among senior Canberra-based staff and the strengthening of the role of ACIAR country managers will facilitate this.
- In the lead up to ACIAR-country consultation meetings, ACIAR now develops and circulates a discussion paper to consultation

participants. This includes a synthesis of information on current policies affecting agriculture in the particular partner country. We will explore the option of including a 1–2-page summary of policy syntheses in the ‘country profile’ publications ACIAR produces annually.

- ACIAR is open to approaches from individual partner countries if they request research assistance in the synthesis of agricultural or rural policy settings.

### **Recommendation 8: Continue to build relationships with other agencies**

There are many agencies undertaking policy research and analysis. They include, for example, the World Bank and AusAID, and they are custodians of vast amounts of information. At the same time, ACIAR and its networks generate a large amount of information of interest to other development assistance agencies. **ACIAR should continue to work — both formally and informally — to ensure that this information and knowledge continues to flow in both directions.** This recommendation is clearly related to recommendation 7, as the work of other agencies will be a major source of policy information.

**ACIAR response: Accept.** Close relationships are important to ensure that the proposed policy research is relevant and that it does not duplicate the activities of other donors, particularly the development banks. In addition, ACIAR’s research managers will be encouraged to maintain a closer relationship with AusAID and Department of Foreign Affairs and Trade (particularly the Economic Analytical Unit and Political–Economic Counsellors at each Embassy or High Commission) personnel. ACIAR’s policy research projects and AusAID’s governance programs bear a number of conceptual relationships, and greater effort will be made to align this work.

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# I Introduction

ACIAR is interested in examining the impacts of its policy-related research. In particular, the Centre wants to know:

- what are the impacts of its policy work
- if the current research portfolio focuses on policy issues that are relevant to partner-country needs
- if the current project development processes are appropriate to enable key, researchable policy issues to be addressed in a timely manner
- if the policy portfolio has an appropriate balance between theoretical and practically based and directed policy research
- if current research agents in Australia and partner countries are appropriate for delivering the best outcomes.

To examine these issues, and to provide advice on the future structure of any policy work, the Centre for International Economics (CIE) has analysed ACIAR's policy research to date. This analysis has two broad components:

- a meta-analysis using reports and documentation from previous projects
- case studies of three 'clusters' of research in China, India and Indonesia.

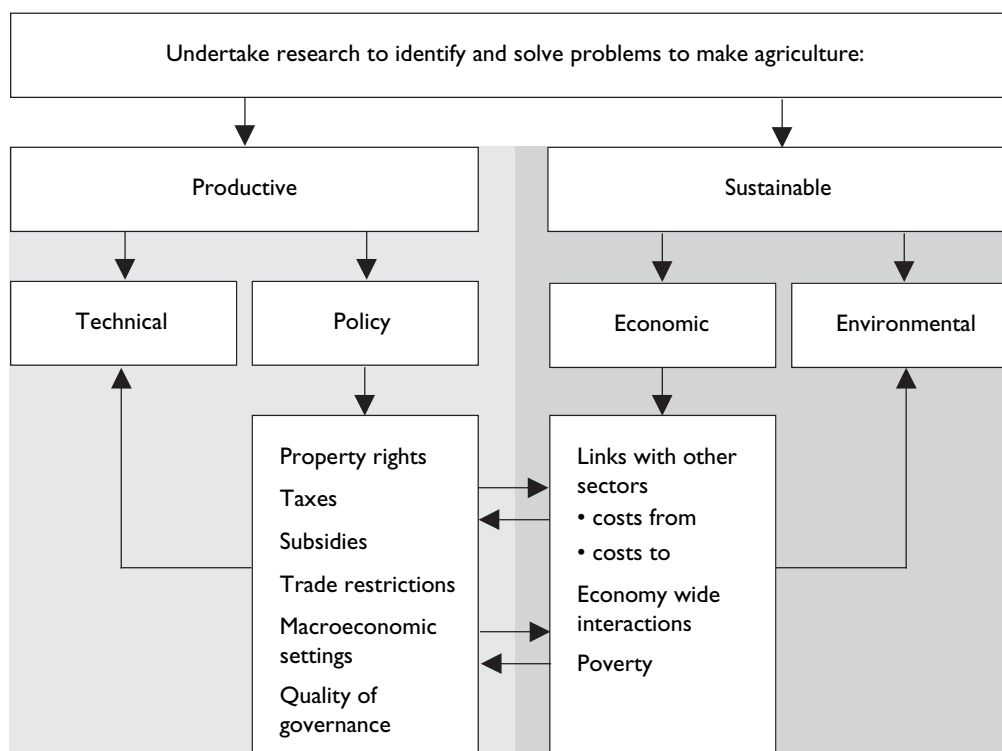
This report sets out the main results of this study.

## 2 The nature and impacts of policy research

### 2.1 Policy research in the context of ACIAR's work

ACIAR's overall objective of undertaking research to improve the productivity and sustainability of agriculture in developing countries and in Australia inevitably has a policy component. The links to policy and economic issues are illustrated in Figure 1.

**Figure 1.** Economic policy research and ACIAR's objectives



The overall productivity of agriculture clearly has a technical component: new seed varieties, new production techniques, new approaches to disease and so on all increase the possibility of agriculture being productive. But whether these opportunities are ever realised, and whether agriculture is organised in a way to capture them, are questions that are closely related to the policy framework in place.



The overall ability of agriculture to use resources to produce outputs, and the overall fortunes of the agricultural sector, will be influenced by a range of policy settings. These include the allocation of property rights, the presence of taxes, subsidies and trade restrictions, general macroeconomic management (affecting things such as the exchange rate, for example) and general economic governance. They also include the priorities for public expenditure, particularly in terms of basic infrastructure.

A number of recent studies have illustrated the importance of policies in determining overall agricultural performance. Mundlak et al. (2002) examined the determinants of agricultural growth in Indonesia, the Philippines and Thailand and concluded that specific policies (including those that ease the constraints on factor markets or promote public investment) provide the best opportunities for agricultural growth. In the context of Brazilian agriculture, Hefland and Castro de Rezende (2004) noted that events outside agriculture were central to its performance and influenced the timing and nature of policy reforms.

Ravallion and Chen (2004) in reviewing China's progress against poverty, noted the importance of particular policy changes in achieving the recent reductions in poverty. Recent research by Anderson (2004a,b) has pointed out the significant gains potentially available to developing countries from further trade reforms.

There is a strong economic factor in the sustainability of agricultural activities. One element of this sustainability comes through the links between agriculture and other sectors of the economy. In many countries, other sectors, or the policies in other sectors, impose indirect costs on agriculture. In other countries, it is the agricultural sector that imposes costs on other sectors, or on the environment. Many of these costs are policy driven, as in the case of fertiliser subsidies, for example.

Whether agriculture is receiving net taxes or subsidies, there is, in either case, a serious issue of sustainability. Long-term subsidies to the agricultural sector are clearly not sustainable. With increasing pressure on government budgets, subsidies are always at risk, and the ultimate withdrawal of those subsidies creates challenges for agriculture. More importantly, long-term subsidies distort production and production processes and inevitably result in less-efficient resource use than would otherwise be the case.

An agricultural sector that is taxed (usually indirectly through protection given to manufacturing sectors) is also unlikely to be sustainable and will also be using resources less efficiently than would otherwise be the case.

Policy settings can also influence the environmental sustainability of agriculture. Distorted incentives for particular production techniques, such as the use of fertilisers, or lack of property rights over land, can lead to adverse environmental outcomes.

## 2.2 Evaluation of policy research

While the economic evaluation of technical and scientific research has a relatively long and successful history, the systematic evaluation of economic policy research is quite new.

The systematic evaluation of R&D, either project by project or within a portfolio, is applied routinely by research agencies around the world. In their recent meta-analysis of the rates of return to agricultural research, Alston et al. (2000a,b) were able to draw on 292 published studies containing 1886 rate-of-return estimates. In contrast, understanding the relative importance of policy research, either on its own or within a portfolio, is considerably more rudimentary, and there are few quantitative estimates of the returns from agricultural policy research.

In one sense, the reasons for this are fairly straightforward. Technical research ultimately becomes embodied in a product or process of some kind, and that product or process is usually bought and sold on well-defined markets. The valuation of the product can be undertaken by ultimate reference to market valuations of goods that are exchanged. Thus, a new variety of rice has value to the extent to which farmers wish to use it because of its yield properties or to the extent to which consumers wish to purchase it because of its eating properties. Even in cases where the products are not exchanged in well-defined markets (environmental 'products', for example) there are established methods for valuing the tangible outputs of the research.

For policy research, the ultimate outcome is rarely tangible, but consists of sets of more or less complex ideas in the minds of policy analysts and researchers, policy makers and those involved in the formation and maintenance of a society's institutions. Indeed, the products of policy research become embedded in those institutions and are valuable to the extent to which they result in more-efficient economic organisation within a country.<sup>1</sup>

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<sup>1</sup> Some forms of economic research do lead to improved processes, and this is also the case for some ACIAR research, as will be indicated later. In most cases, however, this research is concerned with influencing policies.

But whereas the chain of research and other events that lead to a particular new product can generally be followed through, the chain of events that leads to a new policy are considerably more complex. Indeed, policy research is only one of many factors that may lead to a change in policies or to a change in the direction of a society's institutions.

As recently pointed out 'it is easier to link a change in yield to plant breeding research than it is to link an institutional change to policy research' (Norton and Alwang 2004).

### 2.2.1 *Difficulties in evaluating policy research*

Recent research into the impacts of policy research—as summarised, for example, in the volume by Pardey and Smith (2004)—has pointed out some of the major constraints to careful evaluation.

#### *Attribution*

As will be discussed further below, policy research is only one factor that may lead to changes in policy and therefore—it is hoped—to improvements in economic welfare. Policy research no doubt contributes to the processes of policy change, and narrative discussion of policy changes does identify that the ideas generated by the policy research are an important part of the mix. Nevertheless, as Anderson (2003) pointed out in his review of the model-based policy research of the International Food Policy Research Institute (IFPRI), narratives and survey findings do not provide convincing evidence that policy changes are a direct consequence of the research that might have been carried out.

The attribution problem may turn out to be fundamentally insoluble, always requiring a subjective estimate of the contribution of policy research to a particular policy change.

An alternative approach to attribution is to follow research such as that of Ryan (1999) who argued that policy research brought forward beneficial policy changes that would have happened anyway. Thus, the long-term benefits of policy changes are not attributed to the research at all, but to bringing forward their timing.

#### *Circularity*

A disturbing problem in evaluating economic policy research has been pointed out by a number of authors, including Krugman (2004). The problem is that the benefits of policy research must be evaluated using the

same tools that were themselves the product of the policy research. In other words, the results of the research are used to evaluate the research.

If some policy research suggests policy *A* should be adopted rather than policy *B* (where *B* may be the status quo), and this advice is followed, what then is the value of the policy research? As it is usually impossible to construct a controlled evaluation experiment (we cannot run the economy backwards and then see what would have happened if policy *B* were in place), the advantages of policy *A* over *B* must be estimated indirectly. And the only way of doing this is to use the same sort of research that led to the preference for policy *A* in the first place.

#### *Implementation difficulties*

A number of authors have argued that Bayesian decision analysis provides the ideal framework for evaluating the effects of policy research that is essentially about generating information; see Lindner (2004) and Gardner (2004). While this approach offers some valuable insights, it is somewhat difficult to implement, as it requires some means of obtaining 'before' and 'after' probabilities from policy makers.

#### *Valuation problems*

As pointed out by Timmer (1997), economic and related policies are acts of government and should be designed to solve problems that private agents are unable to solve by themselves. There is inevitably, therefore, a conflict between how particular actions may be valued in a market and their true social value.

Whereas the value of technical developments can be imputed using observed market prices and costs, the value of policy changes that are public goods cannot easily be valued by the same methods. Often, however, the approach to policy-research evaluation involves converting the effects of policy change into some form that can be expressed using market values. For example, policy research that leads to changes in trade policy (the removal of an import barrier or export subsidy) can be evaluated by assessing the impact of the change in the—originally protected—product market and related markets.

#### *The 'poison well' problem*

As a number of authors—including Krueger (2004)—have pointed out, not all the ideas generated by economic research are worth implementing; indeed, implementing some may be dangerous. While products with no particular value to anyone tend to die out in the market, this is not

necessarily the case for bad ideas. Evaluation of policy research will inevitably involve judgments about the usefulness of the ideas that emerge.

## 2.3 The value of policy research

Nevertheless, even with the aforementioned problems, there is a widespread belief that policy research is valuable. One reason for this is the steadily increasing demand for economists in government and related agencies. Another is the findings of the successful evaluation efforts that point to the possibility of significant returns.

### 2.3.1 Value of policy research from international studies

Table 1 summarises three recent studies that attempted to quantify the benefits of particular policy research. While the results vary considerably (both between and within the studies) they basically show very healthy returns. These returns are of the same broad order of magnitude as those found by Alston et al. (2000a,b) in their meta-analysis of agricultural technical R&D.

**Table 1.** Examples of estimated returns to policy research

Research	Cost of research (\$m, current Australian)	Benefit–cost ratio (ratio to 1)	Internal rate of return (IRR) (%)
International Food Policy Research Institute (IFPRI) research into rural rationing in Bangladesh	7.4	12–60	57–259
IFPRI research into rice export policy in Vietnam	1.3	45–91 <sup>a</sup>	8000–8800 <sup>b</sup>
Research into pesticide use in the Philippines	0.8 <sup>c</sup>	3–8 <sup>c</sup>	16–29

<sup>a</sup> Returns to Vietnam only

<sup>b</sup> Because of the timing and short duration of benefits, the IRR is misleading in this case.

<sup>c</sup> Approximate

Sources: Ryan (1999, 2004); Babu (2000); Norton and Alwang (2004).

### 2.3.2 Technical versus policy projects in the ACIAR portfolio

Table 2 summarises the benefit–cost ratios (BCRs) for a range of technical and policy-related ACIAR projects. The BCRs for the technical projects are taken from recent ACIAR impact-assessment reports, as are those for most of the policy projects, except for the Chinese beef project, the BCR for which is calculated in Chapter 4.

While the policy projects have a narrower range of benefits, and do not seem to have some of the very high values that are apparent in the technical projects, this may be simply because there are fewer policy project estimates. Indeed, a statistical test of the distributions of the returns from each of the kinds of research shows that there is no reason to believe that they do not come from the same underlying distribution.<sup>2</sup> That is, the available evidence from ACIAR projects suggests that policy projects are just as likely as technical projects to give very good returns.

**Table 2.** Returns from technical versus policy-research projects

Project	Estimated ratio of benefits to costs
<b>Technical/scientific projects</b>	
Control of <i>Phalaris minor</i>	180
Breeding and feeding pigs	159
Hybrid acacias	145
Postharvest research and development of tropical fruits	38
Rodent control in Vietnam	25
Rust resistance in wheat	17
Breeding and quality analysis of rapeseed	14
Use and management of grain protectants	7
Sulphur testing	3.4
Improved drying of high-moisture grains	3
Footrot in Nepal	2.9
Control of bluetongue	2.3
Foot-and-mouth disease in Southeast Asia	1.7
<b>Policy projects</b>	
China beef	60
China wool	40
China grain and World Trade Organization requirements	6 to 30
Vanuatu protected areas	4.5

Source: CIE estimates based on ACIAR impact-assessment publications and project documentation.

This finding for ACIAR research is consistent with the observations for international research reported earlier. What it implies is that, for randomly chosen scientific and policy projects, there is no reason to expect the returns from the two to be significantly different. Further, as more evaluations of policy projects are undertaken, we would expect to see emerging a pattern of benefits similar to those from the technical projects.

<sup>2</sup> This is the Kolmogorov-Smirnoff test, which is designed to test the equality of two distributions. We implemented the test using the exact small sample calculation available in the STATA statistical package.

These broad findings are also consistent with examinations of the impact of policy research within Australia. The Allen Consulting Group review of Australian Research Council funding, for example, found significant returns to policy-related research despite a relatively long time lag in implementation (Allen Consulting Group 2003).

## 2.4 The nature of policy research

### 2.4.1 *The policy research process*

Some of the ways in which policy research can ultimately influence policy outcomes are illustrated in Figure 2. Immediate research outputs, particularly as undertaken in academic environments, consist of papers and books, conference presentations, and teaching and training material. These outputs find their way into the 'body of literature' on a particular subject and *may* then either be taught or picked up directly by policy advisers or practitioners. This policy advice goes into the political process and vies with many other factors (including interest groups, some of whom are themselves drawing on economic research) to determine the ultimate policy outcomes.

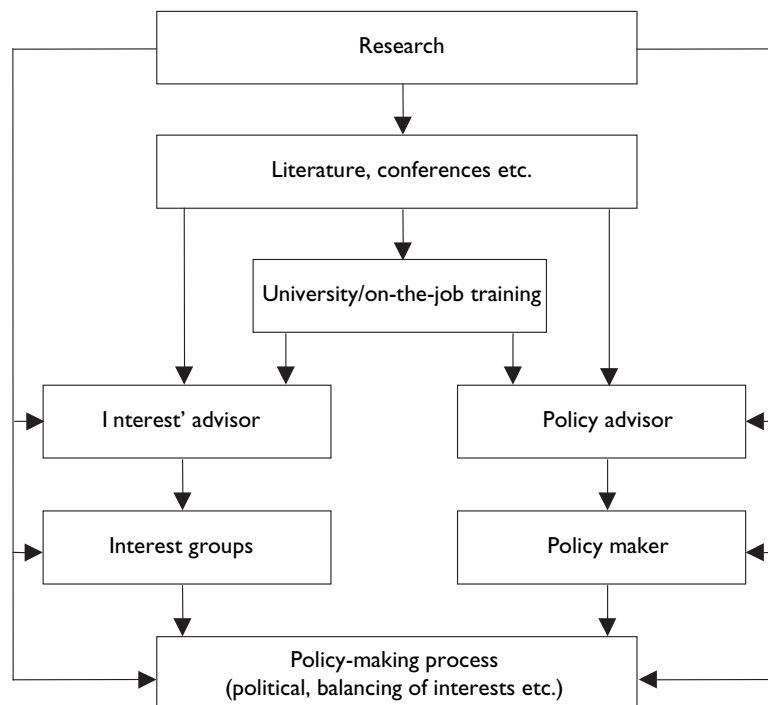
There is little doubt that particular academic publications can have a significant influence on policy thinking. It is also true, however, that the publications alone have little impact unless picked up by a policy practitioner.

The crucial assumption implicit in the design of much economic research, particularly that which finds its way mostly into publications, is that the policy advisor or practitioner will be able to find what they need in the 'body of research' that is represented by the publications. Further, it assumes that they will be able to interpret and use this information appropriately.

Ultimately, policy will change only where there is an alignment of interests, just some of which will be driven by rational economic concerns.

Much of the policy research of the type that ACIAR has funded follows the rather indirect path from research, through publication and on to policy advisors and researchers.

But as Figure 2 also illustrates, it is possible for policy research to influence the policy-making process more directly, without necessarily going through the publication cycle. Research that takes place within, or is

**Figure 2.** Research and the policy process

commissioned by, government departments, often takes this more direct route. Investigation of a particular issue is directly requested by a policy maker, to whom the research advice then goes directly, without necessarily appearing in any publication.

Indeed, a great deal of policy analytical knowledge and research is never placed in the public domain. In Australia, for example, before Australia initially choosing to be a party to the Kyoto Protocol on greenhouse gas emissions (in 1996)<sup>3</sup>, there was a great deal of sophisticated analysis (enough to sustain several PhDs) that never appeared in the public domain.

#### 2.4.2 *A taxonomy of economic research*

Table 3 provides a broad taxonomy of economic research. It illustrates four broad categories of research:

- research that leads to new economic information
- research that itself leads to technical change

<sup>3</sup> Subsequently, Australia did not ratify the protocol.



- research that contributes to the formulation or implementation of government policy
- research that contributes to capacity building.

This last category is somewhat different in nature to the other three, but is included here as a reminder that capacity building is a crucial element of policy formulation in developing countries.

**Table 3.** The taxonomy of economic research

New economic information	Contributions to technical change	Contributions to public policy	Contributions to capacity building
<b>I1</b> Price and quantity information	<b>T1</b> Production and management information	<b>P1</b> Policy paradigms and institutional innovation	<b>C1</b> In government
<b>I2</b> Information on markets and institutions	<b>T2</b> Product introduction and marketing	<b>P2</b> Tools for policy analysis	<b>C2</b> In academic institutions
<b>I3</b> Aggregate economic indicators	<b>T3</b> Improved methods for R&D management	<b>P3</b> Policy impact assessment	<b>C3</b> In the private sector

*New economic information*

Research that generates new economic information may generate knowledge about:

- the prices and quantities of goods and services produced and exchanged within a country or between countries—an example of this sort of research is ACIAR project ADP/2001/092 on the role of fish in world food
- the workings of particular markets and institutions within a country—an example is ACIAR project ANRE1/1992/028 on the emergence and integration of regional grain markets in China
- aggregate economic indicators, including GDP, the balance of payments and so on—this branch of research is largely irrelevant to ACIAR’s projects.

*Technical change*

Economic research can also lead directly to technical change in a number of ways including:

- through the generation of information on how to produce particular goods, or how to best manage particular production processes—an example of this sort of research is ACIAR project ASEM/1998/060 on China's wool textile mills
- by generating information on the introduction and marketing of new products or groups of products
- developing methods for improved R&D management.

The last-mentioned area of economic analysis was not evident in our review of past ACIAR policy projects. It is, however, an important component of some ongoing projects including ASEM/2002/103, 'Enhancing project impact and science capability through ongoing evaluation'.

*Contributing to policy*

Economic research can also contribute to the development of public policy through:

- research into policy paradigms and institutional structures—as will be noted below, this branch of research is very common within ACIAR's policy research portfolio
- the development of particular tools for policy analysis—this includes the development of particular economic models, which has been the case in a number of ACIAR projects
- the analysis of the impacts of particular policies or policy proposals—examples of this type of research include ACIAR project ADP/1994/008 on the implications of different price-support schemes for tree crops in Papua New Guinea.

*Contributing to capacity building*

Policy research, particularly collaborative research, can contribute to building the capacity of researchers and policy makers in partner countries. Appropriately structured, such capacity building can be extremely powerful.

Like any taxonomy, this taxonomy is far from perfect, and the lines between different categories are often blurred. Nevertheless, it is a useful way of categorising and thinking about the ways in which policy research may have economic effects.

## 2.5 The ideal policy project

Table 4 sets out some broad, in-principle steps that would be required for an 'ideal' policy project, thereby providing a useful benchmark against which to evaluate policy projects.

**Table 4.** Steps and requirements for a successful policy project

Step	Key activities	Requirements for success
1. Identify problem	<ul style="list-style-type: none"> <li>• Collect data</li> <li>• Interact with stakeholders</li> <li>• Understand magnitude</li> </ul>	<ul style="list-style-type: none"> <li>• Clear problem definition</li> <li>• Real problem</li> <li>• Manageable problem</li> <li>• Understanding of policy-making constraints and processes</li> <li>• Conducive policy environment</li> <li>• Capacity in government</li> </ul>
2. Analyse problem	<ul style="list-style-type: none"> <li>• Develop tools</li> <li>• Use/improve existing tools</li> <li>• Develop links with key policy agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Engage expert and experienced analysts</li> <li>• Ensure analytical credibility</li> </ul>
3. Develop solutions	<ul style="list-style-type: none"> <li>• Further use of tools</li> <li>• Interaction with stakeholders</li> <li>• Look at cross-country experience</li> <li>• Enhance links with policy agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Engage policy practitioners</li> <li>• Test solutions</li> </ul>
4. Disseminate solutions	<ul style="list-style-type: none"> <li>• Condense into clear policy recommendations</li> <li>• Begin capacity building</li> <li>• Work with policy agencies</li> </ul>	<ul style="list-style-type: none"> <li>• Clear and convincing policy brief</li> <li>• Links to appropriate parts of government</li> </ul>
5. Implement and maintain solutions	<ul style="list-style-type: none"> <li>• Identify key policy-making targets</li> <li>• Monitor</li> <li>• New problems, go to step 1</li> </ul>	<ul style="list-style-type: none"> <li>• Continued capacity in government</li> </ul>

The issues involved in ensuring a successful policy project can be summarised as follows:

- The political environment in the recipient country must be receptive to the policy changes being advocated in the project. The degree of receptiveness will be determined by economic conditions at the time, the perception that a policy change is needed to improve them and the political will among decision-makers to embark on the change.

- Receptiveness is essentially about timing. The prospect of policy reform will be enhanced the greater is the underlying momentum for change. In the case of India, for example, policy projects aimed at achieving agricultural trade liberalisation would have had a much lower probability of success in the years before the early 1990s. Up to that period, the dominant economic paradigm was growth based on import substitution.
- This does not mean, however, that work should not be undertaken on the potential for reforms in areas that are not currently in the spotlight, but in such circumstances it should be recognised that the lead-time between completion of a project and policy reforms will be very long. That said, policy analysis that is too long on the shelf before the time becomes ripe for its implementation is likely to get lost. There is clearly a need for balance in choosing areas of policy research. On the one hand, it is important to keep analysis going on particular policy issues while, on the other, there is a risk of the research having no impact if it is too far ahead of political acceptability. Achieving this balance will be a major element in determining the overall benefits of policy research.
- The project participants must have credibility in economic policy circles in the country. No matter how good the analysis, economic policy recommendations will carry even more weight if they are advocated by persons who have earned through their previous work the respect of decision-makers.
- The analysis of the policy issue must be credible. The arguments for policy change need to be persuasive. Credibility is greatly enhanced by sound analysis of the benefits of reform for the economy as a whole, and the sectors and households that are likely to win or lose.
- Policy analysis must be effectively promoted throughout the appropriate channels in the country—academia, the various policy institutes, political advisors and politicians. Ideally, this promotion should also spill over into the wider community. Politicians will be much more comfortable with recommendations that they know enjoy some measure of community support. Persuasion is critical. The policy message must be presented in a way that has the greatest prospects for successful transmission to decision-makers.
- The project should not be overly ambitious. There is a tendency in economic policy analysis to want to cover all the issues. This can lead to a superficial treatment where the key messages are not driven home

with any conviction. It is better to have a greater depth of analysis and sufficient commitment to fully developing and testing a small set of proposed policy reforms than a superficial treatment across broader areas.

- The project should not crowd-out economic policy analysis that would otherwise have happened within the country. In developing countries especially, the pool of experienced policy analysts with the credibility needed to get their message accepted is generally small. Such people have a tendency to become over-stretched in their work agenda, with the result that they end up doing many things poorly rather than a few well. It is important that ACIAR projects fill gaps by commencing work that otherwise would not have happened, rather than competing with existing projects in the same area.
- The policy analysis must be relevant to the circumstances of the country at that time. There is no point in researching policy areas that are only of peripheral interest to the economic agenda of the day.

## 2.6 Lessons from the literature to date

The body of research undertaken on the impacts of policy research, in particular the research undertaken at IFPRI, has led to a number of broad lessons. These are discussed in Ryan and Garrett (2003) and are outlined below.

- **Quality and independence of research.** High-quality and independent (from political influence) research seem to be very important in influencing the acceptability of policy advice.
- **Responsiveness and communication.** IFPRI has found it important to actively engage with policy makers (key ministries, for example) through all stages of a project. This includes responding to policy-makers emerging needs and planning a clear communications strategy.
- **Long-term collaboration.** A long-term presence, with researchers working in-country builds understanding and trust and increases the likelihood that the policy research will have positive impacts.
- **The need for a conducive policy environment.** Policy makers, and the policy process in general, need to be receptive to economic-policy research. If this is not the case, it is unlikely that the research will have any impact.

- **The importance of relatively simple analysis.** Often policy makers in developing countries do not require complicated theoretical or empirical analysis for major breakthroughs in policy understanding. The research should satisfy the demand of the policy makers, rather than the publishing preferences of the researcher.
- **Choice of partners and collaborators.** This choice is obviously crucial, both in terms of the capacity of the partners to understand the policy analysis being undertaken, and in terms of their capacity to engage in the policy process and deliver policy change.

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## 3 Meta-analysis of ACIAR's policy research

### 3.1 The research projects

This chapter is concerned with an overview, or meta-analysis, of around 47<sup>4</sup> policy-related projects that ACIAR has funded over the past 10–12 years. The analysis that follows covers completed policy-research projects for the most part.

In real terms (2004 Australian dollars), total ACIAR expenditure on these projects amounted to \$21 million. This is equivalent to just over half a single year's research spending (taking 2002–03 as a base) or (in real terms) to just over 10% of research spending over the past 4 years. It is probably equivalent to slightly less than 5% of total research expenditure over the past 10 years.

The projects also attracted in-kind or matching funding of \$11 million in total. Average ACIAR funding per project was \$440,000 and, with average matching funding of \$230,000 per project, total resources per project averaged \$670,000.

It is hard to assess the relative magnitude of this research (in terms of policy research elsewhere), but it is interesting to note, for example, that this funding per project is somewhat lower than the funding provided to the research projects summarised in Table 1.

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<sup>4</sup> The exact number of projects in the database is 47, but not all of these have complete information, and so not all 47 are used in the comparisons below.

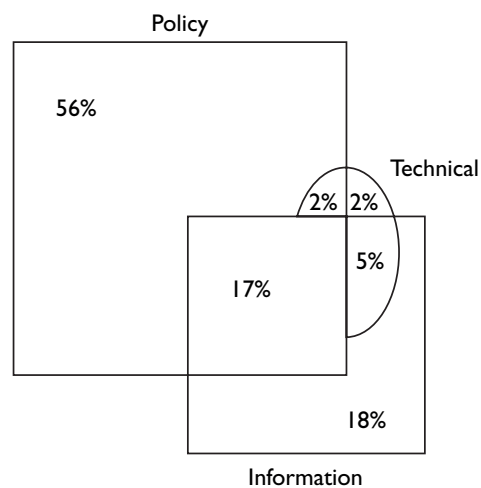
It is also interesting to note that IFPRI's Trade and Macroeconomics Division received funding equivalent to \$22 million in current Australian dollars between 1994 and 2002—CIE calculations based on Anderson (2003).

### 3.2 Nature of the research

#### 3.2.1 Broad categories

Figure 3 gives the broad breakdown of ACIAR's policy research in terms of the taxonomy set out in Table 3 (for simplicity, we have omitted the capacity-building category). The relative proportions are all expressed in terms of ACIAR funding.

**Figure 3.** ACIAR policy-related projects categorised by type of research<sup>a</sup>



<sup>a</sup> Expressed as a proportion of total ACIAR funds (in real terms) devoted to policy projects since 1988. Data source: CIE estimates based on ACIAR project documents

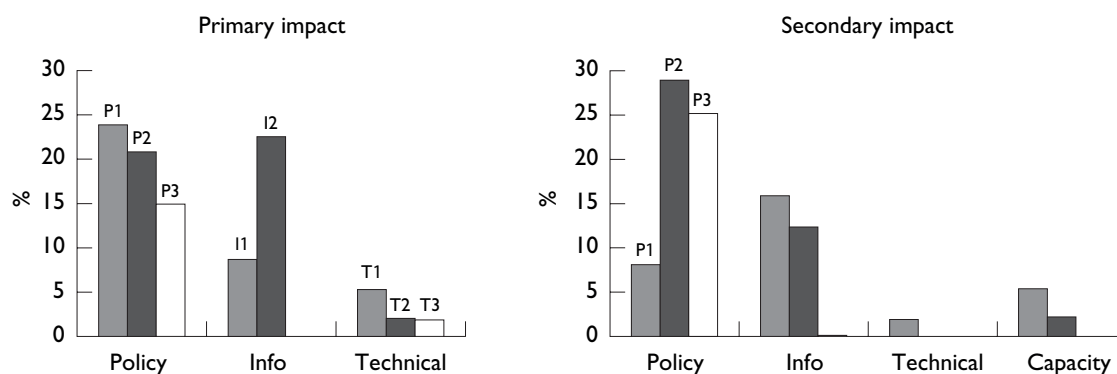
Figure 3 indicates that around 56% of the projects (in terms of funds) focused solely on policy-related research. An additional 17% of projects were concerned with a combination of policy research and research generating new information, while 18% of projects were primarily concerned with generating new economic information.

Some 9% of projects involved economic research that made a contribution to technical change. More than half of this was in combination with either new economic information or policy research.

### 3.2.2 Categories in more detail

Figure 4 provides a further breakdown of the characteristics of the policy research. It divides each broad area into three components and distinguishes between the primary and secondary impacts of the research. The figure illustrates the overall dominance of policy-related research, particularly in the category P2 (tools for policy analysis). New economic information is also important, particularly in terms of information about markets and institutions. Capacity building appears as a secondary impact, but only in a relatively small proportion of projects.

**Figure 4.** Detailed categorisation of ACIAR policy-related research<sup>a</sup>



<sup>a</sup> Expressed as a proportion of total ACIAR funds (in real terms) devoted to policy projects since 1988.  
Data source: CIE estimates based on ACIAR project documents

### 3.2.3 Categories by country

The relative importance of different categories of research varies significantly by country. For example:

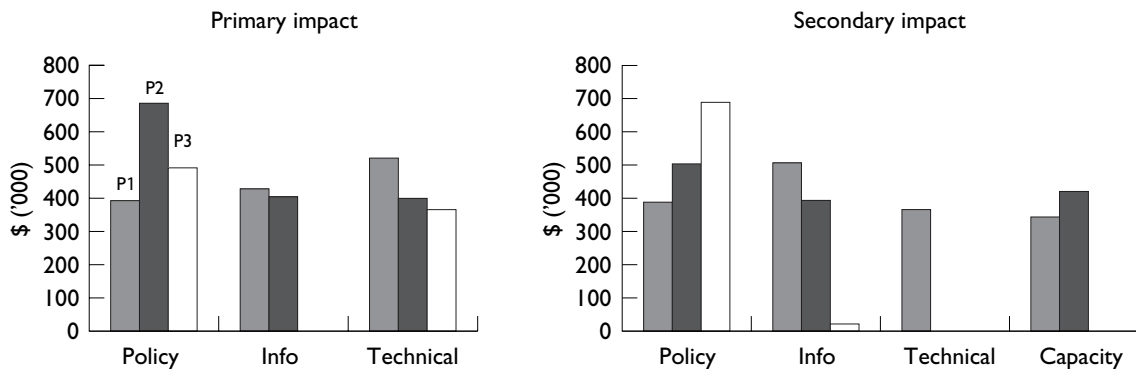
- in China, research on new economic information dominates (receiving up to half the funds), while policy research receives about one quarter
- in Indonesia, policy research dominates, with a combination of policy research and capacity building being very important (around 30%)
- in Vietnam, research is fairly evenly distributed between policy research, new economic information and a combination of the two.



### 3.2.4 Average funding by category

Figure 5 illustrates the average funding per project for each of the impact categories. Funds are fairly evenly distributed, with the policy categories P2 and P3 receiving slightly more than the average.

**Figure 5.** Average ACIAR policy-project funding, grouped by impact category<sup>a</sup>



<sup>a</sup> Average funding based on total ACIAR funds spend on projects (in real terms)  
Data source: CIE estimates based on ACIAR project documents

### 3.2.5 Funding by country

Figure 6 summarises average funding by country, both in terms of shares of total funding, and in terms of average funding per project. The largest shares of funds have gone to research in China, Indonesia and Vietnam, with Papua New Guinea and India following closely.

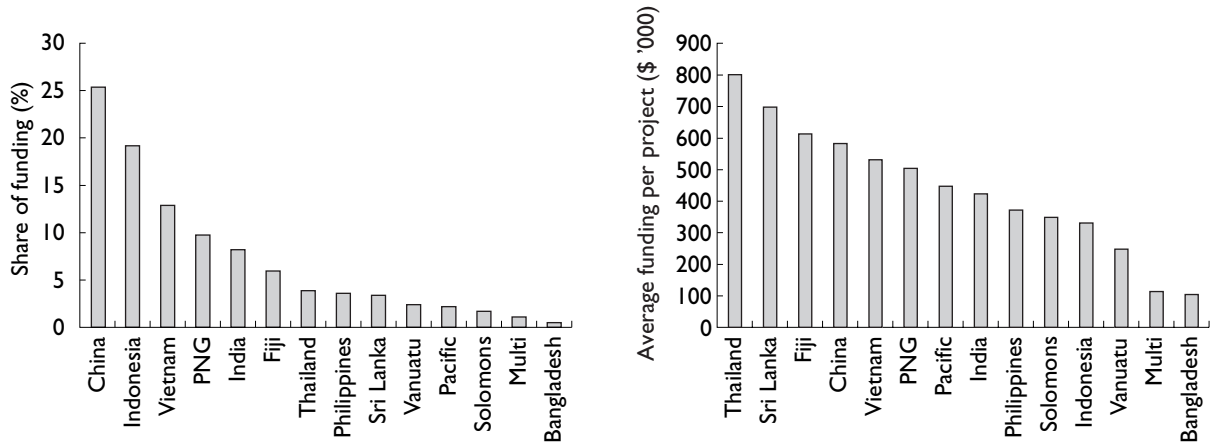
In terms of average funds per project, Thailand and Sri Lanka top the funding, followed by Fiji, China and Vietnam. Other countries have received relatively small average project funding.

### 3.2.6 Funding by commodity

Figure 7 summarises policy-project funding by commodity, both in terms of shares and average funding per project. Not surprisingly, most funds were spent on multi-commodity projects, or on areas of research that spanned all commodities.

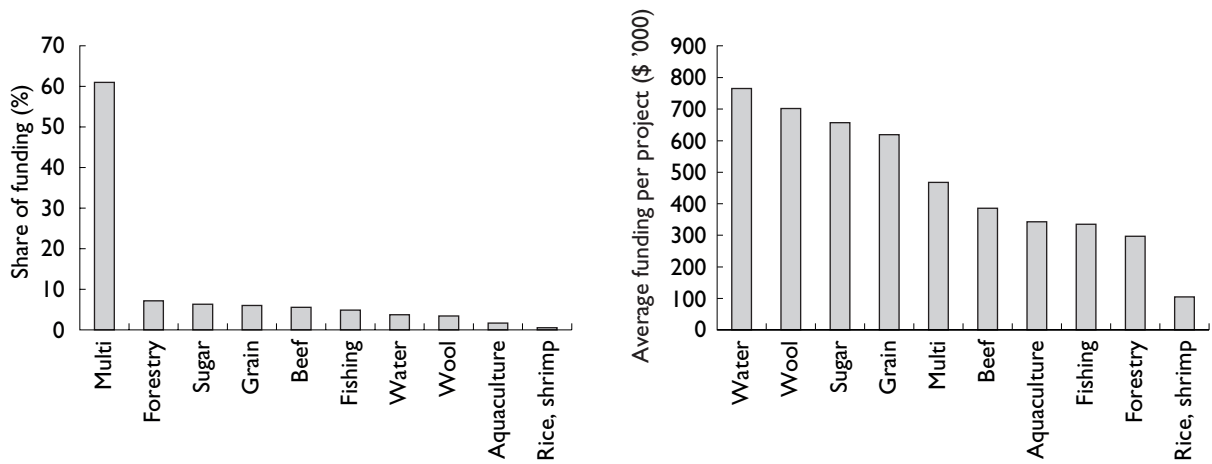
The highest average project funding has been on projects related to water issues, followed by wool and sugar.

**Figure 6.** Country distribution of ACIAR funding for policy projects<sup>a</sup>



<sup>a</sup> Average funding based on total ACIAR funds spent on projects (in real terms)  
Data source: CIE estimates based on ACIAR project documents

**Figure 7.** ACIAR funding of policy projects, grouped by commodity<sup>a</sup>



<sup>a</sup> Average funding based on total ACIAR funds spend on projects (in real terms)  
Data source: CIE estimates based on ACIAR project documents

### 3.3 Documentation issues

We have made a subjective evaluation of the quality of documentation associated with the projects. Three different forms of ranking were used.

- First, we ranked the overall quality of documentation into three categories (high, medium and low) based on the clarity of discussion of the projects, objectives and outcomes and the completeness of the documentation.
- Second, we provided a 'yes' or 'no' categorisation of whether we considered that the documentation was sufficient to give a good indication of what actually took place during the course of the project.
- Third, we ranked the quality of the economic-impact discussion in the documentation, again using the categories of high, medium and low. This ranking was based on how considered and convincing the impact discussion was found to be. It is important to note that most of the impact discussion in the project documents is in fact ex-ante discussion, so it is not concerned with demonstrating an actual impact but with setting out the expected likely impacts of the project.

Since these rankings are subjective, they should be interpreted with a degree of caution.

Using these evaluations, we found that (in terms of ACIAR funds spent):

- projects accounting for 31% of funds had 'high'-quality documentation, projects accounting for 55% of funds had 'medium'-quality documentation, and projects accounting for 13% of funds had 'low'-quality documentation
- projects accounting for 78% of project funds scored 'yes' in terms of the overall sufficiency of the documentation
- in terms of the quality of the ex-ante impact discussion, the high, medium and low categories each accounted for around one third of projects; that is, one third of the projects (by value) had a convincing and well-constructed discussion of the ex-ante expectations of project impacts. The remainder of the projects had a less convincing or cursory treatment of the expected project impacts.

The differences in the quality of project documentation do not appear to be related to the quantum of funds devoted to the project. There are some highly funded projects with very poor documentation, and vice versa.

The main factor determining the quality of documentation appears to be the extent of external project funding. The projects that scored high on quality of documentation had three times the external funding of the projects that scored low. A similar pattern is evident for projects that scored 'yes' in the overall judgment as to whether the documentation was sufficient to provide a clear idea of what the project was about.

Interestingly, there is no difference in external funding for the projects that scored high versus low in terms of the quality of the ex ante impact discussion.

### 3.4 Ex-ante quantification of impacts

Around 32% of projects (by value, in terms of both total and ACIAR funding) attempted some form of quantification of potential project benefits (Table 5). On average, projects that attempted quantification had a slightly higher total project value. The average total value for those projects that did attempt quantification was \$780,000, compared with total funding of \$625,000 for those that did not. The average estimated benefit for the projects that attempted quantification was \$24 million. Thus, there was an average ex-ante expected BCR of around 30 to 1. With a smooth accrual of benefits, this implies an internal rate of return (IRR) of around 150%.

**Table 5.** Project participants ex-ante expectations of returns to ACIAR policy-research projects

Measure	Estimate
Proportion of projects attempting quantification	32%
Average funding	\$780,000
Average expected benefit	\$24 million
Average benefit–cost ratio (BCR)	30:1
Average internal rate of return <sup>a</sup>	150%
Implied BCR for whole portfolio <sup>b</sup>	9.8:1

<sup>a</sup> Assuming smooth accrual of benefits

<sup>b</sup> Assuming that the projects that did not attempt quantification generated zero benefits

Source: CIE estimates based on project documentation

The total ex-ante benefits for the projects that estimated a benefit was \$307 million which, set against the total funding of \$31 million for all projects covered by this analysis, implies a BCR of 9.8 to 1. Based on these ex-ante estimates, even if 68% of the funding (that is, the projects that did not attempt any ex-ante quantification) generated no benefits, the entire portfolio would still be expected to generate a healthy return (an IRR of around 50%).

Of course, there is no guarantee that ex-ante expectations will be realised. Nor does the fact that projects did not attempt ex-ante quantification mean that they will not ultimately realise some form of benefit—only that the benefit calculation was difficult to make.

In addition to the subjective evaluations of documentation set out above, we also assessed the documentation for whether there was ‘convincing’ evidence of impacts contained within the documentation itself. By impact we mean an actual change in policies or practices as a result of the project.

Around 20% of projects had convincing evidence of impacts, and around 6% of projects that attempted ex-ante quantification had evidence of impacts (Table 6). For the projects that had evidence of impacts, this came mostly from the later stage annual reports within the documentation, or in a limited number of cases from actual impact statements. This implies that, for some projects, the time lag for impact is within the life of the project.

**Table 6.** Ex-ante expectations of returns and evidence of impacts of ACIAR policy-research projects

Measure	Estimate
Proportion of projects with convincing evidence of impacts	20%
Proportion of projects that attempted quantification with evidence of impacts	60%
Benefit–cost ratio (BCR) for projects with evidence of impacts	15:1
BCR for projects with no evidence of impacts	60:1

Source: CIE estimates based on project documentation

It is not surprising that project documentation containing convincing evidence was restricted to only a small proportion of projects, because in most cases the purpose of the documentation was not to show evidence of impacts, but to report on the progress of the projects. It is interesting, nevertheless, that projects that attempted quantification (ex ante) were three times more likely to be able to show evidence of impacts (ex post). There are several possible reasons for this. It is possible that the discipline of attempting to quantify impacts made the project participants more

aware of where the impacts were likely to emerge, allowing them to focus their reporting on these areas. Alternatively, this finding may reflect the interests and abilities of the particular researchers involved in the project.

Further, projects with evidence of impacts tended to have a lower ex-ante BCR than did projects with no evidence of impacts. While this does not necessarily mean that their ex-post benefits would be lower, it does indicate that some care should be taken with ex-ante estimates of benefits. Some of the higher estimates evidently involve some speculation which, at the time of the project documentation, was not backed up with actual impacts.

### 3.5 Output summary

The main measurable outputs of the projects are publications and workshops.

In total, the research represented by this portfolio has produced:

- 28 books and monographs
- 162 published papers (including journal articles and chapters in books)
- 117 conference papers
- 181 project papers
- 21 models
- 1197 person-days of training

In a completely unweighted sense (i.e. not distinguishing between the relative quality of different outputs) this implies an average cost of \$62,000 per unit of output (excluding the person-days of training). This is comparable with an equivalent cost per unit of output from IFPRI's Trade and Macroeconomics Division of \$85,000.

## 4 Case studies

In addition to the overview analysis of ACIAR's policy projects, we undertook three case studies of 'clusters' of ACIAR's projects. The projects and countries that were the subject of these case studies are summarised in Table 7.

**Table 7.** ACIAR policy-project clusters used for case studies

Project areas and identifiers	Description
<b>China: Beef and wool cluster</b>	
ADP/1998/011	Economic aspects of raw wool production and marketing
ASEM/1999/060	China wool textile mills
ASEM/1995/002	Analysis of socioeconomic and agribusiness developments in the Chinese beef and cattle industry
<b>Indonesia: Policy modelling cluster</b>	
ANREI/1990/038	Analysis of policies affecting the Indonesian agricultural sector: a multiple modelling approach
ANREI/1993/705	Analysis of growth and stabilisation policies in Indonesia—a linked modelling approach
ADP/1994/049	Policy analysis of linkages between Indonesia's agricultural production, trade and environment
<b>India: Trade reform cluster</b>	
ADP/1994/026	Accelerating growth through globalisation of Indian agriculture
ADP/1998/091	Equity driven trade and marketing policy strategies
ADP/2000/004	International food safety regulation and processed food exports: a comparative study of India and Thailand

Some of the projects listed in Table 7 have been reviewed previously, and in undertaking the case studies it was important to make clear to the project participants that the purpose of our work was to draw lessons from particular projects for the overall portfolio of policy-related research.

As the primary objective was to draw lessons for applications to the policy portfolio, we have not evaluated most of the projects per se (in the sense of a conventional benefit–cost analysis) but have used their outcomes to draw lessons. In some cases, however, we have been able to build on the work of project participants to estimate a BCR.

The three case studies represent quite different areas of policy research, ranging from information gathering (for China), to the development of tools

for policy analysis (in the case of Indonesia) to relatively conventional analysis and explication of policy interventions (in the case of India).

Because of these differences, the lines of inquiry followed in each case study are different, and reveal different aspects of policy research. Nevertheless, a common filter through which we have interpreted these case studies is the overall classification of policy research in Table 3, as well as the notion of an ideal research project set out in Table 4.

## 4.1 China

Broad details of the projects in the Chinese cluster are summarised in Tables 8–10.

**Table 8.** Summary details of ACIAR project ADP/1998/01 I

Item	Content
Project title	Raw wool production and marketing in China
Collaborating agencies and lead researchers	University of Queensland, Professor John Longworth
Budget	\$766,167
Available documentation	Impact assessment by A.S. Watson (July 1998)
Context	Restrictions on Chinese wool imports and potential for Australian exports
Objectives	<ul style="list-style-type: none"> <li>• identify and quantify technical, economic and institutional constraints on the production and marketing of raw wool in China</li> <li>• establish a basis for long-term collaborative research with Chinese scholars on wool economics in China</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Publications</li> <li>• Changes in import policy</li> </ul>
Proposed follow-up	<ul style="list-style-type: none"> <li>• Led into subsequent projects</li> </ul>

### 4.1.1 Project overviews

These three projects are being undertaken by the China Agricultural Economics Group (CAEG) in the School of Natural and Rural Systems Management at the University of Queensland. The original impetus for the line of research that emerged through the wool and beef studies was the work on the beef industry in Japan undertaken by the project leader (Professor Longworth).

This earlier work was valuable in understanding the underlying reasons behind particular trade policies, and contributed to the relaxation of Japanese beef import quotas. This led to ideas for the development of the



**Table 9.** Summary details of ACIAR project ASEM/1995/002

Item	Content
Project title	Analysis of socioeconomic and agribusiness developments in the Chinese beef and cattle industry
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• University of Queensland, Professor John Longworth</li> <li>• Chinese Academy of Agricultural Sciences, Professor Zhang Cungen</li> <li>• Chinese Academy of Social Sciences, Professor Chen Jiyuan</li> <li>• Chinese Ministry of Agriculture, Lu Xiaoping</li> </ul>
Budget	\$669,405
Duration	1997 to 1999
Available documentation	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Annual reports</li> <li>• Final report</li> <li>• Review report (2001)</li> <li>• Impact statement (2004)</li> </ul>
Context	Very little known about the overall industry, but with some apparent rapid expansion
Objectives	<ul style="list-style-type: none"> <li>• Comprehensive overview of developments in Chinese beef and cattle industries</li> <li>• Establish basis for policy-making strategies to maximise the benefits from this sector</li> </ul>
Proposed methods	<ul style="list-style-type: none"> <li>• Surveys and collaborative research</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Publications in Chinese: 4 books, 8 chapters, 17 journal articles, 2 working papers, 2 theses</li> <li>• Publications in English: 3 books, 2 book chapters, 5 journal articles, 4 research reports, 16 working papers, 13 conference papers, 6 theses.</li> <li>• Project workshop</li> <li>• Roundtable discussions</li> <li>• Models of household and feedlot cattle production</li> </ul>

**Table 10.** Summary details of ACIAR project ASEM/1998/060

Item	Content
Project title	China wool textile mills: economic analysis of fibre-input/textile-product selection and new processing technologies
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• University of Queensland, Professor John Longworth</li> <li>• Research Centre for the Rural Economy, Chinese Ministry of Agriculture, Ke Binsheng</li> </ul>
Budget	\$1,084,321, of which ACIAR \$699,622
Duration	Started 2001, ongoing
Available documentation	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Annual reports (2001, 2002, 2003)</li> </ul>
Context	Economic reforms posing challenges to the viability of Chinese mills
Objectives	<ul style="list-style-type: none"> <li>• Analyse impact of fibre-input and product selection on mill profitability and viability</li> <li>• Identify user preferences</li> <li>• Examination of receiving and marketing systems</li> <li>• Examine costs of imported wool</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Project is ongoing</li> </ul>

first wool project, which appears to have contributed to relaxation of Chinese wool import policy.

The beef project had a slightly different focus but basically it examined in detail the workings of the Chinese beef industry.

The first wool project and the beef project fall very much into the information-collection category of policy research. They were both concerned with understanding the workings of particular industries, identifying their strengths and weaknesses, and making recommendations for their development.

The second wool project is more technical and involves economic research that will improve the operations of the industry.

#### 4.1.2 *Impacts*

The two completed projects are generally considered to have been very successful.

##### *The wool projects*

An economic assessment of the first wool project in 1998 found that its research had:

- reinforced the case for trade liberalisation in the Chinese wool industry and helped tip the balance within Chinese policy making in favour of the groups in China with an interest in trade liberalisation
- led to increased understanding of agribusiness developments within the Chinese wool industry that should help generate productivity improvements in that industry
- fostered recognition that the Chinese and Australian wool industries could be complementary rather than competitive
- generated an overall BCR of around 40 to 1.

Our interviews with individuals in China who report to the State Council strongly confirmed the view that the findings from the early wool work had helped stimulate policy changes within the Chinese Government.

The ongoing wool project is being undertaken with the Research Centre for Rural Economy (RCRE) within the Ministry of Agriculture. RCRE is the biggest think-tank within the Ministry and plays an important role in

the development of policies for the rural sector. Within the continuing process of reform, RCRE has decided to focus research effort on specific major products, such as wool, rather than more generally on the agricultural system.

In the past, the government had limited information on the wool industry, with no officially published statistics, despite the fact that wool is important in some rural areas and is a major input to a rapidly growing textiles industry. This ACIAR-funded project thus contributes to an important identified area of research within the Chinese Government.

One of the major components of this project is the development—jointly by the project partners with assistance from wool processing and marketing firms in Shandong, Gansu and Jiangsu provinces—of the CAEGWOOL model.

The core of the model identifies costs, revenues and material flows for seven processes: raw wool collection and classification; washing; wool strip making; dyeing and worsted spinning; spinning; weaving; dyeing; and finishing processes. The model provides guidance about the most-efficient production design to fill any particular product order.

There is expected to be considerable interest in the model and other project outputs. While the project has apparently not yet led directly to particular recommendations to government, the participants expect that it will, and that the advice provided will likely influence policy.

#### *The beef project*

The beef project took place at a time of considerable change for Chinese agriculture. As well as ongoing reforms of various kinds, there was evidence of changes in consumption patterns leading to a rapid increase in beef consumption and growth in livestock as a source of farm income. In addition, the Chinese Government was very interested in developing livestock industries and shifting its previous focus on pork (of which China contributes just over 40% of world production) to cattle and beef, which were considered to be much weaker industries.

Project participants observed real changes in the nature and conduct of the beef industry over the time frame of the project. There were marketing changes, a tendency towards agglomeration of beef enterprises and increased use of grading techniques for beef.

The Chinese research counterparts found the project valuable for a number of reasons. In particular, it gave them the opportunity to be involved in in-depth studies and to learn about research methodologies—particularly questionnaire design—from Australian researchers.

The beef project appears to have resulted in some relatively demonstrable impacts to date. As identified in the project's impact statement, and confirmed in our interviews in China, the research has led to:

- a switch to a more market-led approach to cattle industry development, focusing on quality control and market information
- a switch to a more circumspect approach to using beef as a development and poverty-alleviation option.

*Cost–benefit analysis for the beef project*

The impact statement for this project estimates that a 0.3% productivity improvement in the beef industry could be reasonably attributed to the project. We can use the economy-wide model of the Chinese economy (developed as part of ACIAR project ADP/1998/128) to estimate the net change in Chinese income that has resulted from the project.

Simulations from the model indicate that a 10% productivity improvement in the beef industry leads to an increase in Chinese income of 0.02%. This increase accounts for both the flow-on effects of the increased beef productivity, and the opportunity cost of the additional resources used to expand the industry following the productivity increase. It also accounts for the increased consumer benefits of greater availability of beef.

This 0.02% increase in income can be converted to dollars using current estimates of Chinese national income. The conversion is made using a purchasing power parity (PPP) exchange rate, rather than the Chinese market exchange rate, which does not accurately reflect true income in China.

On the cost side of the project, it is important to consider not only ACIAR's project expenditure (which was around \$670,000) but also the resources contributed by the Chinese in undertaking and disseminating the research. We do not have accurate estimates of this amount, but assume that it is between 2 and 4 times the Australian expenditure. The ACIAR costs are already expressed in international dollars; the Chinese costs are converted to international dollars using the same PPP exchange rate as for the conversion of benefits.

Table 11 shows the BCR for the project, using a discount rate of 5% and assuming the benefits accrue annually for a maximum of 10 years. It gives a range of ratios depending on assumptions about the overall productivity increase and the extent to which ACIAR costs are multiplied up to give total costs. The BCRs range from 12:1 to 156:1, with an average value of 60:1.

**Table 11.** Benefit–cost ratios from ACIAR beef market policy research in China under various assumptions<sup>a</sup>

Scaling factor for going from ACIAR costs to total costs	Assumed beef industry productivity improvement		
	0.5%	0.25%	0.1%
2	156	78	31
4	59	29	12

<sup>a</sup> From the Chinese model, a 10% increase in beef productivity leads to an increase in Chinese income of \$US1.15 billion using a PPP exchange rate of 4.7 (based on current World Bank estimates). Expressed in Australian dollars, a 0.25% increase in beef productivity leads to a \$298 million increase in Chinese income. Assuming a cost-scaling factor of two leads to total project costs (in international dollars) of \$3.8 million.

Source: CIE estimates

This is clearly a very healthy return from the project. It is also likely to be an understatement of total returns, because it does not account for other, one-off benefits of around \$12 million claimed in the project impact statement.

#### 4.1.3 *Receptiveness of the policy environment*

The Chinese projects have been undertaken during a time of considerable reform and opening-up in China. Indeed, the Chinese administration seems particularly keen on ‘getting things right’ in agriculture. The Chinese researchers we spoke to were very critical of policy mistakes made in the past, and eager to contribute to the development of more sensible policies in the future.

China also has a receptive policy environment in the sense that it contains a unique structure of research and policy development. The various academies involved in the projects—the Academy of Sciences, the Academy of Social Sciences and the Academy of Agricultural Sciences—are clearly very influential in the Chinese policy development process. There are no direct counterparts of these bodies in Australian policy making.

Individuals within the academies are all highly qualified and therefore very receptive to new ideas and techniques. Furthermore, they usually have important links into policy-making processes.

#### 4.1.4 *Credibility of the researchers*

The researchers on both the Chinese and Australian side have very high credibility.

The Chinese researchers clearly held the Australian team in very high regard. By the time of the beef project, this team had developed considerable expertise in China and had built up good working relationships across a number of organisations involved in Chinese agricultural policy making.

The Chinese researchers were also well identified, in some cases having extremely long experience in Chinese agricultural policy making and a good understanding of the history of policy development in China.

#### 4.1.5 *Credibility of the analysis*

Each of the projects has amassed a large amount of data on aspects of the wool or beef industries in China. As well as providing detailed and previously unknown information about these industries, the project has generated a significant amount of more general information about rural-development processes in China.

#### 4.1.6 *Disseminating the results*

The three Chinese projects have generated a large output, with the greatest to date coming from the beef project. The vast majority of the research has also been published in Chinese, a crucial prerequisite to ensuring effective dissemination of the project results.

Results have also been disseminated through workshops and through the process of undertaking the research itself.

#### 4.1.7 *Key lessons from the Chinese case studies*

By far the strongest lesson from the Chinese case studies is the value of establishing long-term research relationships. An extremely high degree of trust and mutual regard has emerged over the course of these projects, with the obvious long-term commitment of the Australian researchers contributing to their ability to have a real impact on policy outcomes.

A second lesson is the extent to which the Chinese researchers and policy makers have valued the nature and outputs of the research. The research was very practical and tightly focused. It involved collecting information using appropriate techniques and then putting this information together in a useful way. This targeting of the research meant it was able to directly hit the mark in terms of policy impacts.

The third lesson relates to the choice of country partners. Each of the projects, but in particular the first wool project and the beef project, had excellent and well-placed counterparts. There is no doubt that this contributed significantly to the impact of the research.

## 4.2 Indonesia

### 4.2.1 Background

The Indonesian case study considers three related projects concerned with the development and use of economic models, in particular economy-wide national and multi-country models. Tables 12–14 present some basic information on these projects.

**Table 12.** Summary details of ACIAR project ANREI/1990/038

Item	Content
Project title	Analysis of policies affecting the Indonesian agricultural sector: a multiple modelling approach and application to fertiliser policies
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• Research School of Pacific Studies, ANU, Ray Trewin</li> <li>• Centre for Agro-Socioeconomic Research (CASER)—Effendi Pasandaran, Erwidodo, Pasaribu, Sjaiful Bahri</li> </ul>
Budget	\$920,186, of which ACIAR contributed \$584,501
Duration	Start: February 1992 Termination: February 1996
Available documentation	<ul style="list-style-type: none"> <li>• Project document (September 1991)</li> <li>• Proposal for extension (April 1994)</li> <li>• Termination report (February 1996)</li> </ul>
Context	Perceived limitations of partial equilibrium models built by earlier ACIAR projects and by IFPRI
Objectives	<ul style="list-style-type: none"> <li>• Estimate production functions for major crops and regions</li> <li>• Analyse Indonesian agricultural policies using an econometric model of the agricultural sector</li> <li>• Examine broader effects of policies through inter-sectoral linkages</li> <li>• Promote spill-over applications of research outcomes</li> </ul>
Proposed methods	<ul style="list-style-type: none"> <li>• Regression analysis</li> <li>• Adapt existing models</li> <li>• Construct equations linking agricultural sector to key variables or incorporate estimated values into an established multi-sectoral model</li> </ul>
Changes in project emphasis	<ul style="list-style-type: none"> <li>• Project resources channelled toward building a CGE model, INDOGEM, IFPRI collaboration sought through ANREI/1993/705</li> <li>• Project extended for 1 year</li> </ul>
Outputs (including from ANREI/1993/705)	<ul style="list-style-type: none"> <li>• 22 papers (10 conference, 6 published, 2 working, 3 others, 1 postgraduate thesis)</li> <li>• Associated training activities (not necessarily funded by project)</li> </ul>
Proposed follow-up	<ul style="list-style-type: none"> <li>• Project to extend the INDOGEM model and link it to the GTAP global-trade model to enable analysis of broader trade and environmental issues</li> </ul>

**Table 13.** Summary details of ACIAR project ANREI/1993/705

Item	Content
Project title	Analysis of growth and stabilisation policies
Collaborating agencies and researchers	<ul style="list-style-type: none"> <li>• International Food Policy Research Institute, Mark Rosegrant</li> <li>• Research School of Pacific Studies, Australian National University, Ray Trewin</li> <li>• Centre for Agro-Socioeconomic Research (CASER), Effendi Pasandaran</li> </ul>
Budget	Total budget not specified (IFPRI provided time of principal researcher): ACIAR contribution \$130,000
Duration	Start: May 1993 Termination: August 1995
Available documentation	<ul style="list-style-type: none"> <li>• Special-purpose grant proposal (undated)</li> <li>• Progress report (1 April 1994)</li> <li>• Paper by Rosegrant et al. Indonesian agriculture to 2020: source of growth, projections and policy implications, April 1997</li> </ul>
Context	IFPRI brought in to develop sectoral component of project 9038, building on previous work with CASER, so that ANU could focus on building a CGE model (INDOGEM).
Objective	<ul style="list-style-type: none"> <li>• Extend past IFPRI analysis of food crop sector to: <ul style="list-style-type: none"> <li>– link with CGE modelling of ANU</li> <li>– develop a user-friendly version of the model.</li> </ul> </li> </ul>
Methods	Not well specified in the proposal (although there is considerable discussion of the CGE work, building on a model developed by Dee (1991) to look at forestry issues.)
Changes in project emphasis	Progress report flags a shift of emphasis to incorporate a treatment of livestock in the model
Outputs	<ul style="list-style-type: none"> <li>• 2 papers (1 conference, 1 other) included in count for ANREI/1990/038</li> </ul>

**Table 14.** Summary details of ACIAR project ADP/1994/049

Item	Content
Project title	Policy analysis of linkages between Indonesia's agricultural production, trade and environment
Collaborating agencies and researchers	<ul style="list-style-type: none"> <li>• Centre for International Economic Studies, University of Adelaide, Kym Anderson</li> <li>• Research School of Pacific and Asian Studies, Australian National University, Ray Trewin</li> <li>• Centre for Agro-Socioeconomic Research (CASER), Achmad Suryani, Erwidodo</li> <li>• Centre for Strategic and International Studies, Mari Pangestu (later Tubagus Feridhanusetyawan)</li> </ul>
Budget	\$2,199,520, of which ACIAR contributed \$903,520
Duration	Start: July 1996 Termination: December 2002
Available documentation	<ul style="list-style-type: none"> <li>• Project proposal (undated)</li> <li>• First annual report (1997)</li> <li>• Fourth annual report (2000)</li> <li>• Reviewers' report (June 2000)</li> <li>• Proposal for 1-year extension (undated)</li> <li>• Final report (January 2003)</li> </ul>

Continued on next page



**Table 14.** (cont'd) Summary details of ACIAR project ADP/1994/049

Item	Content
Context	Proposed follow-up to ANRE1/1990/038: perceived need to take better account of broader trade and environmental issues given Uruguay Round agreement and sustainable development focus of most recent 5-year plan
Objective	<ul style="list-style-type: none"> <li>• Assess efficiency, distributional, environmental and welfare effects of structural and policy changes at home and abroad that may affect Indonesian agriculture                             <ul style="list-style-type: none"> <li>– Update INDOGEM model (with regional and income group disaggregation)</li> <li>– Conform INDOGEM to GTAP, to be able to take advantage of GTAP update processes</li> <li>– Disseminate skills in CGE-based empirical policy analysis among Indonesian researchers</li> </ul> </li> </ul>
Proposed methods	<ul style="list-style-type: none"> <li>• Extend INDOGEM and link to GTAP</li> <li>• Explore incorporation of environmental damage functions</li> <li>• Explore ways to value environmental impacts</li> <li>• Training programs in policy analysis</li> <li>• Analysis of Indonesian agricultural, trade and environmental issues</li> </ul>
Changes in project emphasis	<ul style="list-style-type: none"> <li>• Abandon INDOGEM and build new CGE model (WAYANG) to take advantage of developments in computing technology</li> <li>• Reduce focus on environment and emphasise analysis of issues arising from impact of East Asian financial crisis that developed in 1997</li> <li>• 1 year project extension focused on training in use of model, training teachers to teach CGE modelling, and establishing a WAYANG training unit in CSIS</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• 2 books, 6 student theses, 54 working papers, model manuals</li> <li>• Assorted training programs</li> </ul>
Proposed follow-up	There is an ACIAR project to update the social accounting matrix used in WAYANG, and a joint study with Thailand. Also, it is proposed to use some of the models developed in the overall Indonesian cluster in a project to evaluate the China–ASEAN trade agreement

The projects were linked, and their development and transition tracked a process of experimentation and evolution in approaches to modelling issues facing the Indonesian agricultural sector. An initial activity (ANRE1/1990/038), which was to explore a range of modelling approaches, evolved into a larger (in terms of resources and institutional reach) and more-structured project focused on economy-wide modelling (ADP/1994/049). Some of the non-CGE (computable general equilibrium) modelling elements proposed under ANRE1/1990/038 were handled by IFPRI under a special-purpose grant. The following were important stages in the evolution of the projects:

- It was recognised within parts of the agricultural-policy community in Indonesia that agricultural issues had to be assessed in an economy-wide framework that more effectively captured interactions within the agricultural sector and between agriculture and other sectors.

- There was growing appreciation within Indonesia of the importance of trade liberalisation and changes in regional and multilateral trading systems for Indonesian agriculture.
- The networks (personal and institutional) engaged in economy-wide analysis expanded. This occurred with respect to Australian involvement—especially with the involvement of the Centre for International Economic Studies (CIES) in Project ADP/1994/049 bringing access to networks involved in World Trade Organization (WTO) matters—and with respect to Indonesian involvement, with the introduction of a non-government research institution with interests in public advocacy on macro and trade issues—the Center for Strategic and International Studies (CSIS)—and the informal involvement of the Bogor Agricultural University (IPB).
- The research approach to take advantage of developments in computing technology and modelling frameworks—particularly the generic national model framework ORANI-G and the Global Trade Analysis Project (GTAP) model.
- The focus of the final project was shifted to address the urgent policy issues raised by the Asian financial crisis (which appeared to be accompanied by a reduction in attention to environmental issues).
- The scale of the engagement was expanded to match the institutional and human-resource demands of building, using and maintaining economy-wide models and interpreting their results for policy formulation.
- More formal mechanisms developed to disseminate research results (through a program of policy briefs) and make data, models and information of project developments widely available (on a project website).
- Advantage was taken of the expertise of Indonesian researchers returning after completing postgraduate training (sometimes with ACIAR scholarships).

#### 4.2.2 *Documentation and interests*

The assessment of the impacts of the cluster is based on a review of the documentation for the three projects and discussions with participants and interested parties. Information on people consulted is given in Appendix 1. The status of the project documentation in itself provides useful information on the likely impact of the projects. Similarly, the location of

people involved in the projects also sheds some light on the potential for sustainability of the capacity building that was supported. These are discussed briefly, before the main elements of the assessment.

#### *Documentation*

As Tables 12–14 indicate, the extent of documentation available for the projects varies considerably.

- For ANRE1/1990/038, ACIAR holds copies of the project proposal, a proposal for an extension and the termination report. No copies of research papers produced by the project are held, nor of papers arising from project reviews (if there were any). A number of the formal publications from the project are available in academic journals.
- For ANRE1/1993/705, ACIAR holds copies of the project proposal, a progress report and an IFPRI mimeo that presumably draws on the work undertaken under the project.
- For ADP/1994/049 the documentation is extensive, including the project proposal, the first and fourth annual reports (with extensive annexes including examples of the project newsletter and the project's home page), a report by a team of reviewers commissioned in the latter stages of the project, a proposal for 1-year extension, and the final report. Most if not all of the project's research papers are accessible at the project's home page at CIES, from where it is also possible to download versions of the WAYANG model built by the team. It is also possible to download papers using the WAYANG model from the home page of CSIS, which refers readers to the CIES site for more information on the model.

#### *Interested parties*

A number of the main Indonesian personnel involved in the projects (particularly ADP/1994/049) have moved to different Indonesian institutions, and some have left the country, taking with them expertise built up by the projects. However, some participants have returned after a period working in policy positions: either to the same or a related institution or to a higher-order organisation.

Countering these effects on formal institutional capacity is the existence of a strong informal network of researchers, policy advisors and policy makers linked to the key agencies involved in the project, and especially to IPB. It is clear that the economy-wide way of thinking has begun to take hold amongst people involved in this network, and influences the advice

they give to the top policy makers that the network includes. (At the same time, exposure to the exigencies of policy making has made some participants appreciate simpler and more responsive analytical tools.)

Informal and somewhat personalised networks are an important part of the Indonesian research and policy-formulation process. Their importance is exemplified by the role that a group of researchers and academics at CASER and IPB played over the past year or so in advising Indonesia's new president on agricultural and other policies.

#### 4.2.3 *Impacts*

The benefits to Indonesia of the three projects can be paraphrased from the ADP/1994/049 project proposal as follows:

- a greater awareness of the policy and modelling issues involved in addressing the linkages between Indonesia's agricultural, trade and environmental policies
- better quantitative measures of the costs and benefits of current versus alternative policies that have taken the above interactions into account
- more complete analysis of the effects of economic growth, structural changes and policy developments on agricultural production, trade and the environment
- an enhanced capacity to undertake subsequent policy analysis that takes account of the direct and indirect effects on agriculture of trade and environmental policies
- the introduction of more efficient, equitable and environmentally sound policies
- ultimately, improvement not only in the economic efficiency of agricultural production and trade but also in social welfare and the environment, as Indonesia is better able to ensure its rural development is being managed on a sound basis.

Overall, the projects were about establishing the relevant skill base in Indonesia to make possible the development and use of multi-sectoral economy-wide national and global models. One of the main Indonesian collaborators indicated that the reason for being involved in the projects was research capacity building, including strengthening CASER's research capacity, improving research methodology, especially CGE

analysis, establishing databases and improving national and international research networking.

It was also felt that there were some pressing policy problems that needed to be solved (including threats, challenges and opportunities of trade globalisation which needed to be assessed to determine optimal policy prescriptions and alternatives). It is worth noting that the projects overlapped the conclusion of the Uruguay Round of trade negotiations. Indonesia's participation in these negotiations seems to have been driven largely by the country's representatives in Geneva, and there may have been a delayed realisation in sector-oriented agencies that the commitments being made could have strong implications for the economy.

The project leader of ADP/1994/049 (Mari Pangestu) recently became the Minister for Trade in the Indonesian Government. This establishes an important link from the ACIAR-funded project into the policy process and should result in increased awareness of economy-wide impacts in policy making.

#### 4.2.4 *Capacity impacts*

There is capacity to use and modify the models developed and/or introduced by the projects. Researchers at CSIS, which was chosen to be the Indonesian 'home' of the WAYANG model, have continued to use and extend the model. IPB has a group of researchers who also use the models, and they are training academics in other universities, as well as giving a compulsory course on CGE modelling to PhD students in economics.

On the other hand, there is little continued use of the models in CASER, the original collaborating institution for the projects. In this case, the capacity fostered by the projects sits in academic and private consulting institutions. A contributing factor to the 'take up' of modelling in IPB was the return to Bogor of people who had done postgraduate work using CGE models in Australia, in at least one case using the models adopted/built by the projects. Some of these postgraduate studies may well have been funded by AusAID and/or ACIAR fellowships. It should also be noted that there exist modelling cells in other universities, especially Gadjah Mada, where a collaborative effort with Monash University had led to the construction of another national model (INDORANI) based on ORANI-G.

As the review of ADP/1994/049 pointed out (Bunator and Powell 2000):

Of course, skills in model building and manipulation are not enough: equally important are the ability to formulate policy problems in a manner

that allows the models to be applied to them, as well as experience in writing up policy simulations in a style that maximises their accessibility to policy advisers and policy makers.

The review observed (in June 2000) that the number of people capable of mounting simulations with the models could be counted on one or at most two hands, and that there were even fewer people capable of modifying the structure of the models. It identified the tendency for technically able people to be promoted to management positions as a risk to maintaining that 'thin' capacity. It also expressed concern about the absence of durable institutional arrangements for model maintenance and refurbishment. In response to this, a project extension was targeted at training and developing a 'home' for the WAYANG model at CSIS. The training function continues at IPB, but it is not so clear that there is a strong institutional home for WAYANG that meets the expectations of the extension.

#### 4.2.5 *Policy impacts*

In response to a question concerning possible policy changes introduced as a result of the analyses carried out by the projects, or using tools that were developed, one researcher commented that:

It is not easy to answer this question, since any government policy change is a very complex process, influenced by many factors including politics. It is too exaggerated to say that policy recommendations resulting from the project are (fully) implemented by the government. In many events, including policy seminars and policy dialogues, we shared the project's findings and recommendation ... to some extent our arguments were taken into account.

People consulted for this review suggested that the work of the project had some impacts on government decisions about:

- the phase-out of the fertiliser subsidy (one of the issues explicitly targeted by ANRE1/1990/038)
- the position taken on agricultural trade issues at the WTO meeting in Cancun, linked to an increased understanding at policy levels of the linkages between international trade and domestic development
- recognition of the need for downstream agro-industry development to ensure that farmers gain from on-farm productivity improvements
- rice and fertiliser pricing linkages.

#### 4.2.6 *Comment*

There clearly is a capacity to use economy-wide modelling in Indonesia, and much of this can be traced back to the effects of the projects in stimulating interest and building the skills required.

What is not so clear is the extent to which government agencies have embraced the concepts and used the models. There is a sense in parts of the Ministry of Agriculture that simpler tools coupled with more responsive forms of support for policy analysis are more useful than economic models that are seen as being rather academic and dependent on data-sets of uncertain accuracy.

Against this perception has to be set the observation that government agencies compete with more informal networks in the provision of policy advice. The fact that the models are embedded in universities may not necessarily condemn them to irrelevancy. However, there are questions about the ability of universities, given how they are funded, to put in the sustained effort at maintenance and model development. Government research agencies have annual budget, whereas university research tends to be very dependent on external financing, which is not often targeted at maintaining databases and the institutional underpinnings of model development and dissemination.

#### 4.2.7 *Observations and lessons*

##### *Topic choice*

An economy-wide perspective, and a capacity to analyse questions are these days seen as prerequisites for sound policy making. The focus of the projects on building tools and capacity for this kind of analysis met a clear need. They responded to expressed desires to address pressing policy questions, and a clear capacity-building challenge. It is likely that a collaborative research approach could be well-suited to meeting these needs: but activity design may need to take more explicit account of the fact that capacity development and problem solving are the ultimate objectives, rather than completed and published research.

It should be noted that IFPRI is no longer prioritising CGE analysis. It is focusing more on approaches that are easier to transfer via capacity building and results that are easier for nationals to disseminate. However, in some of ACIAR's partner countries (such as Indonesia, Vietnam and the Philippines) there is clear capacity to absorb and adopt CGE-type analysis. IFPRI's decision leaves a gap that ACIAR could fill with appropriately structured interventions.

*Components of policy research projects and ACIAR's assistance modalities*

The following clear messages came from discussions with Indonesian stakeholders.

- Policy research should focus more on the transfer of tried and proven tools of analysis rather than working at the theoretical frontier: it is unlikely that local partners have the ability to work on methodology or developmental issues, nor is there demand for this kind of research.
- Capacity building should be an explicit and properly programmed part of policy research projects. This may involve:
  - linking with scholarship programs to provide key personnel with relevant postgraduate training
  - programming capacity-building activities at the outset of projects.
- Dissemination is essential if policy research projects are to be useful, and traditional vehicles (conference and research papers) will be inadequate given the target audiences. Project ADP/1994/049's policy brief initiative was one important way of reaching policy makers.
- There is strong demand for a shorter-term policy advice mechanism. This may require a different modality and perhaps different Australian partners, since what seems to be needed is in-country technical advisors able to mobilise resources and/or provide their own inputs to respond to urgent questions.

This demand seems to be for traditional technical-assistance projects that would explicitly target provision of advice on demand and capacity building, rather than collaborative research in which quick response advice and institutional capacity building may be by-products rather than primary outputs.

- This may also reflect some challenges in Indonesia's institutional arrangements for policy formulation and implementation: analytical capability may not be strongly embedded in government ministries, and the research agencies that are attached to ministries may be focused on longer-term research rather than applying economic tools to practical policy problems.
- This demand may not be well met through current collaborative research models, and may also require different skill sets in addition to academic research capabilities.



- As indicated earlier, there is also an expressed demand for help developing simpler and more practical models for policy analysis. There is no reason in principle why ACIAR's collaborative research approach could not address this need (in fact, ADP/1994/049 did spend time on partial equilibrium policy analysis in its workshop program). However, to make this the prime focus of an activity would require changes in project design and delivery modalities.

#### 4.2.8 *Time frame*

The projects operated over a period of around 10 years. This is probably a minimum engagement for effective capacity building and transfer of the tools and ways of thinking involved in economy-wide analysis.

ACIAR's modalities for project delivery seem to allow for sufficient flexibility to adapt activities and areas of focus: this kind of flexibility is necessary when a commitment of this duration is being considered. ACIAR's approach compares well with the approaches of some other development assistance donors, which seem to be constrained to shorter term and projects that are specified more tightly.

#### 4.2.9 *Choice of research partners*

##### *Indonesian partners*

Whether by serendipity or design, the projects worked with partners with strong networks into high-level policy making, which significantly enhanced the potential impact of the tools and ways of thinking that were being delivered. In Indonesia, there were contrasting views about the choice of partners, focusing on the alternatives of universities, government research agencies and private research/consulting institutions. Table 15 summarises some of the advantages and disadvantages identified in this discussion.

##### *Australian partners*

The success of this project had a lot to do with the quality of the Australian research partners, the international networks (especially involved with international trade and development economics) they could draw on and, particularly, their strong pre-existing links with Indonesian researchers and policy analysts. Universities should, in principle, be well-equipped to address the capacity-building elements of such projects if they involve researchers with good training skills. However, there are also non-academic institutions that have track records in this kind of work.

**Table 15.** Factors involved in the choice of Indonesian partners in ACIAR policy-research projects

Partner	Advantages	Disadvantages
Government research agency	<ul style="list-style-type: none"> <li>• Formal place in policy-making processes: possible first port of call for sensitive policy analysis</li> <li>• Has annual budget, so can commit to institutional support and cover database and model maintenance costs</li> <li>• Preferential access to some kinds of data</li> <li>• Can integrate non-economic technical information inputs and insights from non-economic research agencies under the same ministerial umbrella: capacity for interdisciplinary approaches to complex problems</li> </ul>	<ul style="list-style-type: none"> <li>• Possible constraints on research independence</li> <li>• Tendency for capable researchers to be promoted to management positions, erodes effective analytical capability</li> <li>• Salary limitations make it difficult to retain good researchers or allow them to avoid over-commitment on externally funded projects</li> </ul>
University	<ul style="list-style-type: none"> <li>• Independence facilitates robust evaluation of existing policies and promotion of public discourse</li> <li>• Ability to co-opt additional human resources in the form of postgraduate students</li> <li>• Ready access to vehicles for dissemination of research results through journals and publication programs</li> <li>• Potential for teaching role to facilitate and extend capacity-building activities</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of annual budget for research and development activities and resultant reliance on external funding; militates against long-term system maintenance role</li> <li>• Hostage to changing research interests of funding sources</li> <li>• Risk of focusing on academic interests rather than practical policy relevant work</li> </ul>
Private research institute	<ul style="list-style-type: none"> <li>• Strengths in public advocacy and discourse</li> <li>• Focus on value for money and output orientation may lead to greater efficiency and timeliness</li> <li>• May have a degree of authority and a 'respected voice'</li> </ul>	<ul style="list-style-type: none"> <li>• Limited by project funding mode: may have difficulty resourcing system/database maintenance</li> </ul>

#### 4.2.10 Collaboration modality and ownership

The collaborative research modality has some advantages and disadvantages with activities where capacity building and technology transfer are the key objectives.

On the positive side, working with people on problems that they have identified can be a very effective way of motivating appreciation of new tools. And the exploratory nature of the research model allows for changes in emphasis or adoption of newly available approaches.

On the negative side, there are risks that, if the work is driven by the agenda of the Australian research institution, local counterparts are treated

as research assistants and data gatherers and most of the increases in knowledge accrue to the participating Australians. There is considerable resentment in some developing countries of the paternalistic approach adopted in some 'collaborative' policy-research programs. This does not seem to apply to ACIAR's activities, and especially not to this cluster. However, Indonesian participants have suggested that there is a need to monitor the spirit of collaboration to ensure that local ownership is sustained and local issues drive the research agenda.

One way to address this risk is to explicitly build capacity building into research projects. However, this may require changes in contracting and monitoring modalities.

#### 4.2.11 *Linkages with other programs*

One factor contributing to the impact of the project cluster was the high degree of linkages with other programs: in some cases these were links with programs in partner institutions, and in others to programs (such as scholarships) financed by other development assistance agencies. Given that a number of donors are engaged in supporting the development of capacity for policy advice in countries where ACIAR has programs, there may be some gains to be realised from more concerted efforts at coordination of activities.

Such coordination could take a number forms, from information sharing to seeking financing of parallel or follow-on capacity-building activities. In the case of work on CGE models, there is also scope for the kind of activity proposed by the review team for project ADP/1994/049, of supporting activities that would help deal with the challenges created by multiple modelling initiatives. (The team recommended that ACIAR support model-comparison conferences, as well as collaboration on database development.)

Such collaboration may become even more important as the effects of decentralisation and greater regional autonomy are felt. Institutional capacity building may now need to be targeted at regional levels, where the challenge in terms of initial capacity and proliferation of agencies may be too great for one donor to manage.

### 4.3 India

Tables 16–18 summarise the key features of the projects within the Indian cluster.

**Table 16.** Summary details of ACIAR project ADP/1994/026

Item	Content
Project title	Accelerating growth through globalisation of Indian agriculture
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• Australia South Asia Research Centre, Australian National University, Dr K.P. Kalirajan</li> <li>• National Council of Applied Economic Research, India, Dr Ashok Gulati</li> </ul>
Budget	\$696,803, of which ACIAR contributed \$574,174
Duration	Three years from 1995
Available documentation	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Annual report (1998)</li> <li>• Final report (undated)</li> </ul>
Context	Relatively poor growth performance of Indian agriculture
Objective	<ul style="list-style-type: none"> <li>• Identify policies to encourage stronger transmission of development in agriculture into higher economic growth and business opportunities for Australia</li> </ul>
Proposed methods	<ul style="list-style-type: none"> <li>• Estimation of production functions, supply-response functions and domestic resource costs</li> <li>• Estimation of disequilibrium macroeconomic model</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• A book, journal articles and working papers</li> </ul>

**Table 17.** Summary details of ACIAR project ADP/1998/091

Item	Content
Project title	Equity driven trade and marketing policy strategies for improved performance of Indian agriculture—a scoping exercise
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• Department of Economics, University of Wollongong, Professor D.P. Chaudhri</li> <li>• Institute of Development Studies, Jaipur, Professor S.S. Acharya</li> </ul>
Budget	\$297,401 of which ACIAR contributed \$149,864
Duration	January 1999 to December 2000
Available documentation	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Annual report (2000)</li> </ul>
Objectives	<ul style="list-style-type: none"> <li>• Document and analyse impacts of past and current policies</li> <li>• Identify alternative policy options for improving equity and efficiency</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Major book</li> </ul>

**Table 18.** Summary details of ACIAR project ADP/2000/004

Item	Content
Project title	International food safety regulation and processed food exports from developing countries: a comparative study of India and Thailand
Collaborating agencies and lead researchers	<ul style="list-style-type: none"> <li>• Research School of Pacific and Asian Studies, Australian National University, Dr P. Athukorala</li> <li>• Research Information Systems, India, Dr R. Mehta</li> <li>• Faculty of Economics, Thammasat University, Dr B. Nidhiprabha</li> <li>• International Food Policy Research Institute, Dr A. Gulati</li> </ul>
Budget	\$1,125,433, of which ACIAR contributed \$546,150
Duration	Ongoing, 2002 to 2005
Available documentation	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Annual report (2003)</li> </ul>
Context	Trade conflicts relating to the Sanitary and Phytosanitary Standards (SPS) Agreement becoming a major focus in the World Trade Organization
Objectives	<ul style="list-style-type: none"> <li>• Examine impact of SPS</li> <li>• Identify technical constraints faced by governments in meeting SPS requirements</li> <li>• Prepare inventory of standards in India and Thailand and compare with international standards</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• 2 journal articles and 14 working papers to date</li> </ul>

#### 4.3.1 *Accelerating growth through globalisation of Indian agriculture*

This project set out to examine the impact on India's agricultural growth and growth for the economy as a whole of reforms to achieve the globalisation of Indian agriculture.

Its genesis reflected widespread concerns about the poor productivity of Indian agriculture over many years when compared with many Asian economies. A highly interventionist government policy towards agriculture through a complex set of subsidies, implicit taxes, domestic price and quantity distortions and trade barriers was postulated as a major reason for the low productivity in Indian agriculture. Underinvestment by government in rural infrastructure through, in part, the diversion of scarce government revenue to fund subsidies was also envisaged as a significant reason for agriculture's poor performance. Since in India the states are responsible for the implementation of many agricultural policy interventions the study gave special attention to farm-efficiency outcomes in individual states.

##### *Receptiveness of the policy environment*

The project followed the 1991 move to open up the Indian economy to international trade. While most of the liberalisation to that time (and indeed since) has occurred outside of agriculture, there was a growing

perception of the high cost of agricultural intervention and the need for reform. The policy environment was therefore receptive to the possible changes being researched in the project.

#### *Policy credibility of researchers*

The research team involved Australian academic economists, the leader of Indian origin, working in collaboration with Indian researchers drawn from Indian universities and research institutes. Some of these researchers were state-level specialists. Some researchers and some members of the research advisory group set up to oversee the project had experience or links with the various planning commissions at state and national level in India. The team had sufficient credibility and links to policy circles in India for the policy work to be taken seriously.

#### *Credibility of policy analysis*

The project has delivered some useful estimates of inefficiencies in Indian agriculture and the likely impact of introducing some alternative policy settings. It demonstrated the feasibility of doing such analysis at the state level. The study comes out in support of greater liberalisation, but the policy message is bland and non-specific. There is no comprehensive analysis of the gains to be had from various policy reforms, the urgency for reforms or how the reforms should be sequenced. While the study helps reinforce the case for liberalisation it is essentially a contribution to the literature and educative process in this area. It is not a blueprint for reform presented in a way likely to focus the minds of policy advisors.

#### *Disseminating the results*

The project has generated a large number of publications, including research papers, journal articles and two books (Kalirajan et al. 2001; Kalirajan and Bhide 2003) that will be useful references for some years to come. These are important additions to the literature in this area, but the main users will be other economists and students. The project did not produce a policy brief suitable for consumption by policy advisors and politicians.

Three project review meetings held during the project provided scope for interaction with other research economists in universities and research institutes. Three workshops held at the conclusion of the project helped disseminate the results and methodology, but the dissemination was mainly to other research economists in universities and other enterprises who had an interest in analysing productive efficiency. The emphasis appears to have been on techniques of analysis rather than on policy

implications and how to bring about policy reforms. A greater emphasis should have been given to both developing the policy implications of the work and disseminating them in digestible form to the key policy advisors.

#### *Scope of study*

While the scope of the study was ambitious, the development work in the project concentrated on the potential for efficiency gains at the sector level and the construction of a macro-econometric model to look at the impact of alternative policy choices on agriculture. Although the project seems to have been manageable, a narrower focus might have allowed for a greater emphasis on drawing out and arguing a set of policy implications, and their prioritisation and sequencing.

#### *Crowding out and relevance*

The project was demand-determined. It arose from a suggestion by Dr Ashok Gulati, then at the National Council of Applied Economic Research in Delhi. Dr Gulati is an applied economist with a strong involvement (at that time) in several policy advisory committees in India, including the Economic Advisory Council of the Prime Minister of India, the Advisory Council of the Chief Minister of Andhra Pradesh, and the Committee on Agriculture of the Federation of Indian Chambers of Commerce and Industry. Dr Gulati emphasised the critical need for a study of this type. It was therefore highly relevant to the policy debate in India at the time. The project did not involve any crowding out of other initiatives in this area.

#### *Contribution to capacity building*

As well as their contribution to policy reforms, projects of this nature may have a benefit in terms of their contribution to capacity building in the host country. The extensive publication list, and especially the two books, have ensured that the project has made significant contributions to the knowledge base on agricultural liberalisation, to the estimation of frontier production functions and to macro-econometric modelling for policy analysis. The latter two contributions are important to capacity building in India. These research tools, which are being taught at universities in India, may find wider use in the future.

#### **4.3.2 *Equity-driven trade and marketing policy strategies for improved performance of Indian agriculture***

This project evolved from the ACIAR–Indian consultations held in July 1997 in New Delhi. In those consultations, the issue of the capacity of Indian agriculture to sustain its growth against a backdrop of growing

scarcity of land and water, problems with input-intensive agriculture and declining public investment in agricultural infrastructure received considerable attention.

The distortion of incentives to farmers through a host of market inventions was seen as a cause for concern, particularly because, with the advent of the WTO, India faced challenges in removing barriers on imports and exports. Issues of food security, poverty, and regional disparities in development were also seen as important in any moves for policy reform.

The project sought to identify a socially acceptable package of policies and their sequencing which, while improving resource-use efficiency, would take into account India's goals of improved food security, reduced poverty and reduced interpersonal and interregional disparities in development.

Although this project followed on from (with about a one year overlap) project ADP/1994/026 and shares some common ground with it, it does not appear to build on that project in any way.

#### *Policy credibility of researchers*

The project leader in Australia was an academic from India with a sound reputation in Indian economic-policy circles. Similarly, the project leader in India was a well-respected agricultural-policy analyst who has played a prominent role through his work on various Government of India policy-advisory commissions on agricultural-policy formulation.

The project was overseen by a research advisory committee of persons influential in the agricultural economic-policy debate in India. The research project and team therefore had considerable credibility in Indian agricultural-policy circles.

#### *Credibility of policy analysis*

The project amassed a large amount of public data on India's agricultural performance, together with estimates of various behavioural responses. It provided a comprehensive description of policy interventions, their effects and progress to date on reform, as well as some statistical analysis of the degree of integration of Indian agricultural-produce markets. A marketing and trade-policy strategy for Indian agriculture was proposed and comments made on sequencing the reforms.

The strategy is unconvincing. It is not driven by any comprehensive analysis of the costs of existing policy interactions or the gains that



reforms would bring to agriculture and the economy as a whole. The comments on sequencing are judgments only, and do not draw on quantitative analysis or the experiences of other countries in this area.

Some of the policy recommendations are unorthodox and convey a confusing message to policy makers. In particular, equity concerns are addressed by arguing for continued intervention in agricultural trade and marketing arrangements despite the broad thrust of the project that such arrangements lead to inefficiencies and need reform. For example, the recommended policy agenda continues to argue for:

- buffer stocks of food to address food security (rather than the much more efficient and less costly stocking of money)
- the continuation of subsidised food grains (though only to weaker sectors of society)
- a continuation of minimum support prices for important agricultural commodities and a market support scheme to stabilise farm prices for the less-important commodities
- an ongoing role for state agricultural marketing boards, agricultural produce marketing committees and commodity corporations
- the use of tariffs on imports as safeguards where necessary
- maintenance of tariffs and countervailing duties to restrict excessive imports in some years.

Although improving farmer and regional equity are important components of the study, none of the conventional set of policies available to address these types of equity concerns (in ways which do not disturb markets and trade) are mentioned.

#### *Dissemination of results*

The project team has done an excellent job in publicising its work in agricultural economic policy circles and the press. Four workshops were held in India. These had a deliberate focus on policy issues and were attended by key Indian policy advisors. The subsequent publicity generated over 250 citations in newspapers.

The project analysis and findings were published in a book (Acharya and Chaudri 2001) that is now seen as a key source of information for those interested in the subject; to date, some 600 copies of it have been sold

throughout the world. The contents of the book have been used as a starting point for ongoing work in this area, in particular the government's continuing 'millennium study of Indian agriculture'. The main findings have been incorporated in the work of committees advising the Indian Government on agricultural-policy issues.

There is also some evidence of policy changes being contemplated as a result of the project. The project's leaders point to similarities between their policy prescriptions and some recent shifts in policy direction in India as evidence of an impact of their work.

#### *Project scope*

In retrospect, the scope of the project was far too ambitious given its time frame and budget. It would have been better to address a smaller subset of issues in greater detail, particularly in terms of quantitative evaluation. The project would have benefited greatly from the use of an economy-wide framework to draw together the various interventions and to quantify their costs and the implications of their removal for agriculture and the overall economy.

#### *Crowding out and relevance*

The project has complemented rather than competed with other work on these issues in India. There was a long gestation time to work through the issues for analysis and strong agreement in India on the priorities to be studied and the need for such a study.

#### *Contribution to capacity building*

The book produced by the project team is now widely used for reference and as a university text. The contribution to capacity building is through this avenue rather than the dissemination of analytical techniques.

### **4.3.3 *International food-safety regulation and processed food exports from developing countries***

Unlike the previous projects this project was 'supply' driven. The Australian project leader suggested it. Its choice reflects his considerable expertise in multilateral trade issues, his research on shifts in comparative advantage in some developing countries towards processed food exports and his concern with how well prepared these countries are to accommodate the rules and requirements of the WTO, under the Sanitary and Phytosanitary (SPS) Agreement which regulates trade in processed foods.

The study aims to examine the policy, institutional and technical problems faced by processed-food exporters in meeting these requirements and to formulate appropriate policy measures to address them while recognising the legitimate concerns in importing countries about safety and quality.

The focus is on India (which is finding its failure to meet SPS requirements in developed countries a major impediment to its exports of processed food) and Thailand (which has been able to successfully address the SPS-related concerns of developed countries and has experienced rapid growth in processed-food exports).

The project involves in-depth case studies of selected firms which are either exporting or making the transition from the domestic market to exports. The studies aim to determine the problems of these firms in meeting SPS standards and the costs involved in compliance and lost export opportunities. This is information rather than policy. The policy aspect comes through considering how the problems in meeting SPS requirements in developing countries can be addressed to facilitate cost-effective compliance and reduce trade disputes. Another potential policy aspect is the likely need for significant restructuring of production processes in some food industries to enable them to be able to meet the cost of SPS requirements and become internationally competitive.

#### *Policy credibility of researchers*

The Australian team leader is a well-known expert in this field. He has formed a team whose leader in India is a specialist on WTO issues and a key advisor to the Indian Government on SPS matters. The team has the necessary credibility and connections to ensure that its findings are taken seriously in government circles.

#### *Credibility of policy analysis*

This project has nearly a year to run so the findings and recommendations are some way off. The signs to date are that the analysis will have considerable credibility for the following reasons.

- It skilfully exploits inter-country comparisons. India has much to learn from Thailand in processed-food exporting. Achievements in Thailand in addressing SPS issues are real and represent lessons from experience.
- Its research methodology directly involves the key commercial stakeholders in this area; participants at all links in processed-food supply chains.

- The analysis is highly empirical rather than theoretical. It makes extensive use of real data from companies in India and Thailand, and authorities such as the US Food and Drug Administration which set food standards in developed countries.

#### *Dissemination of results*

Two workshops have been held to date. These were attended by both researchers and processed-food exporters. An innovative project initiative is the development of a website to inform interested parties of the project and findings to date. This website is being accessed frequently.

It is anticipated that the findings of the project will be disseminated by various means, including a book published internationally.

Wide dissemination of findings throughout processing industries and government circles seems likely to occur because:

- the project's research advisory committee consists of representatives from public and private-sector food authorities in both countries who need to cope with SPS issues
- the research methodology invites a participatory approach through the case studies of actual and potential food exporters, thus ensuring that survey participants are being informed on SPS requirements and how to meet them in the data-gathering exercises.

#### *Project scope*

The dimensions of the project are sensible. The focus is on one part of the WTO agreement (SPS), rather than on all aspects. This tight focus will allow the team to thoroughly research the issue. The prospect is thereby enhanced of the project coming up with:

- a range of detailed recommendations about improvements in procedures for assuring export quality and international standards
- policies that need to be adopted by the relevant government agencies and practices needed in food-processing firms wanting to export to developed-country markets.

#### *Relevance and crowding out*

Although this project is supply rather than demand driven it is highly relevant in India. India is considered to have considerable potential as an exporter of processed foods, but is experiencing significant problems in

exporting processed foods to developed countries largely because of the inability of Indian processors to meet SPS standards in importing countries.

Furthermore, there is generally a poor understanding among potential food exporters in India of the SPS Agreement and the procedures they need to put in place to meet importing-country standards. Within the bureaucracy, there is also a poor understanding of how to use the SPS system and the dispute process. A widespread tendency is to view the SPS Agreement as a potential trade barrier to India's exports rather than to acknowledge the legitimate concerns of developed countries about food safety standards. In fact, some Indian firms competing against imports of processed foods are seeking to use SPS in this way.

The project is ideally placed to educate food processors in SPS requirements and how to achieve them. It is not crowding out any other initiatives in India in this area. It represents a first of its type for India and enjoys the strong support of Indian Government officials.

#### *Contribution to capacity building*

The project has the prospect of making a major contribution in this area by bringing processed-food manufacturers and government officials in India up to speed with the requirements of SPS and how best to meet them. There appears also to be a dearth of knowledge on this issue in a number of other developing countries. The findings from this study may find application in such countries.

#### **4.3.4** *Conclusions and implications*

Getting the macro-economic policy environment right is essential to achieve economic prosperity. Getting the policy environment right at the sector level is also essential if the achievements from successful scientific and technical projects in agriculture are to be translated into higher incomes and living standards. So, prima facie, projects that are concerned with improving the economic-policy environment for agriculture should be part of ACIAR's portfolio provided they can be seen as having the potential to make a useful contribution in this area.

Each of the case-study projects has made a contribution to the information base on agricultural trade and policy in India. The reports on the two completed projects are part of the literature of ideas available to policy advisors to draw on. While they have helped highlight the issues for reform, the government has not yet used the findings from these studies to

implement the reforms, though there is increasing pressure to undertake such reforms.

In India, large-scale economic reforms tend to be preceded by long debates about the issues. This was the case with the issue of whether India should open up its economy to world trade. This debate has now been concluded in favour of a WTO approach. In agriculture, the debate is moving slowly towards reform. The momentum is gathering both within and outside government that farm subsidies and other commodity-market distortions must be reduced. The ACIAR studies have contributed to this.

*The present ACIAR process is getting many things right*

The findings of this review suggest that there are several positive features about how the projects have been chosen, teams put together and the work executed.

- The project selection process has managed to identify three projects that are highly relevant given the current political environment in India and its receptiveness to policy change.
- Each of the project teams contains persons with considerable credibility in economic-policy circles. Furthermore, there are links between these people and the policy advisors and politicians. In each of the projects, good use has been made of a research advisory committee drawn from key interest groups concerned with the project's subject matter, some of which are linked into the decision-making process.
- In each case, the project teams are doing well in documenting and disseminating their results.

That said, there are some obvious areas for improvement if ACIAR research is to make a better contribution to policy reform. Not all the requirements for successful policy analysis listed earlier are being met. The following are some suggestions for improvement.

*Who undertakes projects?*

Each of the three projects studied involved university academics in Australia forming teams with academics in universities or research institutes in India. The academic model, with its strong emphasis on literature reviews, conferences and workshops, formal analysis and publications, has been followed.

In the case of India, teaming up with the relevant academics (those with the necessary policy expertise, reputation and connections) is appropriate. Such academics move easily and frequently between universities, research institutes and government advisory positions such as membership of government pricing and planning commissions. Well-chosen academics have the right contacts in policy circles.

The problem appears more on the Australian side. Few Australian academics have experience in policy analysis to the point where a policy brief is formulated and argued to policy people. This sharp end of policy analysis is missing from the two completed projects.

#### *Recommendation*

The Australian team must obtain guidance from experienced policy analysts on how the work might best be packaged and argued in policy circles in the host country. The appointment of an experienced Australian policy analyst to the project's research advisory committee would suffice.

#### *Formulating and promoting a policy impact brief*

A series of papers presented at a workshop followed by a published book should not be the end of the policy project. Yet, this is usually as far as academics take it; going further is beyond their comfort zone and experience.

#### *Recommendation*

Each project should contain a policy impact strategy, requiring the preparation of a policy brief to be read by ministers, who are unlikely to read working papers, journal articles or books. The policy brief should be short and attractively presented, with an emphasis on graphic presentation of information. It should clearly set out the changes proposed, why they are needed, the gains to the economy that would come from their implementation, who would be the main winners and losers, an implementation schedule and how to cushion the impact on the losers.

The policy brief should be argued in key policy circles at the highest level. It should also be made available to the mass media.

#### *Ensuring that the policy recommendations are credible*

The extent to which ACIAR should exert an influence on policy recommendations is a delicate issue. On the one hand, countries have a sovereign right to implement the policies they think are best. On the other hand, ACIAR would be anxious if it believed that the policy

recommendations coming from a particular study were clearly inappropriate in that, if implemented, they would likely reduce, rather than improve, the country's welfare.

It is important that sufficient checking and expertise be put into the carriage of a project to minimise the likelihood of poor policy recommendations.

The 'poor policy' problem that has arisen in one of the two studies completed in India appears to be a legacy of the Indian agricultural economic policy 'club'. The agricultural economics profession in India, while expert in agricultural matters, does not take an economy-wide view. Agricultural economists in India do not appear to appreciate how interventions to help agriculture impose costs elsewhere in the economy. Nor do they have experience in policy instruments beyond the various price, quantity and trade barrier instruments that have been used to distort Indian agriculture over many years.

#### *Recommendation*

Projects on agricultural development policy issues must have, as part of their teams, people who have an economy-wide mindset. The Australian experience suggests that these 'bigger picture' people, or people outside of agricultural policy circles, are needed to bring about agricultural policy reform. The Australian experience of agricultural policy reform and the institutions that have played a key role in bringing about this reform should be conveyed to project team members during their visits to Australia.

#### *The use of inter-country comparisons*

In the agricultural economic policy area, India is playing catch up with other countries who have successfully completed the reform process. India has much to learn from those countries on how they went about the process of policy reform and the pitfalls along the way.

The inter-country comparison framework is being used to good effect in project ADP/2000/0004. It could also have been incorporated usefully into projects ADP/1994/026 and ADP/1998/09.

#### *Recommendation*

Where appropriate a 'lessons from other countries' approach should be incorporated into agricultural development policy projects.



*The cost of disseminating findings*

The ACIAR projects have produced several books with a potentially large readership. The high prices of these books is restricting access to them by students and some academics. The more reputable the publisher and the better the production quality of a book, the higher becomes its price. While academics naturally seek to have their work published by reputable publishers in a high-quality format, it is important that the distribution of such work is not constrained by its cost. This is a problem in India that needs to be solved.

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## Appendix      Individuals consulted

**Table AI.** Individuals consulted: Indonesian case study

Name	Title	Organisation
Professor Bunasor Sanim	Dean	Faculty of Economics and Management, Bogor Agricultural University (IPB) <femipb@indosat.net.id>
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Dr Syaiful Bahri		CASER
Dr Achmad Suryana	Director General	Indonesian Agency for Agricultural Research and Development, Department of Agriculture
Dr Pantjar Simatupang	Director	CASER
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Professor Gumbira Sa'id	Director	Master of Management in Agribusiness, IPB <egum@mma.ipb.ac.id>
Susilo Bambang Yudhiono	PhD candidate (now President of Indonesia)	Faculty of Economics and Management, IPB
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**Table A2.** Individuals consulted: Indian case study

Name	Title	Organisation
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Dr Shashanka Bhide		National Council of Applied Economic Research, New Delhi
Dr Ramesh Chand	Professor and Head	Agricultural Economics Unit, Institute of Economic Growth, New Delhi
Dr Ric Shand		Formerly of Australia/South Asia Research Centre, Australian National University
Dr Kuhu Chatterjee	Country Manager	ACIAR, Australian High Commission, New Delhi
D.P. Chaudhri	Professor	Department of Economics, University of Wollongong, Australia
Dr Ashok Gulati	Director	Markets, Trade and Institutions Division (MTID), International Food Policy Research Institute, Washington DC
Dr Dayanatha Jha	National Professor	National Centre for Agricultural Economics and Policy (NCAP), New Delhi
Mr Philip Lowday	First Secretary	Australian High Commission, New Delhi
Dr Rajesh Mehta	Senior Fellow	Research and Information System for the Non- Aligned and other Developing Countries and Government Advisor on SPS issues, New Delhi

**Table A3.** Individuals consulted: Chinese case study

Name	Title	Organisation
Zhang Cungen	Professor	Institute of Agricultural Economics, Chinese Academy of Agricultural Sciences
Niu Ruofeng	Professor	Institute of Agricultural Economics, Chinese Academy of Agricultural Sciences
Keming Qian	Director General	Institute of Agricultural Economics, Chinese Academy of Agricultural Sciences
Achim Fock	Senior Economist	Rural Development Sector, The World Bank Office, Beijing
Yuman Liu	Professor and Director	Rural Development Institute, Research Centre for Livestock Economy, Chinese Academy of Social Sciences
Jikun Huang	Professor and Director	Center for Chinese Agricultural Policy, Chinese Academy of Sciences
An Xiji	Professor	Department of Agricultural Economics, Beijing Agricultural University
Han Yijun	Deputy Director	Research Centre for Rural Economy, Ministry of Agriculture
Chris Brittenden	Manager, North Asia, China and DPR of Korea	ACIAR Beijing
Zhao Min	Economist	The World Bank Office, Beijing
David Roland-Holst	Director	Rural Development Research Consortium, University of California, Berkeley
John Longworth	Professor	China Agricultural Economic Group, University of Queensland
Stephen Joske	Senior Australian Treasury Representative	Australian Embassy, Beijing

## IMPACT ASSESSMENT SERIES

No.	Author(s) and year of publication	Title	ACIAR project numbers
1	Centre for International Economics (1998)	Control of Newcastle disease in village chickens	8334, 8717 and 93/222
2	George, P.S. (1998)	Increased efficiency of straw utilisation by cattle and buffalo	8203, 8601 and 8817
3	Centre for International Economics (1998)	Establishment of a protected area in Vanuatu	9020
4	Watson, A.S. (1998)	Raw wool production and marketing in China	8811
5	Collins, D.J. and Collins, B.A. (1998)	Fruit fly in Malaysia and Thailand 1985–1993	8343 and 8919
6	Ryan, J.G. (1998)	Pigeon pea improvement	8201 and 8567
7	Centre for International Economics (1998)	Reducing fish losses due to epizootic ulcerative syndrome—an ex ante evaluation	9130
8	McKenney, D.W. (1998)	Australian tree species selection in China	8457 and 8848
9	ACIL Consulting (1998)	Sulfur test KCL–40 and growth of the Australian canola industry	8328 and 8804
10	AACM International (1998)	Conservation tillage and controlled traffic	9209
11	Chudleigh, P. (1998)	Post-harvest R&D concerning tropical fruits	8356 and 8844
12	Waterhouse, D., Dillon, B. and Vincent, D. (1999)	Biological control of the banana skipper in Papua New Guinea	8802-C
13	Chudleigh, P. (1999)	Breeding and quality analysis of rapeseed	CSI/1984/069 and CSI/1988/039
14	McLeod, R., Isvilanonda, S. and Wattanutchariya, S. (1999)	Improved drying of high moisture grains	PHT/1983/008, PHT/1986/008 and PHT/1990/008
15	Chudleigh, P. (1999)	Use and management of grain protectants in China and Australia	PHT/1990/035
16	McLeod, R. (2001)	Control of footrot in small ruminants of Nepal	AS2/1991/017 and AS2/1996/021
17	Tisdell, C. and Wilson, C. (2001)	Breeding and feeding pigs in Australia and Vietnam	AS2/1994/023
18	Vincent, D. and Quirke, D. (2002)	Controlling <i>Phalaris minor</i> in the Indian rice–wheat belt	CSI/1996/013
19	Pearce, D. (2002)	Measuring the poverty impact of ACIAR projects—a broad framework	
20	Warner, R. and Bauer, M. (2002)	<i>Mama Lus Frut</i> scheme: an assessment of poverty reduction	ASEM/1999/084
21	McLeod, R. (2003)	Improved methods in diagnosis, epidemiology, and information management of foot-and-mouth disease in Southeast Asia	AS1/1983/067, AS1/1988/035, AS1/1992/004 and AS1/1994/038
22	Bauer, M., Pearce, D. and Vincent, D. (2003)	Saving a staple crop: impact of biological control of the banana skipper on poverty reduction in Papua New Guinea	CS2/1988/002-C

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29	Lindner, B. (2004)	Impact assessment of research on the biology and management of coconut crabs on Vanuatu	FIS/1983/081
30	van Bueren, M. (2004)	Eucalypt tree improvement in China	FST/1990/044, FST/1994/025, FST/1984/057, FST/1988/048, FST/1987/036, FST/1996/125 and FST/1997/077

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4	Doeleman, J.A. (1990)	Benefits and costs of entomopathogenic nematodes: two biological control applications in China	8451 and 8929
5	Chudleigh, P.D. (1991)	Tick-borne disease control in cattle	8321
6	Chudleigh, P.D. (1991)	Breeding and quality analysis of canola (rapeseed)	8469 and 8839
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8	Ryland, G.J. (1991)	Long term storage of grain under plastic covers	8307
9	Chudleigh, P.D. (1991)	Integrated use of insecticides in grain storage in the humid tropics	8309, 8609 and 8311
10	Chamala, S., Karan, V., Raman, K.V. and Gadewar, A.U. (1991)	An evaluation of the use and impact of the ACIAR book <i>Nutritional disorders of grain sorghum</i>	8207
11	Tisdell, C. (1991)	Culture of giant clams for food and for restocking tropical reefs	8332 and 8733
12	McKenney, D.W., Davis, J.S., Turnbull, J.W. and Searle, S.D. (1991)	The impact of Australian tree species research in China	8457 and 8848
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