Developing Rural Communities in Marginal and Rainfed Areas: Contributions of Agricultural Projects in the Philippines

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No. 23 September 2000

AusAID
The Australian Government's Overseas Aid Program

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Cover photo: 'Cultivation of *Panicum maximum* in rows along the contour of a hill.' Photographed by Ralph Roothaert of CIAT.

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The views expressed in this report are those of the authors and not necessarily those of the Australian Agency for International Development.

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LIST OF ABBREVIATIONS

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
AGRED	Agricultural Education Program
AGRITECH	Philippines-Australia Agricultural Technology Education Project
AT	Agricultural Technician
ATEP	Agricultural Technology Education Project
ATI	Agricultural Technical Institute
AusAID	Australian Agency for International Development
BAO	Business Affairs Office
BAT	Bachelor of Agricultural Technology
BSA	Bachelor of Science in Agriculture
BURSC	Bicol University Research and Statistics Centre
CDW	Community Development Worker
CFP	Community Framework Plan
CHED	Commission on Higher Education
CIAT	International Centre for Tropical Agriculture
COC	Community Outreach Centre
CPS	Country Program Strategy
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DA	Department of Agriculture
DAT	Diploma of Agricultural Technology
DATE	Diploma of Agricultural Technology Education
DECS	Department of Education, Culture and Sports
EDPITAF	Education Development Projects Implementing Task Force
EL	Experiential Learning
FSP	Forages for Smallholders Project
FSR	Farm System Research
FTC	Farm Training Centre
GOP	Government of the Philippines
GRM	GRM International Pty Limited, the implementing contractor to AusAID
IGE	Income Generating Enterprise
LGU	Local Government Unit
IRR	Internal Rate of Return

MPDC	Municipal Planning and Development Co-ordinator
MTR	Mid-term Review
MTWG	Municipal Technical Working Group
NAES	National Agricultural Education System
NAFES	National Agricultural and Fisheries Education System
NGO	Non Government Organisation
OIP	Occupational Internship Program
P	Philippine Peso
PCARRD	Philippine Council for Agricultural Resources Research and Development
PCC	Project Co-ordination Committee
PCR	Project Completion Report
PDD	Project Design Document
PID	Project Implementation Document
PMO	Project Management Office
PPAEP	Pilot Provincial Agricultural Extension Project
PTIA	Provincial Technical Institute of Agriculture
PTWG	Provincial Technical Working Group
RAC	Regional Agricultural College
RBO	Rural Based Organisation
RF	Revolving Fund
RIS	Rural Income Strategy
SEAFRAD	Southeast Asian Feed Resources Research and Development Network
SIE	Student Instructional Enterprise
SMLE	Students Micro-project Loan Fund
SUC	State Universities and Colleges
TA	Technical Assistance
TAG	Technical Advisory Group
TAT	Technical Assistance Team

Key summary information on the projects

Project	GOA contribution	Partner country contribution	Total project cost	Project duration	Project focus	Australian Managing Contractor	Implementing Agency
	(A$ million)	(A$ million)	(A$ million)				
Philippines-Australia Agricultural Technology Education Project (AGRITECH)	24.2	8.9	33.1	1988-1993 (Planning) 1993-2000 (Implementation)	Improve and reorient agricultural education services at Provincial and Regional levels to better meet the agricultural development needs of rural communities.	GRM International Pty Ltd	CHED, DECS through ADPITAF
Pilot Provincial Agricultural Extension Project (PPAEP)	na	na	14.8	1987-1992 (Planning) 1992-1996 (Implementation)	Improve the effectiveness of DA's delivery of extension services so as to improve and sustain agricultural productivity and incomes of rural households.	GRM International Pty Ltd	Department of Agriculture (DA)
Forages for Smallholders Project (FSP) – Philippines Component	4.3[a]	0.54[a]	4.8[a]	1994-1995 (Planning) 1995-2000 (Implementation)	Increase agricultural productivity and soil sustainability on smallholder farms by increasing the availability of adapted forages and the capacity to deliver them to appropriate farming systems, in particular, agro-forestry and other upland systems.	CIAT, CSIRO	CIAT

a Project costs relate to the Regional Project. Neither the design document nor the PCR disaggregate costs on a country by country basis.

na Not available - the PCR did not disaggregate costs.

EXECUTIVE SUMMARY

Objective of the evaluation

AusAID is assessing a range of issues involving targeting, project design and implementation, to more effectively address the causes and consequences of poverty under marginal or rainfed farming systems. The evaluation seeks to assist in developing strategies to assist these communities by assessing the impact and effectiveness of three AusAID projects in the Philippines. It is expected that the lessons learned from the evaluation will also have wider implications for AusAID's rural development programs.

AusAID's initial assessment of the problems facing rainfed agriculture identified a complex range of issues to be addressed to increase and sustain agricultural productivity and household incomes. The evaluation focuses on examining the impact and effectiveness of different approaches and on developing guidelines and design strategies for the future.

The three projects evaluated are:

- Philippines-Australia Agricultural Technology Education Project (AGRITECH);
- Pilot Provincial Agricultural Extension Project (PPAEP); and
- the Philippines Component of the Forage for Smallholders Project (FSP)

These three projects embrace a range of approaches and stages of implementation. AGRITECH is a very large long-term project which is in the final stages of implementation. PPAEP is a medium-sized project which was completed four years ago. FSP is a very small project which was completed a year ago but has been extended on an even smaller scale under an alternative funding source. Only FSP was exclusively concerned with marginal and rainfed areas. The other two were oriented towards rainfed areas but not to the exclusion of irrigated agriculture, fisheries, aquaculture etc.

Main findings

Table S1 summarises the achievements of the projects in AusAID's key result areas.

AGRITECH

AGRITECH is a good example of development assistance in a field where Australia can provide a high level of expertise in addition to finance for hardware. It demonstrates that Australian expertise in technical education for the agricultural sector can be successfully transferred to developing countries. The investments in technical assistance (TA) and training have created a sustainable capability in the Philippines and a platform for further internationally-financed projects. This success was underpinned by a well-funded Project Management Office (PMO) operating across line agencies, and with close involvement of the technical assistance team in management decisions.

Table S1: Project Achievements in relation to AusAID's key result areas (KRAs)[a]

KRA	Objective	AGRITECH	PPAEP	FSP
Improve agricultural and rural development	Improve agricultural productivity and rural incomes through:	na		
	– Improved/appropriate technology	na		
	– Improved agricultural extension	na		
	– Strengthened community capacity	na		
	– Strengthened linkages between agricultural sector and institutions involved in rural development			
Increase access and quality of agricultural education/training	Improve agricultural education/training			
Maximise environmental sustainability	Improve natural resource management (eg water and soil conservation).	na	/	

Notes: na Implies that it is too early to assess effect. FSP is assessed on the basis of potential effects.

a The performance of projects was assessed using a five level scale ranging from weak to best practice as follows: = weak effect; = marginal effect; = moderate effect; = high effect; = best practice effect.

The project has been **successful** in all 14 of the institutions where it has operated but there are many more where it could be applied. A further phase of the project could be implemented in a much shorter time-frame and at much lower cost. The key recommendation from the review of AGRITECH is that the AGRITECH initiative should be continued.

The project has been **successful** in all 14 of the institutions where it has operated but there are many more where it could be applied. A further phase of the project could be implemented in a much shorter time-frame and at much lower cost. The key recommendation from the review of AGRITECH is that the AGRITECH initiative should be continued.

Tracer studies and preliminary economic analysis suggest that technical or vocational training of the type provided by AGRITECH is a good investment for the Philippines and probably also for other countries at a similar stage of development. AGRITECH aims to generate people who can create jobs for themselves and others through entrepreneurship, whereas conventional tertiary education focuses on training people to fill expected job vacancies.

PPAEP

PPAEP was a pilot agricultural extension undertaking at Provincial level. Its goal was to increase and sustain agricultural productivity and income of rural households. The project operated in four provinces over a five-year period and was intended to develop a model which could be replicated on a wide scale in other parts of the Philippines.

Despite the very considerable efforts in training (both agricultural staff and rural-based organisations members) project achievements are **modest**. It was intended that the project would deliver a model to help access external funding to develop the national agricultural extension system, but has not happened. The objective of establishing a replicable extension

system was never achievable. The inputs needed under the project design were simply not replicable or even sustainable.

Although PPAEP's achievements were limited this does not render the objective invalid, but points to the need for modifications in future approaches. The fact that many rural communities in rainfed areas are pervaded by a feeling of dependence which adversely affects initiative must be given due consideration in designing development programs and projects targeting these communities.

FSP

The Philippines was a partner in a regional forages project which also included Indonesia, Malaysia, Thailand, Laos, Vietnam and China. The project aimed to increase the availability of adapted forages and to develop the capacity to deliver them to appropriate farming systems.

The project was **successful** in achieving its objectives of increasing the availability of adapted forages and has devised mechanisms for enhancing adoption by farmers. FSP has used a highly participatory approach to ensuring that interventions are relevant to the perceived needs and aspirations of beneficiaries. Key elements in the project's success include: testing and developing a range of forage options and presenting them to farmers for selection; and emphasis on low cost/low risk, and sustainable interventions suited to resource poor farmers in rainfed and marginal areas.

The review found that the FSP approach was very effective in assisting AusAID's target group and recommended that further assistance be provided in this area.

General conclusions

Whilst AGRITECH was overall a successful project, it demonstrates that people who, through post-secondary training are informed on the commercial opportunities in the agricultural sector, will tend to avoid rainfed systems and target opportunities in irrigated agriculture or agro-industries. This implies that appropriate and proven technology for rainfed areas needs to be developed before people will invest time or money in agricultural production. FSP has shown that communities can be willing partners in the development and dissemination of such technology. However PPAEP demonstrates that if the technology is imperfect and/or the delivery mechanisms are weak such interventions will fail or prove unsustainable.

This general conclusion of the evaluation has important policy implications with regard to assistance for marginal and rainfed areas. First, post-secondary education, however successful in its own right, is likely to accelerate emigration of the most productive young people out of the system leaving it with an even weaker human resource base. Investment in elementary and secondary education is more likely to generate direct benefits for these communities. Second, considerable care needs to be taken to identify and test low cost/low risk technologies which are appropriate for resource poor rural families. Moreover, the Philippines does not yet have a local-government based extension system which is capable of disseminating these technologies

to AusAID target groups. However, there is an urgent need to do this in the upland coconut-based farming systems where population pressure is increasing and prospects for increased income from coconuts are poor. Third, the FSP experience demonstrates that resource poor farmers, when presented with a menu of useful, practical and simple options will select and implement ones which they find appropriate to their individual circumstances.

Key lessons

Besides the above conclusions, other points to be considered in formulating assistance programs targeting marginal and rainfed areas in the Philippines and generally areas in south-east Asia with similar problems include:

THE PROJECT CYCLE

- The concept of progressive engagement means building on successes to amplify achievements such as AGRITECH, and giving further impetus to promising beginnings such as FSP.
- All projects would have benefited from a more effective (though not necessary longer) preparatory phase to assure that at all necessary inputs (particularly human resources) are in place prior to implementation.
- All projects needed a high level of (TA) technical assistance particularly as many of the activities and participatory mechanisms were new in the Philippines at the time. TA should be tapered off from about mid-project to allow time for local managers to take full control.
- Sufficient time must be allowed for the participatory approach to take root and allow on-farm testing and demonstration to reach maturity.
- A program approach, rather than the more usual five year project period, which allows for a longer-term engagement between the recipient country and Australia is often more appropriate. The success of AGRITECH, with a life of 12 years from initial studies until the present, compared to PPAEP with an effective implementation period of only about three years, illustrates the need for longer-term involvement.

INSTITUTIONAL ISSUES

- Institutional weakness, and policy instability make project implementation in the Philippines difficult. Therefore project design should not be over-prescriptive, and recognise that it is often necessary to operate 'outside the system' using NGOs and implementing agencies outside the main line agencies.
- The local government units (LGUs) are in no position to provide adequate support to farming communities on their own. Projects should use competent NGOs to sensitise communities and install the concept of participation, while the agricultural technicians (ATs) should provide technical assistance. It is imperative that the NGOs and the ATs operate as a partnership.

- The effects of devolution make it difficult to work with a single counterpart agency at National/Regional level through to Barangay level. LGUs have their own agendas and financial constraints and cannot generally be depended on to provide strong partnership unless there are adequate incentives in place.

TECHNOLOGY

- A key requirement for assisting farmers in marginal and rainfed areas is the availability of low cost/low risk technologies. Unfortunately such appropriate technologies are frequently unavailable.

CREDIT

- Extreme care must be exercised when using "seed money" to promote economic activity. Funding should be conditional upon contribution of counterpart funds and adequate repayment of previous loans.
- Projects must have more to offer than "seed money" or grants. The potential activities must be technically and financially viable relative to farmers' individual situations.

Possible directions for AusAID assistance

General considerations. Whilst the evaluation found nothing to suggest that the Philippines' Country Program Strategy (CPS) and Rural Incomes Strategy (RIS) are inappropriate, it does highlight some differences between the CPS/RIS and some of the interventions suggested here. The RIS represents an ambitious attempt to tackle the root causes of rural poverty including national policy issues and the systemic weaknesses in the rural economy. If successful, the RIS will have far-reaching effects on a national scale. This evaluation suggests a number of micro-level and area-based interventions building on the successes and lessons from the three projects. These are unlikely to have significant impact at national level but could be very significant locally to rural communities in rainfed and marginal areas.

Follow-up activities. The evaluation supports the concept of progressive engagement and suggests that, as an initial step, it should be applied in the following manner:

AGRITECH represents an investment of over A$33 million. Currently it is operating in 14 institutions but could be extended in a much shorter time-frame and at a much lower cost. If it is correct that AGRITECH will generate an internal rate of return (IRR) of 10-20 per cent, as suggested by the preliminary economic analysis, a follow-up project which gives due attention to the lessons learned so far, could easily double that figure.

FSP has demonstrated a very effective approach for assisting rainfed and marginal areas. This is being continued under the ADB-funded follow-up project but on a very limited scale. AusAID could sponsor a parallel-project to expand the geographical scope while utilising the

methodology established under FSP. An initial step would be intensive training of project staff, co-operating NGOs and LGUs.

There is also potential to use the FSP approach as a component of a broader project. This fits in well with the contention that a project must have more to offer than 'seed money' or grants. The technology is proven, cheap to adopt and maintain and has potential to increase incomes and assist in reducing land degradation.

Technology generation. One of the key requirements for assisting rural communities in marginal and rainfed areas is the availability of appropriate technology. Low cost/low risk technologies suited to the physical and socio-economic environment are not abundant, but as shown under the FSP they can be developed by close collaboration between applied researchers and farmers. Further work of this nature may yield useful results.

A rigorous analysis of available or promising technology suitable for marginal and rainfed areas would be a first step. Priority should be given to the coconut monoculture in the poorest areas. Properly spaced coconut stands can provide shade for more valuable cash crops such as cacao, lowland coffee and fruit trees. The benefits would be substantial in terms of household income.

Elements of effective interplanting technologies must exist in the Philippines but this is not generally apparent in farmers' fields. Given the critical importance of land-utilisation in coconut-dominated areas inhabited by poor households, AusAID may wish to address the issue. ACIAR's mandate and experience are tailor-made to assist with technology development.

Extension-focused project. Whilst the experience with extension has so far been disappointing this is not inconsistent with findings in rainfed and marginal areas elsewhere. However, the worsening plight of rural communities outside the main irrigated rice bowls suggests that extension is too important to abandon completely. The findings of this evaluation have therefore been considered in outlining a new approach which would address the generic issues affecting rainfed and marginal areas.

With the lessons from PPAEP (largely on what-not-to-do) and given AusAID's focus on marginal and rainfed areas, a further extension-based project in resource poor areas may be appropriate. To have any chance of impact, interventions should be on an LGU (municipality) basis following the principles of progressive engagement.

Although the integrated rural development project approach may not be in favour currently, elements of such a strategy could be considered. During project design, once co-operating municipalities are identified, socio-economic investigations would identify the causes of rural poverty and identify means of addressing these causes. While community empowerment through the use of a robust extension methodology would remain the main thrust of the project, complementary activities involving local capacity-building (particularly within the LGUs), infrastructure, health and primary education would be addressed.

The concept is based on the premise that agricultural support services have been in decline since their devolution to local government. The first task is to convince LGUs that an effective extension service can substantially assist development but considerable resources would have to be allocated to develop such a service. The second task is to develop/reactivate an LGU-based extension service.

Part A

EVALUATION REPORT FINDINGS AND LESSONS

1. INTRODUCTION

1.1 Evaluation purpose

AusAID is assessing a range of issues involving targeting, project design and implementation, to more effectively address the causes and consequences of poverty under marginal or rainfed farming systems. The evaluation seeks to assist in developing strategies to assist these communities by assessing the impact and effectiveness of three AusAID projects in the Philippines. It is expected that the lessons from the evaluation will also have wider implications for AusAID's rural development programs.

AusAID's initial assessment of the problems facing rainfed agriculture identified a complex range of generic issues to be addressed to increase and sustain agricultural productivity and household incomes. These include: poor/degraded land resources; erratic rainfall and limited potential for irrigation; increasing population pressure; poor infrastructure (eg roads, potable water) and services (eg health, education, marketing); limited entrepreneurship and investment; limited on-farm and off-farm employment opportunities; and increasing ageing and "feminisation" of the agricultural workforce.

The evaluation focuses on examining the impact and effectiveness of two different approaches aimed at addressing these issues to some degree, and on developing guidelines and design strategies for future agricultural assistance in poor-resource areas.

The first design approach involves targeting the constraints to rainfed agricultural productivity through the introduction of appropriate technologies relevant to farmers' circumstances or through improved and diversified farming practices to achieve better farm incomes. The second approach complements the above technical approach through activities aimed at strengthening agricultural education and training to better meet the development needs of rural communities.

In considering these two design approaches, the evaluation has focused on a number of generic issues including: project impact, sustainability, appropriateness, financial and economic performance, targeting and institutional and managerial aspects of project implementation.

Full terms of reference for the evaluation are given in Appendix 5.

1.2 Projects evaluated

The three projects evaluated are:

- Philippines-Australia Agricultural Technology Education Project (AGRITECH);
- Pilot Provincial Agricultural Extension Project (PPAEP); and
- the Philippines Component of the Forage for Smallholders Project (FSP)

These three projects embrace a range of approaches and stages of implementation. AGRITECH is a very large long-term project which is in the final stages of implementation. PPAEP is a medium-sized project which was completed four years ago. FSP is a very small project which

was completed a year ago but has been extended on an even smaller scale under an alternative funding source. Only FSP was exclusively concerned with marginal and rainfed areas. The other two were oriented towards rainfed areas but not to the exclusion of irrigated agriculture, fisheries, aquaculture etc.

These differences in scope and implementation stage make rigorous inter-project comparisons difficult, particularly in relation to sustainability. It is possible to be reasonably confident about assessing sustainability four years after project completion whereas such an assessment is much more conjectural in on-going or recently completed projects.

1.3 Evaluation methodology

The evaluation mission spanned four weeks in the Philippines with approximately one week allocated to fieldwork for each of the three projects. The approach was to assemble as much information as possible about the performance of each project from documentary sources, interviews and field observations and then analyse this relative to the key evaluation issues. Where suitable data were available the analysis was quantitative and included estimation of economic rates of return. However, the majority of the evaluation was based on semi-quantitative or qualitative assessments of performance.

After reviewing the key documents[1] for all projects, the evaluation team visited the Philippines from 7th May to 2nd June 2000. The team visited four of the AGRITECH State Universities and Colleges (SUCs) namely Cagayan State University, Quirino State College, Quezon National Agricultural School and Laguna State Polytechnic College, as well as 13 of the 21 PPAEP targeted barangays in Albay and Camarines Sur provinces. FSP activities were visited in Cebu. Because of a temporary travel ban to parts of Mindanao, project sites in Region X could not be visited. This was particularly unfortunate as some of the project experiences in Mindanao, particularly with regard to PPAEP and FSP, were different to some other sites.

The team met with senior GOP officials involved, either directly or indirectly, with the project including personnel from the Department of Education, Culture and Sports (DECS), the Education Development Project Implementing Task Force (EDPITAF), the Department of Agriculture (DA) including the Agricultural Training Institute and the Bureau of Agricultural Research. The International Centre for Tropical Agriculture (CIAT) and the Asian Development Bank (ADB) were visited in connection with the FSP.

The draft aide memoire was presented in Manila on 1st June 2000 and at a de-briefing for AusAID in Canberra on 13th June. Comments and clarifications were incorporated as appropriate by the evaluation team.

1 These included Project Design Documents (PDD), Project Implementation Documents (PID), Mid-Term Reviews (MTR), and Project Completion Reports (PCR).

1.4 Evaluation context

The three projects reviewed here were implemented against the background of sluggish economic growth, a tight budgetary situation, a worsening of rural poverty in upland, rainfed and marginal areas and the dual shocks of the El Nino drought and the Asian financial crisis.

The projects were implemented during the 1990s, most of which was a period of very rapid economic growth and industrialisation in the ASEAN region. However, the Philippines experienced a much lower rate of overall prosperity growth. Economic growth in the last decade accelerated after a period of stagnation, only to be stalled by the dual effects of El Nino and the regional financial crisis. Real annual per capita GDP grew, on average by about 2.5 per cent from 1993 to 1997, but fell by 2.5 per cent in 1998 before staging a modest recovery in 1999. The two shocks precipitated a severe fiscal crisis, but the economy was much less affected by the dual external shocks than other countries in the region.

The Philippines has had limited success in reducing poverty. It is one of the few countries in the region where the absolute number of people in poverty increased between 1975 and 1995. Improvements in other human development indices have also been slow in comparison to other ASEAN countries.

The structural limitations and causes of poor long-term economic performance include:

- poor performance of the industrial sector in generating employment;
- low growth of manufacturing output compared to other countries in the region;
- poor overall productivity growth;
- poor productivity performance in agriculture which accounts for 40 per cent of employment but only 17 per cent of output;
- low levels of savings and investment and heavy reliance on remittances from overseas workers; and
- infrastructural weaknesses, particularly in transport, exacerbated by the archipelagic and mountainous geography.

Nearly two-thirds of poor people live in rural areas where they are dependent on agriculture, fisheries and livestock production for subsistence and cash income. However, the agricultural sector's contribution to GDP has declined from around 30 per cent in the mid 1970s to less than 20 per cent at the end of the 1990s. The relative position of the rural poor therefore continues to deteriorate. Unemployment and underemployment in rural areas is very high, particularly in the rainfed upland areas where people are heavily dependent on copra production and have limited or no access to irrigation for rice production. The World Bank estimates that about 60 per cent of people in upland rural areas are in poverty. Generally rural people in the lowland rice producing areas are much better off and have better access to health, education and transport services. Disparities between urban and rural incomes are rising with ethnic minorities (about 18 per cent of the population) and the people of Mindanao, Tagalog and Bicol most adversely affected.

The UNDP's measure of gender empowerment ranks the Philippines second among Asian countries. However significant problems remain, particularly in rural areas. Low farm

productivity and incomes mean that women must work, on their own or other farms, to supplement household earnings, even as they carry the major burden of household and family management. Wage rates are often lower for women employees; low functional literacy and weakness of programs directed to women's health needs undermines their income-generating capacity; and women's access to credit, extension, technology and training is often constrained by the nature of the programs delivering these services.

A trend which emerged during the 1990s was increasing feminisation of agriculture. This is driven by emigration of men to urban areas or overseas in search of employment, leaving the women responsible for farming operations.

GOP fully recognises the social and economic importance of developing the agricultural sector in order to boost overall growth and address the underlying causes of rural poverty. The Medium-Term Philippine Development Plan attributes rural poverty primarily to: low agricultural productivity and the inability of producers to compete internationally; limited access to land and other productive resources; slow diversification of the production base; continuous degradation of the environment; and unresponsiveness of the bureaucracy to the rural sector's needs. The major policy instruments to accelerate agricultural productivity and increase non-farm incomes in rural areas are:

- the Social Reform and Poverty Alleviation Act, which identifies the poorest of the poor and focuses government assistance on these areas;
- the Comprehensive Agrarian Reform Program which aims to complete the land distribution effort by 2004;
- devolution of some central government functions, including the DA, to the local level; and
- the Agriculture and Fisheries Modernisation Act, which guides pursuit of the goals of food security, poverty alleviation, income enhancement, increased competitiveness and sustainability.

1.5 Report structure

The report is organised in two parts (A and B). Part A is the main report and discusses the main evaluation findings, lessons and recommendations (Chapter 2) and policy implications for AusAID (Chapter 3).

Part B of the report contains appendices which evaluate AGRITECH, PPAEP and FSP respectively in some detail (Appendices 1, 2 and 3). A discussion of AusAID's country and sectoral strategies is in Appendix 4. The full evaluation TOR are in Appendix 5.

2. MAIN EVALUATION FINDINGS AND RECOMMENDATIONS

2.1 Summary of conclusions on individual projects

2.1.1 AGRITECH

Appendix 1 evaluates AGRITECH in more detail.

There is a twelve-year history of Australian involvement in Philippines agricultural education. The Government of Philippines (GOP) initially sought Australian assistance to upgrade agricultural training institutions in 1988. Following the pre-feasibility and design phases, project implementation commenced in 1993 and the project is due for completion in December 2000. The total cost was A$33.1 million. AGRITECH has operated in parallel with two other internationally-financed projects[2].

The goal of the project was to assist the GOP in improving and reorienting agricultural education services at provincial and regional levels to better meet the agricultural development needs of rural communities. It has four components: Institutional Support - to develop the capability of the project institutions to effectively develop and deliver the DAT-BAT[3] through the network of agricultural education institutes in Luzon and Mindanao; DAT-BAT program - to develop the students' skills, attitudes and knowledge which will allow them to increase agricultural productivity and rural incomes and/or gain productive employment in local agribusiness enterprises; Human Resource Development - to develop the skills, attitudes and knowledge of the faculty and other staff of the Provincial Technical Institutes of Agriculture (PTIAs) to deliver the DAT-BAT in an experiential manner; and Project Management and Monitoring - to effectively manage and monitor Australian and GOP inputs.

AGRITECH is a good example of development assistance in a field where Australia can provide a high level of expertise in addition to finance for hardware. It demonstrates that Australian expertise in technical education for the agricultural sector can be successfully transferred to developing countries. The investments in Technical Assistance (TA) and training have created a sustainable capability in the Philippines and a platform for further internationally-financed projects should GOP/AusAID and/or other donors decide to proceed in this direction.

Evaluation of AGRITECH's achievements must recognise that it involved a very long term of engagement with Australia. Australian involvement in the project from the initial studies until the present, lasted 12 years. If the time frame had been limited to the more usual five year period it is uncertain whether the conditions of sustainability could have been established.

The tracer studies of DAT-BAT graduates, and preliminary economic analysis, suggest that technical or vocational training of the type provided by AGRITECH is a good investment for the

2 The ADB-supported Agricultural Technology Education Project (ATEP) which ran from 1988 to 1996, and the European Union supported Agricultural Education Program (AGRED) implemented between 1989 and 1998.

3 Diploma of Agricultural Technology (two-year course) and Bachelor of Agricultural Technology (four years).

Philippines and probably also for other countries at a similar stage of development. AGRITECH aims to generate people who can create jobs for themselves and others through entrepreneurship, whereas conventional tertiary education focuses on training people to fill expected job vacancies.

Institutional complexity, unstable policies, and the multi-layered nature of Government make it difficult to implement projects on a national scale in the Philippines. However AGRITECH has demonstrated that it is not impossible. They keys to success are a strong and well-funded Project Management Office (PMO) operating, if necessary, across the boundaries of the line agencies, and with close involvement of the Technical Assistance Team (TAT) in management decisions during the implementation period.

The key recommendation arising from the review is that the AGRITECH initiative should be continued. The project has been successful in all 14 of the institutions where it has operated but there are many more where it could be applied. A further phase of the project could be implemented in a much shorter time-frame and at much lower cost. There would be limited need for further TA, and no-need to make additional investments in curriculum development and management systems. All of these have been well prepared and well documented. If it is correct that AGRITECH will generate an IRR of 10-20 per cent, as suggested by the preliminary economic analysis, some form of sequel which gives due attention to the weaknesses and lessons learned so far, could easily double that figure.

One immediate action which could be taken to accelerate broader adoption of the AGRITECH approach, would be preparation of a comprehensive document describing the AGRITECH approach. This would be extremely useful to schools who may be considering introduction of the DAT-BAT course and the AGRITECH approach to teaching it. Much of the material needed for such a document has already been produced in the various procedural manuals.

2.1.2 PPAEP

Appendix 2 evaluates the project in more detail.

This project was a pilot agricultural extension undertaking situated in the provinces of Albay and Camerines Sur in Region V, and Bukidnon and Misamis Oriental in Region X. The goal of the project was to increase and sustain agricultural productivity and income of rural households. The objectives were to:

- enhance the capacity of agricultural extension workers to effectively respond to the needs of rural farming families;
- strengthen and organise rural-based organisations (RBOs) to gain access to, control over, and management of resources to enhance community agricultural productivity;
- promote and strengthen the farming systems research approach to test and extend appropriate technologies on farms;
- develop and strengthen effective linkages between and among the agricultural sector and local government units, non-government organisations (NGOs), State Universities and

Colleges (SUCs), other government agencies and other institutions at community, municipal and provincial levels;
- increase awareness of provincial and municipal units within agricultural sector agencies of resource management principles to improve the quality of extension advice to communities; and
- project management.

The project commenced in May 1991 and was completed in May 1996. It was implemented by the Department of Agriculture (DA) with GRM International Pty Ltd acting as AusAID's managing agent. Total cost was A$15 million.

The project, because of its pilot character, was restricted to 36 barangays in 13 municipalities in four provinces. The percentage of barangays covered in relation to the total number in a municipality and the relevant province varied from about 5-18 per cent and 1-2 per cent respectively. Activities were concentrated on formal RBOs, often co-operatives, with between 14 per cent and 64 per cent of households in a barangay belonging to the targeted RBO at project completion.

Despite the very considerable efforts in training (both agricultural staff and rural-based organisations members) project achievements are **modest.** Although the core objective of the project was to establish an effective extension system with the appropriate linkages between rural communities, other players in the agricultural sector and LGUs, a disproportionate amount of attention become centred on funding provided for what were, essentially, project-promoted rural enterprises. With regard to the project's specific objectives, the team's main conclusions, four years after project completion, are as follows:

- It was intended that the project would deliver a model to help access external funding to develop the national agricultural extension system. This has not happened. The objective of establishing a replicable extension system was never achievable. The inputs needed under the project design were simply not replicable or even sustainable.
- Although devolution has caused disruption to the national extension system, the system at municipal level remains under-funded and dependent on national (generally donor-assisted) programs as the basis for its activities.
- A large amount of effort focused on promoting a participatory decision-making mechanism using the RBOs as the conduit. The concept has taken root (in some RBOs at least) but concrete benefits and examples of community empowerment remain limited.
- The participatory approach raised women's awareness and ability to articulate and assert their needs, rights and capabilities.
- Despite considerable efforts with on-farm testing/demonstrations during project life, except for irrigated rice and maize using a top-down approach, most such undertakings have now ceased.
- Linkages between and among the various actors in the agricultural sector (LGUs, NGOs, SUCs etc) at community, municipal and provincial level remains tenuous.

- The project assisted in increasing the awareness of agricultural agencies, at provincial and municipal level, to resource management principles. However the impact of the awareness cannot be quantified.
- The project did not adopt to the principle of 'progressive engagement' whereby stakeholders demonstrate commitment at each stage before advancing to the next (e.g. there was no equity contribution needed to access revolving fund credit and new loans were sometimes advanced before old ones had been repaid).
- Indications are that the project was managed satisfactorily at the macro-level but that the effectiveness of the project's NGO partners was often inadequate. Cohesion between the NGO-employed community development workers (CDWs) and the, agricultural technicians (ATs) was frequently lacking.

The project's objective was to use participatory methods to strengthen the delivery capacity of the agricultural extension services and the capacity of communities to express their needs. Although achievements were limited this does not render the objective invalid, but points to the need for modifications in future approaches. The fact that many rural communities in rainfed areas are pervaded by a feeling of dependence which adversely affects initiative, and where debtors feel no obligation to repay loans regardless of the source, must be given due consideration in designing development programs and projects targeting these communities.

2.1.3 FSP

Appendix 3 evaluates FSP in more detail.

The Philippines was a partner in a regional forages project which also included Indonesia, Malaysia, Thailand, Laos, Vietnam and China. The Project commenced in January 1995 and finished in December 1999. The project's executing agency was the International Centre for Tropical Agriculture (CIAT) with management provided by CIAT and CSIRO. The implementing agency in the Philippines was the Council for Agriculture, Forestry and Resources Research and Development (PCARRD).

The project's purpose was to increase the availability of adapted forages and to develop the capacity to deliver them to appropriate farming systems. The objectives for achieving this were: to integrate forages into these different farming systems through participatory research and development; to increase the capability of national staff through training; and to improve the effectiveness of regional research and development through networking.

The main conclusion is that the project was **successful** in achieving its objectives of increasing the availability of adapted forages and has devised mechanisms for enhancing adoption by farmers. FSP has adopted a highly participatory approach to ensuring that the forage development interventions are relevant to the perceived needs and aspirations of the target beneficiaries. After on-station trials have confirmed that the forages are adapted to local conditions, the target beneficiaries are presented with a menu of options from which they select according to their own needs and expectations. Key elements in the project's success include the following:

- The project, through a regional and within-country process of testing, was able to present farmers with a range of attractive forages;
- Forage development of the type demonstrated under the FSP project is a low cost, low risk, effective and sustainable mode of assistance for poor farm families in marginal and upland areas;
- The project confirmed the relevance and practicality of using forage strips to stabilise farming on steep slopes which would otherwise be subject to severe erosion risk, while at the same time improving the nutrition of ruminant livestock which play an important role in the farming system; and
- Women and children receive a significant share of the benefits through reduced forage cut-and-carry needs and a potential general increase in household income.

2.2 Project design

2.2.1 APPROPRIATENESS/ACHIEVEMENT OF PROJECT OBJECTIVES

The target beneficiaries of **AGRITECH** at the time of design were the sons and daughters of farming families in the selected provinces. The project aimed to train these individuals in the skills required to become self-employed rural entrepreneurs. This objective is regarded as highly relevant to the goals and aspirations of young Filipino rural people.

AGRITECH was designed and implemented as part of the government's master plan for agricultural education known as the National Agricultural and Fisheries Education System (NAFES). At the time of design the project was relevant to AusAID's objectives and policies. However, AGRITECH does not specifically target the poorest of the poor, although it does generate indirect benefits for this group.

The design of AGRITECH was an on-going process from the PID stage onwards. The PID was very detailed and prescriptive, but project management was responsive to changing circumstances during the life of the project and there were a number of tactical adjustments made without losing sight of the original project objectives.

The target beneficiaries of the **PPAEP** were small farmers in rainfed and upland barangays. The design of the project was relevant to the needs of these farmers in that it aimed to increase their capability to mobilise community resources and implement income-generating activities.

The design was also relevant to GOP priorities at national and provincial/regional levels prior to devolution of the extension function to LGUs. However, after devolution extension became the responsibility of the LGUs who generally have a lower level of commitment and resources available for the extension function. Project design was relevant to AusAID's objectives and priorities at the time the project was designed, and remains relevant today. The selected locations in the poorer rainfed upland areas were consistent with current AusAID priorities.

The design was faulty in that the manpower inputs (ie one CDW and an AT for each barangay) were not sustainable or replicable and appropriate technology (ie technology that could be immediately used by resource poor) was generally not available. The design did not give

enough weight to in-field monitoring and this led to some implementation problems not being identified quickly enough.

Despite undergoing a very protracted and participatory design process, PPAEP included a serious design flaw. Even if it had been one hundred per cent successful in achieving its objectives at field level it would never have been replicable unless there had been a massive increase in resources allocated to extension on a National basis. The flaw is doubly serious when we consider the pilot nature of the project and the importance of replicability. The use of 'seed money' and revolving funds was not a feature of the original design but eventually become the centrepiece of the entire project.

FSP has adopted a highly participatory approach to ensuring that the forage development interventions are relevant to the perceived needs and aspirations of the target beneficiaries. It was designed as a participatory research project targeting poor farmers in upland and rainfed areas, and has successfully developed a number of forage production strategies.

GOP does not have a clearly defined policy towards forage development and has had limited involvement in the project so far. In Mindanao one LGU has participated in the project, mainly through the efforts of a particularly enthusiastic agricultural technician. However, in a general sense the objectives of project to conserve soil and water and increase farmers' incomes are consistent with Government priorities.

The design of FSP is regarded as highly relevant to AusAID's objectives and policies. Forage development as practiced in the project is virtually cost free and has been adopted by resource-poor farmers who do not have the means or access to credit required for many other agronomic interventions. There are substantial environmental benefits through enhanced soil and water conservation, and women benefit from reduced time and effort required for cutting forage and feeding animals. The project also focuses on upland rainfed farming areas where there is a high incidence of poverty.

Lessons learned: In general the rationale and design of all the projects were relevant to promoting rural development and conforming with the aims of both GOP and AusAID. Two of the projects succeeded while the other (PPAEP) failed to meet its objectives, largely due to design flaws. Key lessons with relevance for future projects include:

- the need for high levels of support from both implementing and co-ordinating agencies or the ability for the project to act relatively independently;
- assurance that implementing agencies at field level are capable and committed to sustaining the initiatives;
- flexibility to change as circumstances dictate – this explicitly implies adequate monitoring and evaluation; and
- the first requirement for assisting the rural poor is to have successful activities. A project design which targets particular disadvantaged groups delivers nothing if it fails during implementation or proves to be unsustainable.

2.2.2 TARGETING

AGRITECH aimed to improve access to relevant and practical training in agriculture-based enterprise management for young people and farmers, including those from low-income groups. It aimed to give attention to the issues and concerns of rural women, sensitise the agricultural education system to their needs and deliver information, material and courses relevant to them. Staff and faculty of the participating institutions were intended to benefit through training programs designed to meet their particular institution's needs. The participatory and collaborative approach to be adopted in implementing the project was intended to bring about closer integration of the Provincial Technical Institute of Agriculture programs with those of local communities and LGUs.

AGRITECH succeeded in developing and institutionalising a practically oriented curriculum to assist graduates in creating and developing rural-based business activities, including agriculture value-adding and economic activities for women.

It was recognised from the outset that AGRITECH would be unlikely to generate direct benefits for the poorest groups in rainfed and upland areas and this has generally been the case. However women have been actively involved in most aspects of the project, and there will be some secondary or indirect benefits for disadvantaged groups from increased commercial activity and employment opportunities in rural areas.

The direct beneficiaries of **PPAEP** were to be amongst the poorest of the small farming and artisanal fishing families and their RBOs in 36 selected sub-municipal administrative units ("barangays"). Other beneficiaries were to include:

- the DA, which as an institution, would benefit directly at the AT and municipal and provincial office levels through the evolution of an effective extension system. The ATs' skills were to be greatly enhanced through focused training;
- the DA was expected to benefit from an improved ability to link with other agencies and LGUs via institutionalised co-ordination mechanisms; and
- NGOs were to be assisted in developing their marginal capabilities as necessary.

The bulk of the project's activities appeared to be addressed towards its stipulated beneficiaries. However, the degree to which the target groups were reached varied – some achievements were made with regard to community empowerment and education and some ATs benefited from training. Effective assistance provided to LGUs and NGOs was limited however.

The main target group of **FSP** was smallholder households often located in upland areas where there is little opportunity for off-farm employment. The families were under increasing pressure to reduce shifting cultivation and often associated cropping on steep slopes and to adopt a more sedentary form of agriculture or turn to forestry systems. The project was to be essentially gender neutral but women and children would benefit by a reduction in time devoted to feeding animals and from the resultant increase in farm income. Their labour productivity was also expected to rise. Another important target group was the technical staff of government departments whose capacity to carry out further development work would be enhanced by

training, through experience in working on the Project and from improved communication with other forage research and development workers in the Philippines and the region.

Project implementation concentrated its activities on its designated target group in two main areas as stipulated in project design. Its interaction with government departments was limited but communication between forage research and development stakeholders in the region was substantially enhanced.

PPAEP and **FSP** both targeted poor farmers in rainfed and upland areas, and both were intended to be pilot or exploratory interventions. However, FSP has been more successful than PPAEP in reaching AusAID's target group, although on a much smaller scale. PPAEP beneficiaries tended to be people who were already members of RBOs or co-operatives, located reasonably close to roads, with some prior involvement in development projects, and usually with better educational standards than non-participants. Due to the very simple and low-cost interventions offered by FSP, there are few barriers to participation by resource-poor farmers including those in remote, marginal and upland areas.

Lessons learned: While all projects focused on their primary target groups as stipulated in project design, more attention on the secondary beneficiaries would have been advantageous in the cases of PPAEP and FSP. With FSP its budgetary limitations necessitated focused attention on its primary objectives. With regard to future interventions the following lessons apply:

- the primary target groups need to be clearly identified according to the criteria of GOP and AusAID;
- the primary beneficiaries cannot be targeted in isolation. An environment conducive to focused implementation must exist (for example, LGUs enthusiastic about project activities); and
- interventions not directed specifically at the primary target group such as training, institutional and infrastructural strengthening should be given due recognition in project design.

2.2.3 PARTICIPATION

Good participation by staff, at all levels, has been evident in the design and implementation of the **AGRITECH** project. This is demonstrated by a clear understanding of the project's objectives and implementation procedures and strongly held belief in the Experiential Learning (EL) approach to teaching. Liaison between the TAT, PMO and PTIAs has been strong. Through the Regional and Provincial Co-ordinating Committees and the Community Outreach Centre (COC) Steering Committee, AGRITECH made significant headway in making aware and involving the LGUs, relevant agribusiness sectors and the farming community in project activities.

In **PPAEP** the magnitude and effectiveness of participation among the various stakeholders (LGUs, NGOs, DA-ATs and the RBOs) came in varying degrees and styles during the different stages of the project. The participatory approach was well conceived and planned at the national level but there were weaknesses and problems during field or municipal level

implementation. This resulted in differential involvement of the various stakeholders in the design, planning, consultation, and implementation of various activities of the RBOs. The factors responsible for the differential involvement include poor selection of NGOs; negative consequences of devolution; disparity in remuneration of CDWs and ATs; varying effectiveness of RBO empowerment; problems in RBO formation; poor identification of economic activities; and major problems with revolving funds (which were seen as donations).

Experience with NGOs who were involved in community organising and strengthening was quite variable. Some were effective while others lacked experience and expertise particularly in agriculture. There was a general sentiment expressed among the interviewed RBO members that there was too much power or independence exercised by the NGOs without corresponding accountability. In addition, partly because of differences in remuneration, there was often poor liaison between NGOs and ATs. As well, because the project employed NGOs were less encumbered by bureaucracy, they were often seen as more effective by communities.

FSP adopted a highly participatory approach to ensuring that the forage development interventions are relevant to the perceived needs and aspirations of the target beneficiaries. Participation was effective, though on a limited geographic scale, through the following activities:

- training and demonstrations (formal training, hands-on experience, actual exposure, cross-visits, workshops/seminars/conferences);
- establishment of forage nurseries (initial evaluation and source of planting materials);
- diagnosing problems and identifying potential solutions;
- on-farm testing and evaluation of most promising species or forage options;
- integrating the chosen forage into their farming systems;
- monitoring through follow-up visits, meetings, and consultations; and
- exchange of information through field days and cross-visits.

An NGO[4] with 18 years experience in organising communities and addressing environmental degradation in upland areas was contracted to assist in promoting forage activities in Cebu. The NGO, aside from training activities, successfully uses farmer-technicians to promote forage activities through farmer-to-farmer interaction. As the farmer-technicians are involved in the forage nurseries and are 'locals' who have adopted the technology, they can relate to their neighbours more easily.

Lessons learned: All three projects involved a satisfactory degree of stakeholder participation in project design and implementation. PPAEP provided CDWs to assist in the formation of RBOs and the conduct of diagnostic and strategic planning exercises. ATs provided technical assistance where needed to help implement these priorities. Most of the RBOs are still functioning as grass roots organisations. AGRITECH involved the faculty, staff and students of the participating institutions in the design of the improved DAT-BAT program and adoption of the experiential learning approach. Most people who participated in this process remain

4 Mag-uugmad Foundation, which utilises the Sustainable Upland Agricultural Resource Centre in a rural barangay for farmer training purposes.

enthusiastic supporters of the approach. FSP tested and successfully demonstrated a participatory approach to smallholder forage development which is potentially applicable over large upland areas in the Philippines. Experience from the three projects indicate that:

- Identification of the real needs and priorities of the target groups primarily through participatory diagnostic surveys are essential. Proposed solutions to the problems as identified by the beneficiaries (and project) must be rigorously analysed and researched where necessary.
- The LGUs are in no position to provide adequate support to farming communities on their own given the scarcity of funds. Projects should use competent NGOs (with training provided by the project where necessary) to sensitise communities and install the concept of participation, while the ATs (with specific additional training as necessary) should provide technical assistance. It is imperative that the NGOs/ATs operate as a partnership. Having emphasised a need to often use NGOs for community sensitisation, good relationships with LGUs are critical for effective project implementation as well.
- All projects needed a high level of technical assistance particularly as many of the activities and participatory mechanisms were new in the Philippines at the time.

2.3 Project management

AGRITECH was well managed thanks to an efficient PMO and a large amount of technical assistance, and has established management systems both at PMO and college level which are both sustainable and replicable, but still largely 'outside the system' of government. As such it was free of the normal bureaucratic problems involved with implementing externally funded projects within line agencies, and was able to adopt flexible and efficient management systems supported by a strong monitoring and evaluation program. It also allowed for a considerable amount of TA input into management decision-making. There was a productive partnership between the Australian advisers and the Filipino staff of the PMO, and between the PMO and the participating schools. These management arrangements arose because of the presence of EDPITAF as a semi-autonomous task force loosely linked to DECS. Whilst the project further strengthened EDPITAF, it cannot continue to operate on this basis indefinitely and is therefore scheduled to be integrated into the Commission on Higher Education (CHED).

The PMO performed an effective and efficient management function. However this mode of operation has meant that project management capability in the line agencies responsible for agricultural education has not been strengthened, they do not necessarily feel ownership of the AGRITECH approach, and their support for wider adoption of the initiative cannot be taken for granted.

The PMO established a comprehensive monitoring system under the management of an individual dedicated to that task. The result was an accurate and timely flow of information on which to base management decision during the implementation period. This allowed the project to make a number of useful tactical adjustments in response to information on what was working and what was not. The tracer studies of graduates and dropouts provide valuable information for assessing project impact.

With regard to monitoring, as the economic viability of AGRITECH depends on a continuing stream of graduates entering the workforce and establishing business enterprises, it will be important to continue the tracer studies for a number of years to come. This will provide valuable information to guide policy formulation, and management of the DAT-BAT program across all institutions where it is offered.

PPAEP was implemented through a PMO based in the DA Regional Office in Cagayan de Oro and the Provincial DA Offices in the four participating provinces. DA was closely involved in the design of the project which covered a period of some 51 months, but its role in implementation was limited by devolution of the extension function to LGUs from 1991 onwards. In the participating municipalities one AT was assigned to each participating RBO, and they were responsible for facilitating the formulation and implementation of strategies and plans for each RBO.

Whilst this procedure was effective in establishing a participatory extension process, the intensity of the staffing inputs could not be regarded as appropriate because they were not sustainable or replicable. A further weakness was in monitoring procedures which should have given early warning of the high failure rates among demonstrations and project activities financed by the revolving funds. The team was not able to inspect the detailed monitoring records of the project and had to rely on information contained in the PCR. This was detailed and presumably accurate at the time it was recorded. However, no follow-up monitoring work was undertaken after project completion and the team's visits to RBOs in Albay and Camerines Sur represented the first attempt to assess project performance since project completion. They revealed that many project initiatives in these areas had not been sustained after project completion. The reasons for this are varied and the situation may well be different in Mindanao which the team was unable to visit.

Whilst the lasting impact of PPAEP has been disappointing, the project was implemented in accordance with the plans set out in the PDD and the PID. The major shortcoming in management was in monitoring which failed to recognise that sustainability was at risk.

The Philippines component of **FSP** was implemented within a management framework established for a regional project in which other countries also participated. FSP worked more-or-less independently from the relevant line agencies but was effective in achieving its initial objectives.

The implementing agency was CIAT working in partnership with CSIRO, and there was minimal involvement of GOP institutions. Whilst this arrangement was appropriate and necessary for a project spanning several countries, it had the disadvantage that there was very limited consultation with official institutions at all levels of government. The result is that the project's achievements are not widely understood and there is low level of forage agronomy capability in government ranks. If the approach developed by FSP is to be expanded or replicated on a broader scale more appropriate implementation arrangements will need to be developed.

Lessons learned: All three of the projects were satisfactorily managed according to the key milestones in AusAID's project cycle. The evaluation suggests that the following ingredients assist with efficient management:

- support from high levels of both implementing and co-ordinating agencies which should be assured at the design stage;
- a strong management unit able to operate without undue interference;
- the ability to keep key objectives utmost in mind and make tactical adjustments as necessary;
- adequate TA which co-operates well with the management unit and which can expanded or reduced as necessary;
- co-operation from stakeholders at all levels;
- continuity of staffing; and
- effective monitoring.

2.4 Impact

The impact of **AGRITECH** is only just beginning to emerge but appears likely to be very positive in terms of the enhanced income-generating capacity of the DAT-BAT graduates and the establishment of an improved system of agricultural technical education suitable for wider adoption in the Philippines.

AGRITECH worked within the government's strategic framework for agricultural education (NAFES) and has also had a considerable influence on agricultural education policy. Following the success of AGRITECH, the GOP now aims to adopt the DAT-BAT approach nationwide and make the institutionalisation of the DAT-BAT approach a condition for an institution to be classified as an 'institution of excellence'. AGRITECH has the potential to have a major influence on agricultural training in the Philippines. It has introduced in new layer in the education system which concentrates on practical and commercial agribusiness skills. This model is highly relevant in a country where the majority of population still live in rural areas and rely on agriculture and related activities for their livelihood.

As a result of lobbying by AGRITECH, agricultural training institutions can now retain funds generated through their commercial activities. The freedom to retain monies has the potential to significantly impact on the financial situations of these institutes.

The strengthened capabilities of the participating institutions is clearly visible but can only be regarded as an intermediate output of the project. The final output consists of the graduates themselves and the entrepreneurial activities they are expected to undertake in their respective communities. With only two batches of graduates numbering less than a thousand in total it is too soon to make a definitive conclusion on how successful the graduates will be, and the impact this will have on the rural community. However, the initial conclusion from the tracer studies is that the DAT-BAT in the form designed by AGRITECH, can produce graduates well prepared for success in the private sector.

The schools selected for participation in the project are located in the poorer provinces (this also applied to schools which participated in the AGRED and ATEC projects). Direct poverty alleviation was not an explicit objective of the project. It was intended that the graduates would remain in these provinces and establish business enterprises which contribute to economic development and the creation of employment and value adding opportunities. This would have an indirect but potentially quite significant impact on the high levels of poverty prevailing in the selected provinces. Students who have completed secondary school (a condition for DAT-BAT enrolment) have already achieved a major milestone in escaping poverty. The project will directly benefit a few students from the poorest families, but the majority come from middle income rural families.

Under **PPAEP**, the almost complete lack of monitoring since project completion makes an assessment of longer term impact impossible. The evaluation team found that the major income generating activities attempted[5] as a result of the project have failed and few new enterprises have been attempted, crop husbandry, except for commercial vegetables, technology remained fairly rudimentary. While PPAEP may have strengthened the capacity for some individual RBOs in financial matters the team's assessment is that impact has been quite small in terms of raising incomes even in the targeted barangays.

PPAEP failed to develop a replicable model for participatory agricultural extension. Extension policy remains heavily focused in the lowland areas and oriented towards specific crops and project-related activities. The DA does not regard the PPAEP model as successful, and it has therefore had little influence on policy or strategic planning. At local government level most current mayors were not in office during implementation of the project and have little understanding of it.

In conclusion, PPAEP had limited lasting impact at field level and failed to achieve its primary objectives of establishing a replicable model for participatory agricultural extension.

The impact of **FSP** has been positive and highly visible in the areas in which it operated but a much larger follow-on effort is needed if the impact is to reach its full potential. FSP has been most successful where it has received enthusiastic support from a local organisation or individual, and where livestock numbers and forage demand are high. On the other hand, the very modest scale of the project means that its impact has been very localised.

Although FSP has demonstrated a successful and replicable approach to forage development there has been limited involvement of national and regional agencies. Whilst the DA is aware of the project's achievements and supports its continuation under the follow-up ADB-supported regional project, FSP has not so far had a significant influence on rural development planning.

Lessons learned with regard to AusAID's policy of targeting the poor in marginal or rainfed areas include:

- Interventions targeting rural-oriented education at the tertiary level, while having some potential in assisting poorest communities indirectly (e.g. creation of more opportunities

5 Goat enterprises as well as large ruminant dispersal schemes have been mentioned but they are generally not a direct result of project intervention.

for employment), will assist lower to middle income families rather than the poorest of the poorest. Assistance at the primary and lower secondary school level would be more effective in assisting the poorest communities.

- The use of proven appropriate technologies introduced to farmers through a participatory approach such as used by FSP, can be a cost effective way of targeting the poorest communities.
- Despite the limited success of PPAEP, appropriately designed extension systems operating at the LGU level warrant further testing, given the fact that LGUs will retain responsibility for extension for the foreseeable future.
- The identification and demonstration of appropriate technologies should be a priority as the contention that "on the shelf" technology is readily available is clearly incorrect for many marginal and rainfed farming systems.

2.5 Efficiency

The very large amount of TA included in the **AGRITECH** project raises the question of whether it could have been less expensively implemented. Whatever the case, the impact of the TA has undoubtedly been very positive and any future projects of this nature will require much smaller amounts of TA.

Although the benefits of AGRITECH are only just becoming apparent, preliminary economic analysis (see Appendix 1) suggests that if project momentum is sustained for five or ten years after completion, and the graduates achieve a reasonable degree of success as agribusiness entrepreneurs, then the net economic impact of the project would be positive - probably in the range of 10-20 per cent internal rate of return (IRR).

It must be recognised that this IRR estimate includes all of the costs of curriculum development, training, technical assistance etc incurred during the last seven years. If the AGRITECH approach is replicated and expanded on a national scale, many of these costs would not be repeated but the stream of graduates would expand. This would undoubtedly generate a very high return to the additional investment.

The major impact so far has been the development of an innovative and comprehensive curriculum together with the facilities and manpower needed to continue the program for five or ten years ahead. This will be sufficient to produce a further three to six thousand graduates in addition to the thousand or so graduates currently in circulation. The economic benefits of the project depend on this future stream of graduates. The real economic benefits will come from the much larger numbers who will be trained in the years ahead. This makes sustainability doubly important.

The design of **PPAEP** did not give due consideration to the efficiency issue. Efficient extension requires a large number of beneficiaries per extension worker. Nationally the Philippines has about one extension worker per 500 families, but these are concentrated in the lowland areas. In the upland areas where PPAEP operated there are many more families for each AT. PPAEP assigned one AT and one CDW to each participating RBO for the full duration of the project.

Most RBOs have between 20 and 40 members, so the project provided one adviser for each 10-20 families, a level of service between 25 and 50 times greater than the national average. Not surprisingly, this has proven unsustainable and non-replicable.

The PCR estimated that PPAEP generated an IRR of about 20 per cent, or possibly higher if adoption rates were above the baseline level. However this estimate was based on a number of assumptions which have turned out to be invalid. A key assumption was that there would be a doubling in the number of farmers adopting improved practices during the five years after project completion. This has not been achieved. Very few of the demonstrations appear to have been sustained for more than a year, and despite claims of high adoption rates by some groups, actual adoption has been minimal or zero in most cases. Similarly, there has been a high failure rate in activities financed from the revolving funds (Appendix 2), most of the money lent to individuals has never been repaid and there is no alternative source of finance for investment or working capital.

At best there has been no further adoption since project completion, and at worst there has been a virtual cessation of all project demonstrations and activities financed from the revolving fund. The 'no further adoption' scenario would generate an IRR of about 11 per cent and the 'virtual cessation' scenario would reduce the IRR to less than 2 per cent. The evaluation team considers the 'virtual cessation' scenario to be much closer to reality.

In summary, PPAEP has not generated a satisfactory financial or economic return on the investment. Some beneficiaries are better off as a result of their participation in activities initiated by the project but the returns have been disappointing relative to the size of the investment.

FSP was a small and very cost efficient project which made good use of local NGOs and/or LGU staff, farmer-extensionists, and low-cost forage development strategies. It has developed a model which is affordable by even the poorest upland and rainfed farmers, since planting material is free and only requires a small amount of labour to plant. There are labour savings later due to reduced time needed to cut and carry livestock fodder.

There has been a study of the benefits of FSP interventions in Mindanao[6] which describes the benefits attributed to the interventions by stakeholders. Almost 40 'impact indicators' were identified. The large number of benefits listed by stakeholders indicates that the benefits are complex, difficult to quantify, and vary between sites. Animal production benefits could be estimated from forage yield measurements but these have not yet been undertaken. Valuation of the other benefits would be more difficult. However if expansion or replication of FSP is to be considered and attempt should be made to quantify the financial and economic benefits of the project interventions. Given the low-cost of the technology used, rapid and sometimes spontaneous adoption rates, and experience from similar initiatives in other countries, it is likely that the financial and economic gains would far outweigh the costs. Moreover, the

6 Purcell T, Nacalaban W, Gabunada F and Cramb R. "Assessing the Impact of Agricultural Technologies in Smallholder Farming Systems – Results from a Participatory Monitoring and Evaluation Study on Forages in Maltibog, Northern Mindanao, Philippines" Paper presented at that Tropical Forages Conference, Cagayan de Oro, October 1999.

approach is ideally suited to upland farming systems at risk from erosion where there is a concentration of the most disadvantaged social groups.

FSP appears to have generated very significant benefits relative to the small investment. The benefits are complex, multi-dimensional and difficult to measure, but it would be useful to attempt quantification of the financial, economic, social and environmental gains if an expansion of the FSP approach is to be considered.

Lessons learned: The evaluation of these three projects emphasises:

- projects such as AGRITECH which involve large investments over an extended period are reliant on continued successful operation long after project completion in order to generate satisfactory economic returns;
- once the basic infrastructure and training investments have been made, the efficiency of follow-up investments to build on this platform, is potentially very high; and
- low-cost/low-risk investments in forage production for smallholders are likely generate good financial and economic returns, although further studies are needed to confirm this is true in the Philippines.

2.6 Gender

AGRITECH has developed a gender-aware and environment-sensitive curriculum which provides the practical skills needed for self employment in agribusiness. Some 40 per cent of enrolments and 44 per cent of graduates are women and women are well represented among faculty and staff although few, so far, hold senior positions. The program offers men and women competitive job market skills and not the gender stereotype courses where women learn skills that are an extension of household activities while men acquire technical skills.

The PPAEP PCR claims that there was a distinct change in attitude to gender issues amongst all those involved. Initially treated lightly, gender issues became integral and normal considerations in all project activities. A gender specialist was employed during Phase 1 and project team members undertook gender sensitivity training. Fifteen PPAEP staff (eight women and seven men) were accredited as Gender Trainers - they in turn conducted gender awareness and equity workshops for project staff and RBO members. Table A2.3, Appendix 2 summarises the proportion of women involved in various aspects of the project. Undoubtedly participation in most activities by women is quite high, but it cannot be concluded that this is due to project interventions due to an absence of any comparative data.

There was a policy provision in the project allotting at least 50 per cent of the revolving fund to women members which provided opportunities for women to engage in income generating activities. Based on documents and results of the field visit by the team, women-managed enterprises such as backyard swine or goat raising, home-based handicraft activities and peddling of goods and produce were the more successful and profitable ones.

FSP reported interesting gender differences in responses to various activities including the following:

- women are more curious and inquisitive than men;
- women are more diligent in taking down notes;
- women are more keen in making observation and require more detail (e.g., alternative uses of forage, effect of the different physical characteristics of forage as it affects digestibility, taste, meat conversion etc);
- male participants expect quick results, females are more patient and willing to wait for results; and
- males generalise in their comments/assessment, while females are more detailed and specific.

Lessons learned: The team's overall impressions suggest that gender was not a major issue during project implementation and that the project impacts were relatively gender neutral. However, the lack of critical monitoring (and evaluation) based on gender-disaggregated data may have failed to recognise some gender specific issues. Such issues may include: continuing male dominance in decision-making in some RBOs; increasing feminisation of agriculture as males seek off-farm employment; the perceived need in some communities for the husbands' consent in accessing formal credit; and inequalities in employment opportunities based on gender. While all of the following comments do not arise directly from the evaluation, future interventions should give sufficient consideration to the following matters:

- Any rural development project will require specific information regarding gender issues and concerns. There is a need to examine in more depth current processes (e.g. natural resource management, economic adjustment and transformation, demographic changes, re-orientation of agricultural education etc) to better understand the gender factors and realities within them.
- For educational activities there is a need to make workbooks/reading materials and courses more gender responsive in both content and delivery. The changing roles of men and women should be emphasised (avoid stereotyping) and the realities of women's contribution in development recognised.
- There is a need to create awareness (especially that of development planners and workers, business enterprises, financial institutions and other relevant agencies) that the biggest obstacle to a meaningful and successful employment career for women is the traditional societal perception that the proper role for women is that of a wife, mother and homemaker. As long as this persists, women will always be considered as secondary wage earners with adverse consequences for their employment in terms of recruitment, training and promotion.
- This same perception also influences some discriminatory treatment by creditors (formal and informal) and suppliers (commercial or small), so that women find it more difficult to access these services.

2.7 Environment

Environment issues were a significant part of the AGRITECH curriculum and consequences on the environment were taken into account in the planning and implementation of the SIE and IGE programs and in the institutions' whole farm plans. Overall there appears to be a strong awareness of environmental issues within the AGRITECH schools among both students and faculty.

According to the PPAEP PCR environment matters were treated as integral parts of the project. Environmental issues were raised and addressed as part of the community development process. In some instances the environmental concerns were used as entry points in the RBO strengthening process. The environment was given consideration in the RBOs assessment of proposals for funding under the RBO revolving fund. The team's impression was that RBO members were environmentally aware. The successful introduction of soil and water conservation measures, particularly in reduction in the level of grassland burning, in parts of the project area was an achievement.

The technology tested and promoted by FSP has huge potential in assisting in stabilising erosion-prone upland areas by providing a cover for exposed land and as hedge row components in contour farming while, at the same time reducing run-off and thereby assisting with water and soil conservation. This is highly relevant to communities in rainfed upland areas where there is rapidly increasing pressure on soil and water resources resulting from shortening of the swidden cycle and the cultivation of steeper slopes. Forage technology of the type offered by FSP has the potential to stabilise farming systems that would otherwise be regarded as inherently un-sustainable.

Lessons learned: The Philippines faces a major environmental challenge in conserving scarce soil and water resources in the upland and rainfed areas and in coastal communities reliant on marine resources. Environmental issues were given due consideration in the three projects and should assume an increasing role in future rural interventions.

2.8 Farmer/extension/research linkages

Through AGRITECH's Community Outreach Centres (COCs) attempts were made to form linkages with the community and agricultural sector. Staff were trained in all aspects of COC work including the research and extension linkages with the community. Achievements are unclear but some of the COCs have generated commodity market information through interaction with farmers and merchants.

PPAEP put considerable effort into trying to install a mechanism for testing and verifying technologies on-farm through closer integration between research and extension. Unfortunately the demonstration phase was insufficient, presumably due to a perceived need to quickly commence commercial activities, and an effective distinction was not drawn between demonstrations and on-farm trials. Demonstrations should promote technologies already proven in the field while on-farm trials are a means of verifying promising

technologies under farmers' conditions and should remain in the domain of researchers (with linkages to farmers, particularly at the evaluation stage, and extension workers). Because of the perceived need to progress quickly and the lack of clarity between trials and demonstrations some negative effects of the activity were evident.

FSP fully adopted the principle of farmer participation in research[7]. The project developed a delivery system which followed a similar pattern at all sites. Farmers were exposed to forage varieties through farmer-established demonstration sites which acted as nurseries or through other farmers who had already planted forages. The delivery system depends on the following actions:

- through surveys and discussions with farmers selecting sites which appears suitable for forage-based activities;
- assisting farmers in establishing communal plots containing a number of forage types;
- encouraging farmers to choose and plant varieties according to their own preference; and
- training and assisting farmers as necessary.

Lessons learned: Because of the limited appropriate technologies available to farmers in marginal and upland areas, rigorous testing of new technologies under farmers' conditions should be a priority. When introducing/testing new technologies the following principles should be followed:

- a clear distinction must be made between on-farm trials and demonstrations;
- both activities should be implemented early in project life and repeated for several years before they can be confidently presented to farming communities;
- extreme care must be taken in relating demonstrations to the environment[8] and the needs of farmers. Unsuccessful demonstrations, while theoretically having a value, can reinforce negative attitudes among farmers and thereby stifle innovations; and
- on-farm trials and demonstrations must be well conceived and implemented. Researchers must take lead responsibility for on-farm trials while demonstrations should be the responsibility of the ATs.

With regard to well-proven technology, in principle, beneficiaries should be presented with technologies and allowed to assess the innovations themselves without undue prompting - basically there should be a balance between giving enough information without stifling initiative.

The FSP project has offered the following lessons based on its own experience of farmer/research/extension linkages:

- Farmers can be natural researchers; self-discovery empowers them; they are willing to participate in groups; farmers are capable of developing their own systems; and there is a need to respect indigenous knowledge.

7 FSP's approach was quite distinct in that Farmer Participatory Research is largely based on observing 'what farmers do' sometimes accompanied by some prompting with regard to technologies.

8 The team was informed that some crops, particularly peanuts, were tested/demonstrated repeatedly in clearly unsuitable environments.

- For technicians to succeed in the participatory approach there is a need for patience; hard work; ability to link within and outside organisations; perseverance; an understanding, respect and belief in local political leaders and existing norms; and a willingness to learn.
- For facilitators to extend technology through a participatory approach they should work with the existing system; have patience, be sensitive to needs of farmers and collaborators; be open-minded (to account of the farmers' agenda as well as that of the project); have the necessary technical expertise; and take into account the capability/capacity of the collaborators.

2.9 Credit

To train students in the use of credit the **AGRITECH** project successfully established the Student Micro-Project Loan Fund (SMLF) which has supported most students in undertaking a practical agribusiness micro-project. The loan is subject to conditions similar to normal commercial bank loans and has to be repaid in full before the student can graduate. Local cooperatives were used as a conduit for disbursing the loan funds, but this arrangement has not been successful in all cases and a number of schools are now administering the loan fund themselves. Repayment of the loans has been reasonable but below the 90 per cent level needed to sustain the fund.

The **PPAEP** PCR concluded that initially the preparation and approval of projects was a tedious matter, causing much frustration to all involved. However, by PPAEP completion the RBOs, ATs and CDWs were preparing much better proposals, and the approval process was greatly improved and streamlined as experience developed. The farm management skills training in gross margins, partial budgeting and cash flows had been very valuable in this regard.

Some four years after project completion, the evaluation team encountered a quite different situation. Despite intensive efforts to train RBOs in financial matters, the funds were seen as another form of top-down assistance which entailed no obligation to repay. Most of the funds are now exhausted due to the non-repayment. While poorly performing enterprises, typhoons and droughts are quoted as main reasons for poor repayment, attitudinal factors undoubtedly played a role. Appendix 2 summarises the situation in the RBOs visited by the evaluation team. The main factors underlying poor performance of the revolving funds appear to be the lack of any requirement for borrowers to contribute to the investment and the feeling that there was no legally-binding obligation to repay.

Lessons learned: Successful experiences with formal credit involving smallholders in the Philippines are a rarity. Financial institutions are extremely reluctant to lend to smallholders because of collateral considerations, often a paucity in attractive rural enterprises (particularly in non-irrigated areas) and the proportionately large overhead costs in relation to the size of the loans. The use of 'seed money' should only be considered if the following conditions are applied:

- the recipient RBOs and individuals should provide a substantial contribution as counterpart funds;

- financial management must be rigorous and release of 'seed money' totally conditional on adequate repayment of previous loans;
- projects must have more to offer than 'seed money' or grants. There is nothing inherently wrong with projects providing menus of activities or solutions to farmers' problems provided the potential activities are financially viable. Financial viability must be judged relative to farmers' individual situations; and
- the option of adopting technology should be left to the farmer – the project however has responsibility of providing information if requested.

2.10 Sustainability

AGRITECH has helped to establish a new system of technical agricultural education in the Philippines which seems likely to continue in the schools where it is already established and be adopted by others as well.

Most of the conditions for sustainability of the DAT-BAT program within the participating schools have been achieved. All project staff have now been converted to regular (plantilla) status, and the schools have been granted permission to retain whatever income is derived from the IGEs. The only major risk to sustainability is that Central Government funding for agricultural education will be constrained to the extent that the quality of the DAT-BAT program will deteriorate resulting in declining enrolments and possibly closure of the program in some schools. There are also a few minor risks to sustainability such as loss of key teaching staff without adequate provisions for replacement, diversion of teaching staff to other duties, and waning enthusiasm for the DAT-BAT program amongst college principals.

The ongoing capacity of the PMO is also a relevant sustainability issue if expansion or replication of the AGRITECH initiative is to be considered. The PMO has demonstrated that it has the capability to implement additional major projects in agricultural education on a national scale. The large amount of TA and training received by PMO staff during the implementation of AGRITECH has provided a very sound basis for future operations provided the transfer of the PMO from DECS/EDPITAF to CHED is achieved satisfactorily and funding is adequate. The long-term sustainability of the PMO will depend on the demands placed upon it by major externally funded projects in agricultural education. If new projects are not forthcoming the need for the PMO will diminish and its capabilities will gradually atrophy. The emergence of NAFES offers potential to establish the DAT-BAT as a core offering nationwide. However, there are reservations as to the will and capability of CHED to respond to the challenges of NAFES, given its other mandates.

Overall, **PPAEP** has not delivered a sustainable outcome at either institutional or village level. There are some examples of successful interventions, but many more where things were tried for a year or two and then abandoned. The extension model piloted was always going to be difficult to sustain because of the intensity and costs of the inputs, and was never likely to be replicable on a wide scale, and the mismanagement of 'seed-money' provides valuable lessons in what not to do.

The training efforts of PPAEP have undoubtedly added to prospects for sustainability of RBOs provided they have a common purpose and strong leadership. Certainly some communities and RBOs feel more empowered as is shown by examples of self-reliance and advocacy. There has been some adoption of improved upland technology which has proved to be sustainable and, reportedly, more development of individual livestock enterprises as a result of PPAEP initiatives.

FSP has demonstrated a highly sustainable approach to smallholder forage development at village level, but has not yet tackled the issue of institutional sustainability. Because little, if any, additional effort is needed to merely sustain the forage species adopted, and farmers generally appreciate the benefits, most of the areas established by farmers are considered sustainable. The full benefits of forage development in upland erosion-prone areas are yet to be widely appreciated in government agricultural services.

The expansion of the FSP approach is another issue. While the ADB project in Mindanao will consolidate the efforts of FSP in the Philippines its effects are likely to remain localised. Considerably more funding, together with an increase in the cadre of personnel with expertise in forages and participatory development, would be needed to spread the technologies to other parts of the Philippines.

Lessons learned: The experiences of the three projects indicate that the following ingredients are needed for sustainability:

- the formulation of clear objectives which are relevant to the needs of stakeholders;
- participation by stakeholders in the achievement of objectives to install a sense of ownership;
- use of technologies which are affordable, robust and self-sustaining with minimal recurrent expenditure;
- involvement of NGOs which have the capability to continue operations after project funding ends;
- TA and training sufficient to develop a critical mass of human resources; and
- sufficient funding for ongoing operation and maintenance purposes either from the beneficiaries and/or government agencies as appropriate.

3. POLICY IMPLICATIONS

This chapter looks at the main conclusions and lessons drawn from the three evaluations and relates its findings to current AusAID policies and strategies in the Philippines as well as other parts of south-east Asia with similar problems.

3.1 General conclusions and lessons

Whilst AGRITECH was overall a successful project, it demonstrates that people who, through post-secondary agricultural training are informed on the commercial opportunities in the agricultural sector, will tend to avoid rainfed systems as a business enterprise and target more lucrative opportunities in irrigated agriculture or agro-industries. This implies that appropriate and proven technology for rainfed areas needs to be developed before people are prepared to invest time or money in agricultural production. FSP has shown that communities can be willing partners in the development and dissemination of such technology. However, PPAEP demonstrates that if the technology is imperfect and/or the delivery mechanisms are weak such interventions will fail or prove unsustainable.

This general conclusion of the review has important policy implications with regard to Australian assistance for communities in marginal and rainfed areas. First, post-secondary technical or vocational education, however successful in its own right, is likely to accelerate the emigration of the most productive young people out of the system leaving it with an even weaker human resource base. Investment in elementary and secondary education is more likely to generate direct benefits for these communities. Second, considerable care needs to be taken to identify and test low cost/low risk technologies which are appropriate for resource poor rural families. Moreover, the Philippines does not yet have a local-government based extension system which is capable of disseminating these technologies to AusAID target groups. However, there is an urgent need to do this in the upland coconut-based farming systems where population pressure is increasing and prospects for increased income from coconuts are poor. Third, the FSP experience demonstrates that resource poor farmers in marginal and rainfed areas, when presented with a menu of useful, practical and simple options will select and implement ones which they find appropriate to their individual circumstances.

Besides these main conclusions, other points to be considered in formulating assistance programs targeting marginal and rainfed areas in the Philippines include:

THE PROJECT CYCLE

- The concept of progressive engagement means building on successes to amplify achievements such as AGRITECH, and giving further impetus to promising beginnings such as FSP.
- All projects would have benefited from a more effective (though not necessary longer) preparatory phase to assure that at all necessary project inputs (particularly human resources) are in place prior to implementation.

- All projects needed a high level of technical assistance[9] particularly as many of the activities and participatory mechanisms used to achieve objectives were new in the Philippines at the time. TA should be tapered off from about mid-project to allow time for local managers to take full responsibility.
- Continuity in staffing for both national and TA staff is an important success factor.
- The duration of the project should be adjusted to its purpose. Sufficient time must be allowed for the participatory approach to take root and, concurrently allow on-farm testing and demonstration to reach maturity.

INSTITUTIONAL ISSUES

- Institutional complexity, institutional weakness, and policy instability all make long-term project implementation in the Philippines difficult. Projects must be permitted to make tactical adjustments to changing circumstances. Therefore project design should not be over-prescriptive, and recognise that it is often necessary to operate 'outside the system' using NGOs and implementing agencies outside the main line agencies.
- Support from high levels of both implementing and coordinating agencies was essential for successful implementation. Such cooperation should be assured at project design stage.
- The LGUs are in no position to provide adequate support to farming communities on their own given the paucity of ATs and the scarcity of operating funds. Projects should use competent NGOs (with additional training provided where necessary) to sensitise communities and install the concept of participation, while the ATs (with specific additional training as necessary) should provide technical assistance. It is imperative that the NGOs and the ATs operate as a partnership.
- The effects of devolution make it difficult to work with a single counterpart agency at National/Regional level through to village (barangay) level. LGUs have their own agendas and financial constraints and can not generally be depended on to provide strong partnership unless there are adequate incentives and assistance put in place – such incentives include assistance with infrastructure (access roads, potable water), primary health care, education and training.

GENDER

- The project PCRs and the team's overall impressions suggest that gender was not a major issue during project implementation and that the project impacts were relatively gender neutral. However the lack of critical monitoring (and evaluation) based on gender-disaggregated data may have failed to recognise some gender specific issues. Such issues may include continuing male dominance in decision-making in some RBOs, increasing feminisation of agriculture as males seek off-farm employment, the perceived need in some communities for the husbands' consent in accessing formal credit, and inequalities in employment opportunities.

9 This assertion is somewhat paradoxical as the Filipinos are amongst the best educated in SE Asia. However, they often find it difficult to be effective working within the Government system.

CREDIT

- Extreme care must be exercised when using ''seed money'' to promote economic activity. The provision of funds should be conditional upon the recipient RBOs providing some contribution as counterpart funds. Financial management must be rigorous and release of 'seed money' totally conditional on adequate repayment of previous loans.
- Projects must have more to offer than ''seed money'' or grants. There is nothing inherently wrong with projects providing 'menus' of options provided the potential activities are financially viable. Financial viability must be judged relative to farmers' individual situations. The option of adopting technology should be left to the farmer – but the project has responsibility of providing information if requested.

3.2 Possible directions for AusAID assistance

3.2.1 GENERAL CONSIDERATIONS

The implications of the review for future AusAID operations in the Philippines must be considered in the context of AusAID's Country Program Strategy (CPS) and Rural Incomes Strategy (RIS) (Refer to Appendix 4).

Whilst the evaluation found nothing to suggest that the CPS or RIS are inappropriate, it does highlight some differences between the broad thrust of the CPS and RIS and some of the specific interventions suggested by the evaluation. The RIS represents an ambitious attempt to tackle the root causes of rural poverty including national policy issues and the systemic weaknesses in the rural economy. If successful, the RIS will have far-reaching beneficial effects on a national scale. This evaluation suggests a number of micro-level and area-based interventions building on the successes and lessons learned from the three projects as well as taking the deliberations of the CPS and RIS into consideration. These are unlikely to have significant impact at national level but could be very significant locally to rural communities in rainfed and marginal areas. Priority areas could include:

- **Rural infrastructure** improvement. Access roads and the provision of potable water represent activities which are highly valued both by rural communities and LGUs and can be used by projects as a point of entry for promoting its core agenda;
- Assistance through LGU **based extension** including training for rural communities supported by demonstrations of proven appropriate technology and focused on-farm research[10];
- Improving and re-orienting **agricultural education** services to better meet the agricultural development needs of rural communities;
- **Primary health care;**
- **Basic education** in primary and lower secondary schools in rural areas;
- **Environmental improvements** including sustainable management of degraded uplands; and
- land use and land management aimed at poverty reduction.

10 A clear distinction needs to be made between demonstrations, which represent the extension of *proven* technology, and on-farm research which is generally the verification of promising but as yet *unproven* technology in the farmers' fields.

3.2.2 FOLLOW-UP ACTIVITIES

The evaluation supports the concept of progressive engagement and suggests that, as an initial step it should be applied in the following manner:

AGRITECH represents an investment of over A$33 million (probably as much as A$50 million in today's terms). Currently it is operating in 14 AGRITECH-supported institutions but could be extended in a much shorter time-frame and at a much lower cost. There would be a limited need for further TA and no need to make additional investments in curriculum development and management systems. If it is correct that AGRITECH will generate an IRR of 10-20 per cent (details in Appendix 1), as suggested by the preliminary economic analysis, a follow-up project which gives due attention to the weakness and lessons learned so far, could easily double that figure.

FSP has demonstrated a very effective approach for assisting rural communities in rainfed and marginal areas. This is being continued under the ADB-funded follow-up project but on a very limited scale. AusAID could sponsor a parallel-project which would expand the geographical scope while utilising the methodology established under FSP. An initial step would be intensive training of project staff, co-operating NGOs and LGU once they are identified.

There is also potential to use the FSP approach as a component of a broader project provided the integrity of the approach developed under FSP is retained. Such a strategy fits in well with the evaluation's contention that a project must have more to offer than ''seed money'' or grants. The technology is proven, cheap to adopt and maintain and has potential to increase incomes and assist in reducing land degradation.

3.2.3 TECHNOLOGY GENERATION

One of the key requirements for assisting rural communities in marginal and rainfed areas is the availability of appropriate technology. Low cost/low risk technologies suited to the physical and socio-economic environment are not abundant, but as shown under the FSP they can be developed by close collaboration between applied researchers and farmers. Further work of this nature may yield useful results.

A rigorous analysis of available or promising technology suitable for marginal and rainfed areas would be a first step in identifying potential income-generating activities. Priority could be given to the coconut monoculture in much of the country's poorest areas.

Many coconut stands are in relatively poor condition producing only marginal returns themselves, and effective intercropping is seldom implemented - consequently returns to resource-poor farmers in these areas are low. Properly spaced coconut stands, provided they are not excessively interplanted with trees or tall shrubs can provide an acceptable level of shade for more valuable cash crops such as cacao, lowland coffee, some specific fruit trees as well as annual crops. Such interplanting[11] is carried out successfully, over large areas, in other countries with similar environments. The benefits of intercropping are fairly obvious. Moreover the benefits of having one or more cash crops in addition to coconuts, given the sometimes huge fluctuations in copra prices, would be substantial in terms of enhancing household income security.

11 The team saw examples of intercropping with cacao - however technically the activities were very poorly implemented.

The evaluation team is aware that elements of effective interplanting technologies must exist in the Philippines but this is not generally apparent in farmers' fields. The World Bank is to implement a Smallholder Tree Crop Development and Diversification Project which will target a myriad of issues but does not appear to address the issues of demonstration and on-farm testing adequately. Given the critical importance of land-utilisation in coconut-dominated areas inhabited by AusAID's target groups, AusAID may wish to address the issue. ACIAR's mandate and experience are tailor-made to assist with technology development.

3.2.4 EXTENSION-FOCUSED PROJECT

Whilst the experience with extension has so far been disappointing this is not inconsistent with findings in rainfed and marginal areas elsewhere. However, the worsening plight of rural communities outside the main irrigated rice bowls suggests that extension is too important to abandon completely. The findings of this review have therefore been considered in outlining a new approach which would address the generic issues affecting rainfed and marginal areas. These are similar in many tropical countries and include:

- reliance on erratic rainfall and limited potential for irrigation;
- because of increasing population pressure, traditional shifting agriculture systems are becoming untenable;
- environmental degradation is increasing;
- poor infrastructure (roads, potable water) and services (health, education, marketing etc.);
- limited entrepreneurship and investment;
- limited on-farm and off-farm employment opportunities; and
- increasing ageing and "feminisation" of the agricultural workforce as men and the youth seek employment opportunities elsewhere.

To have any chance of impact, interventions should be on an LGU (municipality) basis and address all the above features, to some degree, to be able to implement its core agenda.

Given the PPAEP experience the rationale for providing more assistance to extension could be questioned. However with the lessons from PPAEP (largely on what-not-to-do) and given AusAID's focus on marginal and rainfed areas, a further extension-based project in collaboration with LGUs is warranted for the following reasons:

- DA is in the process of conducting major policy reviews towards fulfilling the direction of the Agriculture and Fisheries Modernisation Act. As the trend of these policies appears to be towards a higher-technology, capital intensive agriculture resources will inevitably be drawn away from the current (limited) anti-poverty activities of DA in the country's poorer areas. Thus many of AusAID nominal target group will receive less, if any, support;
- The poorest areas are unlikely to attract private investment and therefore stimulation for economic activities in these areas is likely to be minimal without targeted assistance;
- The LGUs, because of the pervasive poverty in their areas, have little opportunity to collect local taxes and will be disproportionately reliant on central government funding.

Thus the LGUs, given their lack of funding, would have little opportunity of undertaking substantial poverty alleviation activities and attracting suitable staff to assist with rural development.

Following the principle of progressive engagement, a project at municipality-level using relevant LGUs as partners may be appropriate. Although the classical integrated rural development project approach may not be in favour currently, elements of such a strategy could be incorporated. At the pre-project design stage, once potential co-operating municipalities are identified, detailed socio-economic investigations would identify the causes of rural poverty and disadvantage while, at the same time, presenting a tentative proposal on how to address at least some of the causes of poverty. While community empowerment through the use of a robust extension methodology would remain the main thrust of the project, complementary activities involving local capacity-building (particularly planning within the LGU administrative structure), infrastructure, health and primary education would be addressed.

The concept is based on the premise that agricultural extension and support services have been in decline since their devolution to local government under the 1991 Local Government Code. The first task is to convince LGUs that an effective extension service can substantially assist development but considerable resources would have to be allocated to develop such a service. The second task is to develop/reactivate an extension service. Critical elements in developing an effective service aside from funding would include:

- sufficient agricultural staff;
- a small complement of subject-matter specialists (two or three) at municipal level;
- a large injection of focused training;
- partnership between NGOs/LGUs (through ATs);
- adequately implemented demonstrations;
- on-farm trials as necessary;
- access to credit (perhaps) but only on the principle of progressive engagement;
- participatory approach through RBOs; and
- more use of the media.

Part B

APPENDICES

APPENDIX 1 AGRITECH PROJECT

Table A1.1: Summary of performance and potential[a] impact, AGRITECH[b]

Objective		Achievement of Objectives	Potential Impact		
			Social	Institutional	Income
1	Institutional Support				
2.	Consolidation of DAT-BAT Program				
3	Human Resource Development				
4	Project Management & Monitoring				

a The final touches to AGRITECH will be completed by December 2000. It is too early to assess impact on incomes as only two batches of students have graduated to date.

b The performance of the project and its elements were assessed using a five level scale ranging from weak to best practice as follows: = weak effect; = marginal effect; = moderate effect; = high effect; = best practice effect.

A1.1 Introduction

AGRITECH is a joint Australian-Philippines initiative to improve and reorient agricultural education services in Regions II, IV, XI and XIII to better meet the agricultural development needs of rural communities. The project was co-executed by the Commission on Higher Education (CHED) and the Department of Education, Culture and Sports/Education Development Projects Implementing Task Force (DECS-EDPITAF), and is the means by which the desired reforms are articulated and implemented over a six-year period from 1993 to December 2000. Twelve Provincial Technical Institutes of Agriculture (PTIAs) and two Regional Colleges of Agriculture (RCAs) were enhanced to become provincial centres of excellence in technology and entrepreneurial based agricultural education. The PTIAs offer the four-year location-specific Diploma in Agriculture Technology - Bachelor of Agriculture Technology (DAT-BAT) curriculum.

A1.2 The project

A1.2.1 PROJECT BACKGROUND

There is a twelve-year history of Australian involvement in Philippines agricultural education. This has operated in parallel with two other internationally-financed projects: the ADB-supported Agricultural Technology Education Project (ATEP) which ran from 1988-96, and the European Union supported Agricultural Education Program (AGRED) implemented between 1989 and 1998.

AGRITECH is part of a long term program to rationalise and improve agricultural education in the Philippines. In the late 1980s the Philippines had some 285 institutions offering more than 500 educational programs in agriculture and related fields. Most of these were theoretically-based and highly variable in quality and content. It was recognised that these courses could

not satisfy the growing demand for agricultural technicians to provide the middle-level manpower for modernisation of agro-industry and to stimulate rural entrepreneurship.

In response to this need, the Government of the Philippines (GOP) formed a technical panel to review policies and coordinate development plans for upgrading and rationalising agricultural education. The panel formulated a plan, known as the National Agricultural Education System (NAES) which aimed to rationalise and improve agricultural education nationwide. NAES was approved for implementation in 1987 (although the supporting legislation was not passed until December 1997). It was designed to create a closely linked network of existing educational institutions, consisting of the National Agricultural University as the apex institution; three Zonal Agricultural Universities; 13 Regional Agricultural Colleges (RACs); and 77 Provincial Technical Institutes of Agriculture, one in each province.

Implementation of NAES (later re-named the National Agriculture and Fisheries Education System – NAFES) was supported by two externally-assisted projects:

- The ADB-supported **ATEP** was implemented between August 1988 and April 1996 and introduced a practical approach to agricultural training under the DAT-BAT program. ATEP strengthened 13 PTIAs, established 11 Farmer Training Centres (FTCs), and provided support and training for four RACs, three Zonal Universities and the National University and upgraded agricultural teacher education. ATEP was managed by a Project Management Unit in the Educational Development Projects Implementing Task Force (EDPITAF) under the Department of Education, Culture and Sports (DECS).
- The European Community-supported **AGRED** was identified and prepared in the latter half of 1988 and was implemented between 1989 and June 1998, also under EDPITAF supervision. It established the DAT-BAT program in five selected PTIAs in low income provinces.

At the time ATEP and AGRED were being launched GOP also sought Australian assistance to upgrade a number of RCAs and PTIAs under the NAES strategy. AusAID commissioned a series of studies leading to a Project Design Document (PDD) in March 1991 and a Memorandum of Understanding was signed in August 1993. The Technical Assistance Team (TAT) arrived in Manila in September 1993 and the Project Implementation Document (PID) was approved in March 1994. This was amended in August 1995 following a request for further assistance to four schools and extended completion to March 1999. A Mid-Term Review conducted in November 1996 noted the need to extend the project to Mindanao. The TAT demobilised in April 2000 and the project will terminate at the end of December 2000.

A1.2.2 PROJECT DESIGN

Rationale and objectives

When the project was originally designed in 1991 the agricultural education system embraced a diverse range of institutions and courses, with institutions mandated to undertake teaching, research and extension (including training and non-formal education). The proliferation of formal courses resulted in a narrow focus on academic teaching often described as science-

based and research orientated. With limited facilities, equipment, and inadequately financed college farms to teach practical knowledge and skills, and little contact with real farm situations, most institutions provided little or no practical experience for students. The extension role of the colleges was largely ignored and curricula were formulated with little knowledge of real needs of target clientele, particularly women.

However, a number of institutions were attempting to use their limited resources to support practical agricultural training programs more relevant to community needs. Many of these changes were being directed at training students to return to the land rather than seeking the few available white collar jobs. The AGRED and ATAP projects were assisting 21 PTIAs to develop the DAT-BAT program with support from the EC and the ADB respectively. AGRITECH was a parallel initiative initially concentrating on regions II and IV where most provinces did not have PTIAs. Constraints in equipment, facilities, staff capability and relevant course content all needed to be addressed through assistance to the nominated PTIAs.

AGRITECH aimed to focus on supporting relevant education for poor farmers and rural entrepreneurs in order to help rural people to:

- create and develop business activity, including agricultural value-adding activities, and economic activities for rural women;
- implement sustainable agricultural production and processing systems that would maintain and develop the natural resource base; and
- encourage cooperation and working with others, for local planning, creating or expanding commercial community ventures, accessing necessary finance, and communicating the needs of farmers to service providers.

The project proposed to support enrolment of students only if they have access to some land either from their parents or through agreements with the community, co-operatives or rural-based organisation (RBOs). This necessarily meant that some of the poorest in the community may not gain access to the agricultural education offered.

The NAES, and the AGRITECH project were designed within the framework of the Medium-Term Philippine Development Plan (1987-92) which identified the following principle goals: poverty alleviation; generation of more productive employment; promotion of equity and social justice; and sustainable economic growth. The objectives of the education and training sector emphasised values, equity and access goals, together with the need for improved quality and relevance of education and training and all levels.

Regions II and IV were selected by GOP in consultation with AusAID, acknowledging such factors as security, existing and planned projects, and relative need. Following the MTR in 1996 the project was extended to Regions XI and XIII in Mindanao.

The goal of the project was 'to assist the GOP in improving and reorienting agricultural education services at Provincial and Regional levels to better meet the agricultural development needs of rural communities.'

Target group

The project aimed to improve access to relevant and practical training in farming and agriculture based enterprise management for young people and existing farmers, including those from low income groups. It aimed to give attention to the issues and concerns of rural women, sensitise the agricultural education system to their needs and deliver information, material and courses relevant to them. Staff and faculty of the participating institutions were intended to benefit through training programs designed to meet their particular institution's needs.

The participatory and collaborative approach adopted in implementing the project was intended to bring about closer integration of the PTIA programs with those of local communities, Local Government Units (LGUs) and Provincial Governments. National priorities and objectives for locally planned and implemented rural development programs were to be supported through local level planning and coordination established to implement the project.

Project components

AGRITECH has four components:

- **Institutional support** to develop the capability of the project institutions to effectively develop and deliver the DAT-BAT through a network of agricultural education institutions in Luzon and Mindanao.
- **DAT-BAT program** to develop within the students skills, attitudes and knowledge which will allow them to increase agricultural productivity and rural incomes and/or gain productive employment in local agribusiness enterprises.
- **Human resource development** to develop the skills, attitudes and knowledge of faculty and other staff of the PTIAs to deliver the DAT-BAT in an experiential manner.
- **Project management and monitoring** to effectively manage and monitor Australian and GOP inputs.

The project provides support to the following institutions:

Region	Province	Institution
II	Cagayan	Cagayan State University, Lal-lo[a]
	Quirino	Quirino State College, Diffun[a]
	Nueva Vizcaya	Nueva Vizcaya State Institute of Technology, Bayombong
	Isabela	Isabel State University, Echague[b]
IV	Laguna	Laguna State Polytechnic College, Siniloan[a]
	Quezon	Quezon National Agricultural School, Pagbilao[a]
	Marinduque	Marinduque State College, Torrijos
	Occidental Mindoro	Occidental Mindoro Polytechnic College, San Jose
	Romblon	Romblon State College, Odiongan
	Cavite	Cavite State University, Indang[b]
XI	Sultan Kudarat	Sultan Kudarat Polytechnic State College, Lutayan
	South Cotabato	Surallah National Agricultural School, Surallah
XIII	Agusan del Sur	Agusan del Sur State College of Agriculture and Technology, Bunawan
	Surigao del Norte	Surigao del Norte College of Agriculture and Technology (SNCAT), Mainit

a Institutions visited by the team.

b RCA – all others are PIAs.

Project costs

The total project cost was A$33.1 million of which 73 per cent was financed by Australia and the remainder by GOP. Financial support by GOP was significantly higher than originally planned, as shown in Table A1.2:

Table A1.2: Total project costs (A$'000)

	Phase 1 Sept 1993 to June 1995	Phase 2 July 1995 to April 1999	Phase 3 May 1999 to April 30 2000	Total
AusAID				
Planned	7 041	12 517	4 656	23 214
Actual	7 041	14 001	3 149	24 191
GOP				
Planned	2 962	1 340		4 302
Actual	1 507	6 129	1 260	8 896
Total				
Planned	10 003	13 857	5 916	29 776
Actual	8 548	20 130	4 409	33 088

Source: Project Completion Report

A1.3 Project implementation

A1.3.1 OVERVIEW

Whilst the basic goal and objectives of the project remained in place, a number of changes were made to the original design in response to changing circumstances and lessons learned. Significant changes included: expansion of the project to Mindanao in June 1995; extension of the project until December 2000; increased TA from 335 to 628 person-months; construction of an additional Community Outreach Centre (COC); introduction of merit-based AusAID-AGRITECH awards in 1998-99; and renaming of the FTCs as COCs with emphasis on the two-way linkage with the community and a mandate for price, commodity, market and industry research. All key recommendations of the Mid-term Review were addressed, notably the regularisation of contractual staff, retention of profits from income generating activities, additional technical assistance (TA) in Institutions and Agribusiness-Marketing, and scheduling and integration of Mindano activities.

The following discussion details the objectives of each project component, and reviews achievements relative to each of these objectives. It also provides an assessment of project achievements relative to each of the outputs in the logframe contained in the PDD. The assessment is based on information contained in the PCR, review of monitoring documents, tracer studies and visits to four PTIAs involved in the program.

A1.3.2 COMPONENT 1: INSTITUTIONAL SUPPORT

Objective: Develop the capability of project institutions to undertake their function for effectively developing and delivering the DAT-BAT program through a network of agricultural education institutions in Regions II and IV (later extended to Regions XI and XIII)

Component 1 consisted of 6 key outputs designed to expand capacity of participating institutions to function as PTIAs within their respective networks. The key output was to assign and appointed sufficient staff for the institutions to deliver the DAT-BAT and to undertake other functions. This was to be a condition for commencing other inputs.

Achievements of the institutional support component: The project has achieved the overall objective of this component. All 14 schools included in the project are now offering the DAT-BAT program. In 1999 total enrolments were 2229, with 975 being new entrants. Enrolments for 2000 are expected to be sustained.

- **Output 1.1** Information transfer: strengthened sharing of relevant information and technology among participating project institutions and related government and non-government service agencies and organisations.

The PCR reports that considerable problems were encountered in developing information networks and new strategies had to be developed. The most significant activities were those which brought schools and faculty together on a regular basis leading to effective linkages and networks between schools. However, information networks remain tenuous and rely mainly on

personal contact. Private sector linkages have been much more promising, and the sector has proven very supportive of the DAT-BAT. All Mindanao schools and about half the Luzon schools are producing quarterly newsletters and regular radio broadcasts. The program of awards for internal study tours and activities was introduced to replace the internal tours and immersion programs.

- **Output 1.2** Planning: more effective and comprehensive planning systems for developing institutional and human resource development programs.

The PCR reports that strategic plans have been developed by all PTIAs and are revised annually. All PTIAs and the PMO prepared annual operating plans for the DAT-BAT in 1997, 98, 99 and 2000. A Training Needs Analysis is conducted annually and issues constraining the ability of the schools to implement their plans were addressed with the help of an Institutional Development Adviser. Detailed manuals of procedure have been developed across all operational areas of the DAT-BAT. The procedural manuals will ensure that newly recruited personnel easily understand the planning systems and that other schools which decide to adopt the AGRITECH approach will have a model to work from.

- **Output 1.3** Farmer Training Centres: Farmer Training Centres to meet the needs of local communities and community groups.

The COCs are in place, staffed and operational at all PTIAs. Staff have been trained in all aspects of COC work and are pursuing linkage, research and extension programs. Buildings, furniture and computers were provided to the Centres.

The extent to which the COCs have achieved the design expectations is variable. In some cases the Centres are under-resourced and staff have been slow to understand the concept of linkage with the community and the agricultural sector. There appears to be some confusion about the purpose and functions of the COCs.

- **Output 1.4** Income Generating Enterprises (IGEs): Income generating projects/enterprises strengthened and/or expanded.

Each PTIA has at least one functioning IGE. The IGEs are managed under a Business Affairs Office (BAO), created on project advice, which manages all farm activities of the College and reports to the College President. Financial management and reporting systems have been put in place for monitoring and control. All schools are now generating profits from the IGEs although there is considerable scope for improvement in most cases. In addition to their financial contribution to the schools' budgets, the IGEs provide a sound basis for credibility in teaching the DAT-BAT.

- **Output 1.5** Staff: appropriately qualified staff appointed to funded plantilla positions to undertake the DAT-BAT and other PTIA functions.

Staffing of the DAT-BAT is complete and contractual staff have been regularised. This is a major achievement for foreign-assisted projects in the Philippines and is a vital factor in

ensuring the sustainability of AGRITECH. There is however, a risk that staff may be lost through gradual leakage to other programs, or used to teach other courses within the institutions.

- **Output 1.6** Research-Extension Capability Building: Appropriately qualified staff capable of undertaking a community research/extension program.

The PCR does not provide specific comment on this output. However, the team's observations suggest that the project has not made great progress towards research-extension capability building. Although research and extension are part of the PTIA's mandate the AGRITECH institutions have concentrated on developing and teaching the DAT-BAT program and have had few resources to allocate to research and extension.

A1.3.3 COMPONENT 2: DAT-BAT PROGRAM

Objective: Develop within students skills, attitudes and knowledge which will allow them to increase in agricultural productivity and rural incomes and/or gain productive employment in local agribusiness enterprises.

Component 2 was to be achieved by developing curricula and course materials relevant to the local community needs, providing the facilities and equipment needed to deliver the DAT-BAT, an awareness program to attract students to the course and supporting them in undertaking small-scale business ventures on their own account.

Achievements of the DAT-BAT program: The DAT-BAT program was established before AGRITECH and cannot therefore be counted as an achievement of the project.

Tracer studies of the first two batches of graduates from AGRITECH-supported schools provide tentative conclusions on the effectiveness of the DAT-BAT program in these schools. The early indications are encouraging and it is apparent that many graduates who are currently employed are working to save capital for launching their own small businesses. Further tracer studies are needed to verify the initial impressions.

- **Output 2.1** Curriculum: Locally relevant farming systems-based experiential curriculum which promotes the interests of women and the environment, and which integrates adaptive research and extension.

The PCR confirms that the project has developed a much-improved DAT-BAT curriculum, and this has been documented in a form that will facilitate its adoption, and adaptation to local conditions, by other schools that may consider introducing the DAT-BAT in future. The curricula have been designed to respond to gender, environment and local farming systems and data from community surveys were used to support curriculum development. Workbooks for all 42 subjects have been produced and revised following annual curriculum reviews. Substantial changes were made to the original ATEP/AGRED DAT-BAT course. All PTIAs implemented the revised curriculum on schedule, and all instructors are utilising the Experiential Learning (EL) method. Whilst some teaching staff found it challenging to change from conventional instruction to EL, they now have considerable enthusiasm for the method and indicate that they will continue to use EL after project completion.

- **Output 2.2** Facilities: Provide necessary facilities for the conduct of the DAT-BAT program through construction, renovation and repair.

The PCR states that facilities were constructed on time and within budget in Luzon, but with some delays in Mindanao. The project developed procedures for contract management which gave a high level of control over procurement to the TAT. Facilities have proven suitable for their purpose, maintenance training has been undertaken and maintenance manuals have been prepared. All project-financed buildings inspected by the team were in reasonable to good condition.

- **Output 2.3** Equipment: Equipment (including instructional materials and resources) necessary for conduct of the DAT-BAT program.

The PCR reports that equipment lists were drawn up for each PTIA in consultation with faculty and administrators. Tendering was undertaken by the PMO/TAT in accordance with regulations. Maintenance and repair training has been completed and a maintenance procedures manual has been prepared. Some equipment was inspected by the team and found to be in good condition, but satisfactory ongoing maintenance and eventual replacement will be subject to the availability of funding.

- **Output 2.4** Awareness: Communities aware of the DAT-BAT program to provide at least 108 suitable DAT enrollers per annum at each supported institution.

The PCR states that all PTIAs conduct annual publicity campaigns to improve awareness of the DAT-BAT in their catchment communities. Enrolments in Luzon dipped after the first year but have since recovered. Enrolments in Mindanao have been ahead of plan.

However, the target number of 108 DAT enrollers per annum per school is yet to be reached. In 1999/00 a total of 995 students started the DAT program in the 14 schools. This represents only 66 per cent of the target number.

Whilst selection procedures and criteria have been established in line with project objectives, in many cases the number of applicants has been insufficient for the selection criteria to be applied with the result that most or all applicants who had completed high school were accepted. This included some students who were not from farming families.

- **Output 2.5** Student Scholarships and Student-Personal Need Loans to provide greater equity of access to agricultural education for low income groups without sacrificing standards and opportunities for achieving subsequent self-employment.

It was not intended that AGRITECH would fund a scholarship scheme, rather that it would facilitate the funding of scholarships from other sources. However, the scholarship scheme received little attention from the project. Some PTIAs have been active in seeking scholarships with some success.

- **Output 2.6** Student Loans: Access to affordable loans for eligible DAT-BAT students for implementing learning/income generating (micro) projects is required by the curriculum.

The project successfully established the Student Micro-Project Loan Fund (SMLF) which has supported most DAT students in undertaking a practical agribusiness micro-project. Local cooperatives were used as a conduit for disbursing the loan funds, but this arrangement has not been successful in all cases and a number of schools are now administering the loan fund themselves. Repayment of the loans has been reasonable but below the 90 per cent level needed to sustain the fund. Movement of the micro-project from the DAT II curriculum to BAT II in 2000/01 should improve loan recovery.

- **Output 2.7** Internship: Mechanisms to assist graduate students in establishing income generating enterprises or obtaining employment.

The project introduced a number of initiatives to help students and graduates establish a foothold in the agribusiness environment. These included the SMLF and the Occupational Internship Program (OIP). The OIP requires BAT II students to spend one semester working in local agribusiness enterprises to gain practical work experience. Although there have been some difficulties in obtaining placements, many students regard the OIP as a very useful part of their training. In some cases it has led on to employment offers.

A1.3.4 COMPONENT 3: HUMAN RESOURCE DEVELOPMENT

Objective: Develop the skills, attitudes and knowledge of faculty another staff of PTIAs and RCAs to deliver the DAT-BAT program in an experiential manner.

Component 3 was to be achieved by identifying the specific training needs of faculty and staff, designing courses and programs to meet these needs and delivering the courses and programs.

Achievements of the human resources development component: At all of the schools visited by the evaluation team faculty and staff demonstrated considerable enthusiasm for, and understanding of, the DAT-BAT program and the EL approach to teaching. This suggests that there has been a high degree of participation in developing the DAT-BAT course and that the training has been effective.

The training of faculty and staff in the skills needed to deliver the DAT-BAT program has been completed. The PCR reports that the project made a major investment to ensure that faculty and staff have the skills to competently carry out their functions. Participants are positive about the benefits and opportunities provided by the training. The project also initiated the development of the Master of Agricultural Science and Technology course. More than 90 faculty have been supported in course or in completing Masters theses.

A1.3.5 COMPONENT 4: PROJECT MANAGEMENT AND MONITORING

Objective: effectively managed and monitor Australian project inputs in cooperation with the GOP and involved community groups.

Project management was to be undertaken at the national level by EDPITAF and the TAT from officers in Manila and TAT members located in Regions II and IV. Progress monitoring was to be undertaken, as well as establishing procedures for evaluating project impact.

Achievements of the project management and monitoring component: Strong project management has been a feature of the AGRITECH project. Three main factors have contributed to the success of the management and monitoring aspects of the project: (1) establishment of the PMO as semi-autonomous entity able to pursue its objectives without interference from other line agencies; (2) the large amount of TA provided to support the PMO; and (3) the very productive and cooperative working relationship between the TAT and the PMO.

- **Output 4.1** Project Management: A project management system and capacity was to be established involving Australian TA, EDPITAF, the supported institutions and related donor-funded projects.

Implementation has been managed in a consultative framework and close working relationship between the TAT, PMO and the PTIAs. The result was a high degree of ownership of AGRITECH initiatives through active participation of stakeholders at all stages. This engendered a harmonious working relationship between the partners.

A feature of the project has been the constant adjustment and re-focus of activities in response to emerging needs and opportunities. The TAT reacted to external inputs such as the Mid Term Review and all major recommendations were actioned. Monthly and six-monthly reports were mostly submitted on time and all Annual Plans were lodged on time. PCC meetings were held six-monthly. Project Director visits were regular and timed to coincide with the PCC and Annual Planning periods.

Attempts were made to address governance problems at the PTIAs, but these met with limited success. The main constraint to the development of the DAT-BAT was the performance of the PTIA Principals, several of whom were not fully supportive. However, all but two of the institutions are now enjoying a high degree of support from their Heads.

- **Output 4.2** Project Monitoring: Adequate data on the progress of the project to be collected and evaluated on a timely basis.

The Team was provided with most of the information needed to conduct an evaluation of the project, and was generally impressed with the quality and completeness of the monitoring data. Data on all project activities has been recorded and reported to GOP and AusAID. The Project Management Information System established by the PMO at each PTIA has been instrumental in maintaining these records.

- **Output 4.3** Project Evaluation: Initial assessment of the impact of the project.

The PCR provides a preliminary evaluation of project achievements. However, full impact evaluation is impossible at this stage with only two batches of graduates coming into the workforce. Tracer studies on drop-outs and graduates have been conducted and a methodology for long-term monitoring and evaluation has been developed. The case study approach has provided examples of promising outcomes for both male and female graduates. However, it is clear that too many students have enrolled in the DAT-BAT for reasons other than preparation for a private sector career in agriculture and rural enterprise.

A1.4. Achievement of objectives

A1.4.1 GENERAL

The project has achieved most of its objectives, and is an excellent example of a collaborative and participatory approach to the implementation of bilateral projects. It has established a well-designed technical agricultural education system in the Philippines which is relevant to the needs of rural communities, and has the potential to be replicated over all 77 provinces of the country. The DAT-BAT program is now operating in 14 AGRITECH-supported institutions and has so far produced almost 1,000 graduates. The DAT-BAT is also offered in 13 schools supported by the ATEP project and 5 schools supported by AGRED.

A1.4.2 KEY ACHIEVEMENTS

The key achievements of the project include:

- Establishment of a technical agricultural training system which is in line with the objectives of NAFES, tailored to the specific needs of each community, and suitable for replication across the whole of the Philippines.
- The project achieved two significant breakthroughs in satisfying the conditions of sustainability: conversion of all project staff from contract to regular (plantilla) employment conditions; and approval for the schools to retain income generated from commercial activities.
- Institutionalisation of the EL approach in participating PTIAs. Teaching staff report that although EL may seem slower than conventional teaching, they believe it is a more effective educational tool for technical training of this type.
- The establishment of a number of Student Instructional Enterprises (SIEs) and IGEs using the college land and other infrastructure. The SIEs provide hands-on experience for students in a wide range of activities. The IGEs also have some educational role but their main function is to earn revenue to finance operating costs.
- SMLF, which allows students to undertake entrepreneurial activities as part of the curriculum. Although there are concerns about the sustainability of the fund, the cost of operating the fund is not large and it provides students with practical experience in operating a business venture. Some students have gone on to develop their micro-projects into fully-fledged commercial operations after graduation.

- Extensive training for faculty and staff at all levels and the creation of an enthusiastic and capable project team.
- The development of a gender-aware and environment sensitive curriculum including an Occupational Internship Program and student-operated micro-projects which provide the practical skills needed for self-employment in agribusiness.
- Formalisation of management systems and procedures for the DAT-BAT program in the colleges for both educational and commercial activities, and documentation of these procedures in a set of manuals.
- The establishment of the PMO with the capacity for ongoing management of the program and other projects or programs in agricultural education. In future the PMO is expected to be integrated within CHED where it will have the potential to expand its influence on technical agricultural training over a wider scope.
- Operation of an effective monitoring evaluation system including student tracer studies. Continued monitoring will be required to confirm that the project delivers on-going benefits in the years to come.

A1.4.3 SIGNIFICANT INNOVATIONS INTRODUCED

Guided by the aim of instituting long-lasting reforms in the delivery of the DAT-BAT program, the project introduced innovative approaches in the management and administration practices at the PTIAs. The innovations cover all aspects of the PTIAs' activities including the DAT-BAT program itself, as well as farm business and financial management, fund management, and administrative support systems.

Whilst the DAT-BAT program is not new to the Philippines, AGRITECH did introduce significant innovations in the way it is structured and the **training methods** employed:

- The project introduced the concept of **EL** and facilitated its adoption in all 14 AGRITECH-supported schools. EL is defined as "the creation of an environment in which an individual is assisted to use previous experience and existing skills and knowledge to analyse a new situation and to develop the skills, and understanding necessary to adapt to the situation". It uses real life experiences as the basis of learning, and is ideally suited to acquiring relevant and practical skills needed for successful entrepreneurship.
- At each campus the project facilitated the establishment or improvement of existing SIEs. The **SIEs** provide technical skills training in agricultural subject matters such as cereal and field crops, horticultural crops, livestock, poultry, farm structures, and post-harvest processing. Whilst the level of exposure to each enterprise is fairly superficial, the SIEs help students to decide on the type of venture they may wish to pursue after graduation.
- **SMLF**. A SMLF was provided to each PTIA to fund the students' microprojects. To receive a loan, a student has to prepare and submit a project proposal which should pass the judgment of the PTIA's Practicum Committee and the Financial Lending Organisation that handles and manages the fund. The loan is subject to conditions similar to normal commercial bank loans and has to be repaid in full before the student can graduate.

The project also developed improved methods of **Farm Business and Financial Management** to be used by the colleges. These have been very well documented in a set of operational manuals and include:

- **Whole Farm Planning** provides an organised approach by which the college land and resources are allocated and used. The plan indicates the priorities for specific projects and investment requirements. It is the basis for the PTIAs annual business proposals and business plans.
- **IGEs** are intended to operate as self-sustaining commercially viable enterprise, designed and managed to generate the maximum net income possible as a contribution to the operating costs of the PTIAs. IGEs operate in the manner that allows re-investment of profits so as to permit capital build-up and enterprise expansion or diversification. Separate accounting records and bank accounts are kept for each IGE to enable their profitability to be monitored.
- Each school has a BAO which is responsible for the management and supervision of all farm resources and agribusiness activities in the PTIAs. It orchestrates and coordinates activities geared towards developing the college land and related resources into a well managed, productive, profitable and sustainable enterprise. The BAO coordinates the whole farm planning process, organises procurement and marketing and monitors the financial performance of the IGEs.
- **Financial Recording and Reporting**. An essential element in the SIE/IGE reporting system is preparation of internal and external financial reports. These financial reports are instruments to monitor the status, cash flow and fund disbursements of the SIEs and IGEs. These reports are prepared by each enterprise manager and submitted to the BAO for consolidation and evaluation in order to inform the head of institution of the status of each enterprise.
- **Fund Management.** To encourage the PTIA staff especially the Instructors-in-Charge of the individual enterprises to develop and exercise a sense of ownership over the enterprises, the PTIAs maintain individual bank accounts for each enterprise. This strategy inspires a higher degree of responsibility among the Instructors-in-Charge and demonstrates transparency and maturity in handling of the enterprise's funds. Also, this practice readily makes funds available, and expedites the requisition and issuance of supplies and materials essential to the operation of the enterprises.
- **Administrative Support System**. Other than the adoption of the financial and recording system, the project also introduced a new procurement system that governs the acquisition of suppliers and materials for all the income generating enterprises. The system assigns responsibility for supplies and materials management to the faculty/staff-in-charge of the enterprises, and the BAO. The system ensures the adequacy and availability of suppliers and materials required by the enterprises and any given time.

A1.5 Impact

A1.5.1 GENERAL

The impact of the AGRITECH project is only just beginning to become apparent. The strengthened capabilities of the participating institutions is clearly visible but can only be regarded as an intermediate output of the project. The final output consists of the graduates themselves and the entrepreneurial activities they are expected to undertake in their respective communities. With only two batches of graduates numbering less than a thousand in total it is too soon to make a definitive conclusion on how successful the graduates will be, and the impact this will have on the rural community. However, the initial conclusion from the available evidence is that the DAT-BAT in the form designed by AGRITECH, can produce graduates well prepared for success in the private sector.

AGRITECH has the potential to have a major influence on agricultural training in the Philippines. It has introduced in new layer in the education system which concentrates on practical and commercial agribusiness skills. This model is highly relevant in a country where the majority of population still live in rural areas and rely on agriculture and related activities for their livelihood.

A1.5.2 ECONOMIC IMPACT

It is not possible at this stage to make a definitive statement about the economic impact of the AGRITECH project. Although tracer studies have been undertaken for the first two batches of graduates, it is too early to make assessment of the impact of the training on their income generating capacity, and the flow-on effects in their rural communities. However, preliminary economic analysis (see Box A1.1) suggests that if project momentum is sustained for five or ten years after completion, and the graduates achieve a reasonable degree of success as agribusiness entrepreneurs, then the net economic impact of the project should be positive – probably in the range of 10-20 per cent internal rate of return (IRR).

It must be recognised however that this IRR estimate includes all of the costs of curriculum development, training, technical assistance etc incurred during the last seven years. If the AGRITECH approach is replicated and expanded on a national scale, many of these costs would not be repeated but the stream of graduates would expand. This would undoubtedly generate a very high return to the additional investment.

The major impact so far has been the development of an innovative and comprehensive curriculum together with the facilities and manpower needed to continue the program for five or ten years ahead. This will be sufficient to produce a further three to six thousand graduates in addition to the thousand or so graduates currently in circulation. The economic benefits of the project depend on this future stream of graduates. The project has invested some A$33 million in the establishment of the AGRITECH system. The real economic benefits will come from the much larger numbers who will be trained in the years ahead. This makes sustainability doubly important.

A1.5.3 IMPACT ON POVERTY

The schools selected for participation in the project are located in the poorer provinces (this also applied to schools which participated in the AGRED and ATEC projects). It was intended that the graduates would remain in these provinces and establish business enterprises which contribute to economic development and the creation of employment and value adding opportunities. This would have an indirect but potentially quite significant impact on the high levels of poverty prevailing in the selected provinces.

However, direct poverty alleviation was not an explicit objective of the project. Students who have completed secondary school (a condition for DAT-BAT enrolment) have already achieved a major milestone in escaping poverty. The project will directly benefit a few students from the poorer families, but the majority come from middle income rural families. Having said this, except for LSPC, all the PTAIs were located in provinces with very high levels of poverty (Table A1.3).

Table A1.3: Relative poverty levels by province and location of AGRITECH Colleges[a].

Region	Province	PTIA	Poverty Incidence[b]
X	Agusan del Sur	ASSCAT	66.1
	Surigao del Norte	SNCAT	52.4
XI	South Catabato	SUNAS	59.3
XII	Sultan Kudarat	SKPSC	50.5
II	Cagayan	CSU	48.3
	Nueva Vizcaya	NVSIT	45.8
	Quirino	QSC	58.9
IV	Laguna	LSPC	25.6
	Marinduque	MSC	61.5
	Occidental Mindoro	OMPC	45.9
	Quezon	QNAS	53.9
	Romblon	RSC	74.9
	Cavite		18.5

a From the preliminary 1994 poverty estimates, National Statistics Co-ordination Board.

b Calculated on income only.

Romblon has the highest incidence of poverty in the Philippines and Cavite is included for reference as it has the lowest incidence.

Technical or vocational education is more likely to benefit the poor than scientific or academic degrees. However, education aimed at direct poverty alleviation should concentrate on improving the quality and availability of elementary schooling in isolated areas and assisting students from poor families complete secondary school. This would be consistent with AusAID's objectives of assisting people in rainfed and marginal areas which are often isolated from physical and social infrastructure.

A1.5.4 GENDER-SPECIFIC IMPACT

This appears to have been positive. About 40 per cent of enrollments and 44 per cent of graduates are women. Women are well represented among faculty and staff although few so far hold senior positions. AGRITECH offers men and women competitive job market skills and not the gender stereotype programs where women learn skills that are an extension of household activities while men acquire technical skills. Table A1.4 shows that while the sexes were fairly evenly balanced in terms of training and human resource development there was a gender disparity noticeable in the management/formal professional upgrading/degree-related training.

Table A1.4: Participation (percentage) by gender in AGRITECH-sponsored training.

	Type of Training/Workshop	Male percentage	Female percentage
1	Curriculum development (1994-99)		
	• participants	50	50
	• subject specialists	52	48
2	Institutional methods (1994-99)		
	• participants	52	48
	• subject specialists	80	20
3	Curriculum upgrading (1995-99)		
	• participants	53	47
4	Management and related training (1994-99)	59	41
5	Professional upgrading courses (1997.2000)		
	• participant	62	38
	• completions	63	37
	• on-going	65	35
6	Development of MAST program (1996-98)		
	• participants	53	47
	• subject specialists	67	33
7	Participants in study Tours (1994-2000)		
	• Internal	65	35
	• External	66	34

Source: Compiled from Appendix 5, PCR.

A1.5.5 OTHER OBSERVATIONS

Institutional and Policy Framework. The project was implemented within a complex institutional framework and an unstable policy environment, factors which would normally be regarded as highly risky. It has succeeded despite these difficulties largely because the PMO has been able to operate more-or-less independently and has forged a strong working relationship with PTIAs and their Principals. The challenge now is to successfully transplant the PMO into the CHED and to integrate the AGRITECH approach within NAFES.

Technical Assistance. The project has received a very large amount of TA – more than 50 person-years in total. Whilst the need for so much of TA could be questioned, TA has been well

received and has undoubtedly been a key ingredient in the success and sustainability of the project.

Participation. There has been good participation of staff at all levels in the design and implementation of the project. This is demonstrated by a clear understanding of the project objectives and implementation procedures and strongly held belief in the EL approach to teaching. Liaison between the TAT, the PMO and the PTIAs has been strong.

A1.6 Sustainability

Most of the conditions for sustainability of the DAT-BAT program within the participating schools have been achieved. All project staff have now been converted to regular (plantilla) status, and the schools have been granted permission to retain whatever income is derived from the IGEs. The only major risk to sustainability is that Central Government funding for agricultural education will be constrained to the extent that the quality of the DAT-BAT program will deteriorate resulting in declining enrolments and possibly closure of the program in some schools. There are also a few minor risks to sustainability such as loss of key teaching staff without adequate provisions for replacement, diversion of teaching staff to other duties, and waning enthusiasm for the DAT-BAT program amongst college principals.

The ongoing capacity of the PMO is also a relevant sustainability issue if expansion or replication of the AGRITECH initiative is to be considered. The PMO has demonstrated that it has the capability to implement additional major projects in agricultural education on a national scale. The large amount of TA and training received by PMO staff during the implementation of AGRITECH has provided a very sound basis for future operations provided transfer of the PMO from DECS/EDPITAF to CHED is achieved satisfactorily and funding is adequate. The long-term sustainability of the PMO will depend on the demands placed upon it by major externally funded projects in agricultural education. If new projects are not forthcoming the need for the PMO will diminish and its capabilities will gradually atrophy.

The emergence of NAFES offers potential to establish the DAT-BAT as a core offering nationwide. However, there are reservations as to the will and capability of CHED to respond to the challenges of NAFES, given its other mandates.

A1.7 Conclusions, lessons and recommendations

A1.7.1 GENERAL CONCLUSIONS

AGRITECH is a good example of development assistance in a field where Australia can provide a high level of expertise in addition to finance for hardware. The investments in TA and training have created a sustainable capability in the Philippines and a platform for further internationally-financed projects should GOP/AusAID and/or other donors decide to proceed in this direction.

The project also demonstrates that long term engagement is required for projects involving institutional change. Australian involvement in the project from the initial studies until the present, lasted 12 years. If the time frame had been limited to the more usual five-seven year period it is doubtful whether the conditions of sustainability could have been established.

The tracer studies of DAT-BAT graduates, and preliminary economic analysis, suggest that technical or vocational training of the type provided by AGRITECH is a good investment for the Philippines and probably also for other countries at a similar stage of development. AGRITECH aims to generate people who can create jobs for themselves and others through entrepreneurship, whereas conventional tertiary education focuses on training people to fill expected job vacancies.

Institutional complexity, unstable policies, and the multi-layered nature of Government make it difficult to implement projects on a national scale in the Philippines. However AGRITECH has demonstrated that it is not impossible. They keys to success are a strong and well-funded PMO operating, if necessary, across the boundaries of the line agencies, and with close involvement of the TAT in management decisions during the implementation period.

A1.7.2 WEAKNESSES OF THE PROJECT

Whilst the project has more strengths than weaknesses there are a few areas where performance could be improved. These are discussed below:

High dropout rates: Whilst dropout rates are not out of line with other tertiary education courses, they are a source of great wastage in the program. Only about 32 per cent of DAT I enrollees eventually graduate with BATs. The reasons for dropping out are believed to be largely income-related which means that the course is tending to screen out the students from poorer families. There is not much which could be done to help the poorer students through other than provision of scholarships or other forms of financial assistance which is outside the scope of AGRITECH. However there are probably other non-financial reasons for dropping out which need to be identified and addressed.

Entrance requirements: It was intended that all enrollees would be from farming families and have the aptitude and intention of becoming rural or agri-business entrepreneurs. However, because of the shortage of applicants, many schools have been accepting any applicant who has completed secondary school. This situation will only be remedied by publicising the success stories of graduates and encouraging increasing competition for positions in the DAT-BAT program.

Income generation: Now that the colleges can retain the income they generate, there are high hopes that Income Generating Enterprises (IGEs) will provide additional funding for operating and investment costs. However, total net income from IGEs is currently negligible and probably not sufficient to offset the BAO operating costs. Many IGEs need additional investment to achieve viable scale, and teaching staff lack the time and sometimes the skills to manage them effectively. Opportunities for joint ventures with private business should be investigated, efforts

should be concentrated on a smaller number of enterprises, and full-time management is needed to allow teaching staff to focus on teaching.

Community Outreach Centres: The value of the COCs has not yet been clearly established. The COCs evolved from the Farmer Training Centres and were meant to operate as an agribusiness and marketing resource centre for the mutual benefit of the PTIA and the community. Some market information is being collected, but in general the COCs appear uncertain of their function and have not yet established a strong commercial linkage between the college and the agribusiness community. Students have expressed a desire to learn more about the commercial agribusiness environment within and outside their own community.

Student Micro-Project Loan Facility. Although the quality of business plans for student micro-projects is generally good, not all have been successfully implemented and repayments in some cases have not been adequate to sustain the fund. Transfer of the micro-project from second year DAT to second year BAT will improve sustainability as projects are more likely to be financially successful, funding demands will be lower (fewer students), and the incentive to repay will be stronger.

A1.7.3 LESSONS LEARNED

AGRITECH provides a number of positive lessons for consideration in future programs of this nature:

- Income generation is not easy in a teaching institution, and the IGEs need much improvement, with many requiring significant investment before they can make a significant financial contribution. The use of faculty personnel as IGE managers is questionable in view of their primary commitment to teaching duties. Professional management will be required if IGEs are to realise their full potential.
- The creation of a strong PMO with well-qualified local staff supported by long-term TA allowed the project to achieve its objectives in a complex and unstable institutional/policy environment. The PMO should be regarded as a significant lasting achievement of the project as a vehicle for implementing other internationally financed projects in agricultural education.
- In order to make a complete assessment of project impact there is a need to continue M&E, especially gender-specific tracer studies of both drop-outs and graduates in order to assess the effectiveness of the training in increasing rural incomes. Feed back of this experience into the curriculum review process could yield valuable lessons for vocational training applicable across a wide range of AusAID partner countries
- Strong commitment by college Principals was an important condition for success. Closer involvement of the Principals during the planning stages of the project may have helped, but it is recognised that not every Principal will be supportive.
- The continuity of local and TA staff made an important contribution to the success of the project. Local staff comment favourably on the quality of the Australian advisers. The

project made adjustments to the terms of reference for TA personnel in response to changing needs.

- The amount of TA was extremely large, but appears to have provided a substantial legacy, and any extension or expansion of the AGRITECH initiative could be achieved with minimal additional TA.
- The project was allowed to make tactical adjustments to changing circumstances without losing sight of the original objectives and strategy. Lessons were learned and adjustments were made along the way.
- A project of this nature, which involved a relatively new approach to education in business-oriented practical skills, needs an extended implementation period of at least five, and preferably seven or more years, for new ideas to take root and become institutionalised.
- There will be indirect benefits to the rural poor resulting from the entrepreneurial activities of graduates on rural communities and the multiplier effects these generate. However projects such as AGRITECH are not a very effective way to directly target rural poverty alleviation. Whilst the project may have benefited a small number of very poor families, the majority were from the middle income echelons of rural society.
- Commercially oriented training programs such as AGRITECH and Australia's Technical and Further Education system are highly appropriate for many countries in South East Asia. These programs are receiving little support from other donors, and could be considered a target for AusAID assistance.
- The capabilities of teaching staff in Philippines tertiary institutions should not be overestimated. The project found that many staff need supplementary training in their own technical specialties as well as new teaching (eg EL) methods.
- Training programs are very capital intensive to develop, and although the benefits far outweigh the costs, they depend on producing a steady stream of high quality graduates over an extended period **after project completion**. It is better to err on the side of caution to assure sustainability than jeopardise the entire investment.
- It is possible, although not necessarily desirable, to implement projects in an unstable institutional and policy environment through the use of semi-autonomous PMOs. However this should be regarded as a second-best approach to full institutional engagement.
- The AGRITECH model could be considered for application in other AusAID partner countries where practical agricultural education is a high priority and the institutional framework is amenable to the approach.

A1.7.4 CONCLUSION

The key conclusion arising from the review is that the AGRITECH initiative should be continued. The project has been successful in all 14 of the institutions where it has operated but there are many more where it could be applied. A further phase of the project could be implemented in a much shorter time-frame and at much lower cost. There would be limited

need for further TA, and no-need to make additional investments in curriculum development and management systems. All of these have been well prepared and well documented. If it is correct that AGRITECH will generate an IRR of 10-20 per cent, as suggested by the preliminary economic analysis, some form of sequel which gives due attention to the weaknesses and lessons learned so far, could easily double that figure.

One immediate action which could be taken to accelerate broader adoption of the AGRITECH approach, would be preparation of a comprehensive document describing the AGRITECH approach. This would be extremely useful to schools who may be considering introduction of the DAT-BAT course and the AGRITECH approach to teaching it. Much of the material needed for such a document has already been produced in the various procedural manuals.

Box A1.1: Economic analysis — AGRITECH

Introduction

The benefit-cost analysis presented here is based on information contained in the AGRITECH PCR and estimates of the incremental income generating capacity of DAT-BAT graduates. Historical costs (1993/94 to 1999/00) are shown initially current values and updated to 2000/01 values using the Philippines consumer price index. Projected costs and benefits are all in constant 2000/01 prices.

Assumptions

The key assumptions used in the analysis are:

1 There will be no additional investment costs from the end of 1999/00 onwards, and the existing facilities and manpower will be sufficient to continue offering the DAT-BAT at the 14 AGRITECH schools for a further ten years.

2 Enrolments in DAT 1 will be 1 000 students per year over the coming ten years. Retention percentages will be:

DAT 2/DAT 1	68 per cent
BAT 1/DAT 2	61 per cent
BAT 2/BAT 1	84 per cent

3 Operating costs per student will be constant at the current rate of Peso 16 000 per student per annum.

4 The costs of operating the student micro-project loan fund are estimated on the basis of 90 per cent repayment of loans advanced.

5 Total net revenue from income generating enterprises is Peso 300,000 per annum.

6 The incremental income generating capacity of graduates increases during each of the first five years after graduation and remains constant thereafter for the remaining working life of the graduates/diplomats. The incremental incomes (in Pesos per annum) are assumed to be:

	DAT	BAT
Year 1 (year following graduation)	20 000	40 000
Year 2	30 000	50 000
Year 3	40 000	60 000
Year 4	50 000	70 000
Year 5 onwards	60 000	80 000

7 Incremental income is the difference between average earnings of DAT-BAT graduates and what they would have earned had they not completed the course. No incremental income is attributed to dropouts, and decremental income during the years of study is not considered.

8 Net economic benefit represents total incremental income of all graduates less capital and operating costs. Multiplier effects from increased entrepreneurial activity in rural areas is not considered.

Results

The following table shows the results of the economic analysis and suggests that the economic rate of return (ERR) is likely to be about 15 per cent. However, given the uncertainties surrounding the estimates of incremental income generating ability of DAT-BAT graduates an ERR in the range of 10-20 per cent is a more prudent conclusion.

This ERR is dependent on a continuing stream of graduates over the coming decade. If the analysis only included income generation from the existing stock of graduates then ERR would be negative.

Economic Analysis of AGRITECH Project

		Actual (Current Values)							Projected (Constant 2000-01 Values)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22+
		1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	1012-13	2014-15	2015-16
INVESTMENT COSTS																							
Government of Australia	A$'000	1,564.7	5,476.7	4,886.5	5,515.8	2,114.8	1,984.1	2,648.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Government of Philippines	A$'000	586.8	920.2	1,278.1	1,661.5	1,809.3	1,680.3	960.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**A$'000**	**2,151.5**	**6,396.9**	**6,164.6**	**7,177.3**	**3,924.2**	**3,664.4**	**3,609.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Exchange Rate	Peso/$	19	19	20	23	25	25	25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
INVESTMENT COSTS																							
Government of Australia	Peso (m)	29.7	104.1	97.7	126.9	52.9	49.6	66.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Government of Philippines	Peso (m)	11.1	17.5	25.6	38.2	45.2	42.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	**Peso (m)**	**40.9**	**121.5**	**123.3**	**165.1**	**98.1**	**91.6**	**90.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
ENROLMENTS AND GRADUATIONS																							
DAT-1		0	0	752	791	1,013	892	975	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0	0	0	0	0
DAT-2		0	0	0	536	492	726	580	663	680	680	680	680	680	680	680	680	680	0	0	0	0	0
BAT-1		0	0	0	0	343	290	441	354	404	415	415	415	415	415	415	415	415	0	0	0	0	0
BAT-2		0	0	0	0	0	302	233	370	297	340	348	348	348	348	348	348	348	0	0	0	0	0
Total Enrolments		0	0	752	1,327	1,848	2,210	2,229	2,387	2,382	2,435	2,443	2,443	2,443	2,443	2,443	2,443	2,443	0	0	0	0	0
Total DAT Graduates			222	232	348	278	318	326	326	326	326	326	326	326	326	326	0	0	0	0	0		
Total BAT Graduates					288	222	352	282	323	331	331	331	331	331	331	331	0	0	0	0	0		
RETENTION PERCENTAGES																							
DAT-2/DAT-1					71	62	72	65	68	68	68	68	68	68	68	68	68	68	0	0	0	0	0
BAT-1/DAT-2						64	59	61	61	61	61	61	61	61	61	61	61	61	0	0	0	0	0
BAT-2/BAT-1						88	80	84	84	84	84	84	84	84	84	84	84	0	0	0	0	0	
PTIA OPERATING COSTS	**Peso (m)**		**12.0**	**21.2**	**29.6**	**35.4**	**35.7**	**38.2**	**38.1**	**39.0**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
COST OF OPERATING SMLF																							
No of loans		0	0	0	426	438	589	233	370	297	340	348	348	348	348	348	348	348	0	0	0	0	0
Loans AdvancedPeso (m)		0.0	0.0	0.0	5.1	4.4	4.1	2.3	3.7	3.0	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0
Repayments (principal and interest)	Peso (m)	0.0	0.0	0.0	4.7	3.9	3.4	2.1	3.3	2.7	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0
Repayment Percentage	Peso (m)				92.7	89.4	82.1	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	0.0	0.0	0.0	0.0	0.0
Total Cost of Operating Fund	**Peso (m)**	**0.0**	**0.0**	**0.0**	**0.4**	**0.5**	**0.7**	**0.2**	**0.4**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
REVENUE FROM IGEs AND SIEs							**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
COST SUMMARY																							
Investment Costs	Peso (m)	40.9	121.5	123.3	165.1	98.1	91.6	90.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PTIA Operating Costs	Peso (m)	0.0	0.0	12.0	21.2	29.6	35.4	35.7	38.2	38.1	39.0	39.1	39.1	39.1	39.1	39.1	39.1	39.1	0.0	0.0	0.0	0.0	0.0
Loan Fund Operating Costs	Peso (m)	0.0	0.0	0.0	0.4	0.5	0.7	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
Less Income Generation	Peso (m)	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
TOTAL COSTS	**Peso (m)**	**40.9**	**121.5**	**135.3**	**186.7**	**128.1**	**127.5**	**125.9**	**38.3**	**38.1**	**39.0**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Price Index		61.3	66.3	72.3	76.5	84.0	89.8	95.2															
TOTAL COSTS (Const. 2000/01 values)		**66.6**	**183.5**	**187.2**	**243.9**	**152.5**	**141.9**	**132.2**	**38.3**	**38.1**	**39.0**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**39.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Economic Analysis of AGRITECH Project (continued)

		Actual (Current Values)												Projected (Constant 2000-01 Values)									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22+
		1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	1012-13	2014-15	2015-16
NO OF GRADUATES IN WORKFORCE																							
DAT Year 1		0	0	0	0	222	232	348	278	318	326	326	326	326	326	326	326	326	0	0	0	0	0
DAT Year 2		0	0	0	0	0	222	232	348	278	318	326	326	326	326	326	326	326	326	0	0	0	0
DAT Year 3		0	0	0	0	0	0	222	232	348	278	318	326	326	326	326	326	326	326	326	0	0	0
DAT Year 4		0	0	0	0	0	0	0	222	232	348	278	318	326	326	326	326	326	326	326	326	0	0
DAT Year 5+		0	0	0	0	0	0	0	0	222	454	802	1,081	1,399	1,726	2,052	2,378	2,705	3,031	3,358	3,684	4,010	4,010
BAT Year 1		0	0	0	0	0	0	288	222	352	282	323	331	331	331	331	331	331	0	0	0	0	0
BAT Year 2		0	0	0	0	0	0	0	288	222	352	282	323	331	331	331	331	331	331	0	0	0	0
BAT Year 3		0	0	0	0	0	0	0	0	288	222	352	282	323	331	331	331	331	331	331	0	0	0
BAT Year 4		0	0	0	0	0	0	0	0	0	288	222	352	282	323	331	331	331	331	331	331	0	0
BAT Year 5+		0	0	0	0	0	0	0	0	0	0	288	510	862	1,144	1,467	1,798	2,129	2,460	2,791	3,122	3,453	3,453
INCREMENTAL INCOME/GRADUATE																							
		DAT +1	DAT +2	DAT +3	DAT +4	DAT +5+			BAT +1	BAT +2	BAT +3	BAT +4	BAT +5+										
		20,000	30,000	40,000	50,000	60,000			40,000	50,000	60,000	70,000	80,000										
INCREMENTAL INCOME																							
DAT Year 1	Peso (m)	0.0	0.0	0.0	0.0	4.4	4.6	7.0	5.6	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	0.0	0.0	0.0	0.0	0.0
DAT Year 2	Peso (m)	0.0	0.0	0.0	0.0	0.0	6.7	7.0	10.5	8.4	9.5	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	0.0	0.0	0.0	0.0
DAT Year 3	Peso (m)	0.0	0.0	0.0	0.0	0.0	0.0	8.9	9.3	13.9	11.1	12.7	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	0.0	0.0	0.0
DAT Year 4	Peso (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.6	17.4	13.9	15.9	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	0.0	0.0
DAT Year 5+	Peso (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	27.2	48.1	64.9	83.9	103.5	123.1	142.7	162.3	181.9	201.5	221.0	240.6	240.6
Sub-total	Peso (m)	0.0	0.0	0.0	0.0	4.4	11.3	22.8	36.4	53.6	71.9	91.1	110.1	129.6	149.2	168.8	188.4	208.0	221.0	230.8	237.4	240.6	240.6
BAT Year 1Peso (m)		0.0	0.0	0.0	0.0	0.0	0.0	11.5	8.9	14.1	11.3	12.9	13.2	13.2	13.2	13.2	13.2	13.2	0.0	0.0	0.0	0.0	0.0
BAT Year 2Peso (m)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.4	11.1	17.6	14.1	16.1	16.6	16.6	16.6	16.6	16.6	16.6	0.0	0.0	0.0	0.0
BAT Year 3Peso (m)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3	13.3	21.1	16.9	19.4	19.9	19.9	19.9	19.9	19.9	19.9	0.0	0.0	0.0
BAT Year 4Peso (m)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2	15.5	24.6	19.8	22.6	23.2	23.2	23.2	23.2	23.2	23.2	0.0	0.0
BAT Year 5+Peso (m)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	40.8	69.0	91.5	117.4	143.8	170.3	196.8	223.3	249.8	276.2	276.2
Sub-totalPeso (m)		0.0	0.0	0.0	0.0	0.0	0.0	11.5	23.3	42.5	62.4	86.7	111.8	137.9	163.8	190.2	216.7	243.1	256.4	266.3	272.9	276.2	276.2
TOTAL INC. INCOME	Peso (m)	**0.0**	**0.0**	**0.0**	**0.0**	**4.4**	**11.3**	**34.3**	**59.7**	**96.0**	**134.2**	**177.8**	**221.9**	**267.5**	**313.0**	**359.0**	**405.1**	**451.1**	**477.4**	**497.1**	**510.3**	**516.9**	**516.9**
NET ECON. BEN.	Peso (m)	**-66.6**	**-183.5**	**-187.2**	**-243.9**	**-148.0**	**-130.6**	**-97.9**	**21.4**	**57.9**	**95.3**	**138.7**	**182.8**	**228.4**	**273.9**	**319.9**	**365.9**	**412.0**	**477.4**	**497.1**	**510.3**	**516.9**	**516.9**
CUM. ECON. BEN.	Peso (m)	**-66.6**	**-250.1**	**-437.3**	**-681.2**	**-829.2**	**-959.8**	**-1,057.6**	**-1,036.2**	**-978.3**	**-883.0**	**-744.3**	**-561.6**	**-333.2**	**-59.3**	**260.5**	**626.4**	**1,038.4**	**1,515.8**	**2,013.0**	**2,523.3**	**3,040.1**	**3,557.0**

IRR 15%

APPENDIX 2 THE PILOT PROVINCIAL AGRICULTURAL EXTENSION PROJECT

Table A2.1: Summary of performance and impact, PPAEP[a,b]

Objective	Achievement of Objectives	Potential Impact			
		Social	Institutional	Income	Environment
1 Enhanced Extension Capacity					
2 Community Capability					
3 Research/Extension Integration					
4 Improved Institutional Linkages					
5 Resource Management					
6 Project Management					

a Evaluation was restricted to Region V only.

b The performance of the project and its elements was assessed using a five level scale ranging from weak to best practice as follows:
= weak effect; = marginal effect; = moderate effect; = high effect; = best practice effect.

A2.1 Introduction

The Pilot Provincial Agricultural Extension Project (PPAEP) is of one of three projects being evaluated by AusAID while seeking to assist in developing strategies to address the specific problems faced by communities in marginal or rainfed rural areas in the Philippines. This evaluation therefore addresses a wide range of issues involving the targeting of activities, project design and implementation as well as project experiences with implications for addressing the causes and consequences of poverty. As the project had finished some four years prior to the team's evaluation, project impact and the sustainability of project effects were concentrated on. The Appendix is preceded by a summary of project performance in table A2.1.

A2.2 The project

A2.2.1 PROJECT BACKGROUND

The PPAEP was included in AusAID's Philippines Australia Development Program as a pilot approach to developing a sustainable extension system based on a participatory approach involving farming communities and extension.

A Project Design Document (PDD) was produced in 1989 after initial studies commencing in 1988. Further preparatory activities followed in 1991 with the preparation of a Project Implementation Document (PID) jointly by GRM International Pty Limited (GRM) and the Philippines Department of Agriculture. The PID was approved by the two Governments in May 1992. Project implementation was conducted over two distinct phases - one covering May 1992 to May 1994 and the other May 1994 to May 1996. The PPAEP was reviewed in August 1993 and an extension recommended for two years for consolidation purposes. A second review was

conducted in February 1995. The Project concluded in May 1996 and a Project Completion Report (PCR) was prepared by GRM in July 1996.

A2.2.2 PROJECT DESIGN

A feature of PPAEP was the long period taken from planning to effective implementation – some five years. Planning commenced in 1987 with a Government of Philippines (GOP)/Government of Australia Agriculture Sector Planning Study and took place during the Aquino administration following the revolution in 1986.

Rationale and objectives

Rationale. The eventual design took into account both the priorities of GOP and GOA as well as experience of previous and on-going donor-assisted projects. Regions V and X were chosen partly because the areas were particularly disadvantaged with an average annual per capita income of only Philippines Peso (P) 1600 and P 3200 in 1989 prices. The essential development problems that relate to the agriculture sector were considered to be the following:

- a low level of ecologically sustainable agricultural productivity;
- ineffective communication between farmers and extension staff;
- inadequate capacity and capability of the Department of Agriculture (DA) to provide ecologically appropriate technical messages;
- the unwillingness of farmers to accommodate technical messages; and
- duplication in extension activities undertaken by the various agencies of government and, often, the lack of co-ordination and co-operation amongst them.

To address the problems of productivity the project's strategy was to focus on improving the effectiveness of DA's delivery of extension services so as to directly improve the sustainable productivity and incomes of smallholders (both in agriculture and fisheries). Concurrently the project was to concentrate on improving the capability of smallholders to identify their needs, plan for their realisation and to interface effectively with government services. Key elements in the projects strategy were:

- the mobilisation of communities through strengthening Rural Based Organisations (RBOs) and creating such organisations where they did not exist;
- contracting NGOs to mobilise the skills, experiences and energies of rural communities;
- integrating and co-ordinating efforts at community level; and
- developing a bottom-up approach to development through community-based assessments of real situations, development constraints and opportunities.

PPAEP was to cover a three year period from May 1991 to May 1994. A review in mid 1993, some 24 months after commencement, was to examine the progress of implementation and propose further activities.

Objectives. The goal of PPAEP was 'to increase and sustain agricultural productivity[12] and incomes of rural households. There were six objectives namely:

- to enhance the capability of agriculture sector extension workers to effectively respond to the needs of rural farming families;
- to strengthen and organise the RBOs to gain access to, control over, and management of resources to enhance agricultural productivity;
- to promote and strengthen a farming system research approach to test and extend appropriate technologies in farming;
- to develop and strengthen effective linkages between and among agricultural sector agencies and, Local Government Units (LGUs), NGOs, State Universities and Colleges (SUCs), government agencies and other institutions at community municipal and provincial levels; and
- to increase awareness of provincial and municipal units within agriculture sector agencies of resource management principles to improve the quality of extension advice to communities and to effectively manage and plan the implementation of PPAEP.

Target group. The direct beneficiaries were to be the small farming and artisanal fishing families and their RBOs in 36 selected sub-municipal administrative units ('barangays'). Other beneficiaries were to include:

- The DA, which as an institution, would benefit directly at the Agricultural Technician (AT), municipal and provincial office levels through the evolution of an effective extension system. The ATs' skills were to be greatly enhanced through focused training.
- The DA was expected to benefit from an improved ability to link with other agencies and LGUs via the institutionalised co-ordination mechanisms of the Municipal Technical Working Group (MTWG) and the Provincial Technical Working Group (PTWG).
- NGOs were to be assisted in developing their capabilities as necessary.

Location. The project was to be located in Albay and Camarines Sur provinces of Region V and Bukidnon and Misamis Oriental provinces of Region X. One municipality was selected from each congressional district and low income municipalities were given priority. Except for Bukindon, three barangays were selected in each municipality. Selections were based on weighted criteria including low income, presence of an NGO, agro-ecological zones, general accessibility and security.

Project components

The PID summarised the six Project components as follows:

- DA Extension Delivery - to enhance the capacity of the DA to provide effective and appropriate extension services to rural households through organised and strengthened RBOs.
- Community Capacity - to strengthen existing RBOs in target barangays and organise RBOs where they did not exist in target barangays.

12 Agricultural productivity implied all farming enterprises, including livestock and fisheries.

- Farming Systems Research and Extension Integration - to promote the farming systems research and extension approach with the DA and communities.
- Inter-Agency Co-ordination - to develop and strengthen the linkages at community, municipal, provincial and regional levels.
- Resource Management - to increase the awareness of provincial and municipal authorities within the agricultural sector agencies of resource management principles to improve the quality of extension advice to communities.
- Program Management - enable the efficient and effective management of the planning and implementation of the PPAEP.

Project costs

Initial project costs were about A$8.8 million. Major cost items (Table A2.2) were long term technical assistance fees (38.6 per cent), short term fees/expenses (13.6 per cent), procurements (17.1 per cent), office establishment and operation (7.4 per cent) and NGO contracts (6.1 per cent).

Table A2.2: Initial project cost estimates (A$'000) compared to actual costs.

Category		Estimated Cost		Actual Cost	
		Cost	Per cent	Cost	Per cent
1	Long term fees	3169	38.6	6470	43.8
2.	Short term fees/expenses	1117	13.6	1189	8.1
3	Other project related costs:				
	• procurement	1406	17.1	1565	10.6
	• training	448	5.5	699	4.7
	• in Australia costs	235	2.9	224	1.5
	• locally engaged staff	103	1.3	687	4.7
	• office establishment/operation	611	7.4	970	6.6
	• NGO contracts	500	6.1	1385	9.4
	• Contract Research	50	0.6	57	0.4
	• Demonstrations	400	4.9	5546	3.7
	• local professional services	6	0.1	260	1.8
	• travel, in-country	166	2.0	587	4.0
	• promotional materials	-	-	128	0.9
TOTAL		**8209**	**100.1**	**14767**	**100.2**

Source: Adapted from Table 1.3 PCR.

Note: The totals in Table 1.3 in the PCR do not tally exactly with those calculated by the team.

A2.3 Implementation

At field level PPAEP was managed by the Australian Team Leader based in Misamis Oriental province with a provincial office, headed by an Agricultural Extension Adviser, in each province. The PCR noted that as the project evolved, management of field activities was devolved to Project Management Teams. These teams became the policy and decision making bodies for PPAEP and consisted of representatives of provincial and municipal LGUs, Regional

DA and NGOs, with Technical Advisory Team (TAT) members as advisers. During implementation the project was affected by several external changes as well as changes generated through the project itself.

A2.3.1 EXTERNALLY GENERATED CHANGES

Devolution. With the implementation of the Local Government Code late in 1992, the role and focus of DA changed from one of direct contact with rural families to the management of national programs, monitoring and evaluation and the provision of technical assistance to LGUs. The placement of agricultural staff under the provincial government and municipality caused substantial disruption, as did the lowering of their salary levels and, sometimes, delayed payment of salary increases. The project went to considerable efforts to address the issue of staffing, salaries and operating funds to the extent of providing mayors and their Municipal Planning and Development Co-ordinators (MPDCs) with study tours to Australia in an attempt to enable these key people to both better understand the objectives of PPAEP and the mechanisms for local government management in another country. The PCR concluded that "all in all the Project dealt effectively with devolution actively assisting implementation of devolution and the integration of devolved staff".

Elections.[13] To avoid concerns that PPAEP's community related activities could be politicised project activities were wound down prior to elections in May 1992, May 1994 and May 1995 involving one of several political positions (President, Senate, Congress, Governor, Mayor, Barangay Captain, Barangay Council).

AusAID review process. A mid-term Review (MTR) in December 1993 led to the concentration of project efforts on three components, namely:

- strengthening the extension system including linkages between extension and research;
- strengthening RBOs to enable improved services to members with emphasis on access to credit, marketing and technical services; and
- project management.

The MTR came to the conclusion that more had to be done to consolidate the extension service following preparatory activities, mainly training, in Phase 1. Another MTR on June 1995 decided against extending the project any further.

Personnel changes. The number of Agricultural Extension Advisers was increased by one to allow an individual to cover each of the provinces while the positions of Training Adviser was increased to two and, in Phase 2, decreased to one. Despite the limited personnel the project was able to convince the LGUs to upgrade human resource development officers to full-time positions in nine of the thirteen municipalities. The agricultural extension advisers in Misamis Oriental were changed on four occasions (through circumstances beyond the control of the Project) - the lack of continuity impacted negatively on PPAEP.

13 As a result of May 1994 elections, 45 per cent of target barangays elected RBO members as Captains and 33 per cent of Council positions were filled by RBO members.

A2.3.2 PROJECT GENERATED CHANGES

Motorcycles and vehicles. Partly as an incentive and partly to assure that vehicles are properly maintained, a subsidised scheme, which led to individual ownership of vehicles, was successfully introduced. Most of the vehicles are still road-worthy some four years after project completion.

Seed capital. Although not included in the PID, project finances were made available through Revolving Funds (RFs) and Demonstration Funds for use by RBOs as "seed money" to kick-start income generating activities - this activity was seen as part of a credit-worthiness exercise to enable RBOs to borrow from formal credit institutions in the future. Although the RBOs were to manage the funds, the co-operating NGOs through their Community Development Workers (CDWs) and the ATs were to provide advice and assistance as necessary[14].

Community plans. The project, through its CDWs and ATs, established a methodology for community planning at the RBO/barangay level as a starting point for planning at the municipality level. RBOs were assisted in developing multi-sectorial Community Framework Plans (CFPs) from which Agricultural Sector Action Plans could be derived.

Workplans. Both the ATs and NGO staff developed annual/seasonal and monthly workplans based on the ASAPs prepared by the RBOs. Reportedly this methodology was the basis of a non demand-driven extension service and represented a significant change of attitude by staff.

RBO business focus. In Phase 2, as a result of the MTR, the thrust of RBO institutional development activities was refocused towards business skills and systems. A Business Development Officer was employed in each province, working closely with the Farm Management Adviser, to support CDWs and ATs in establishing the necessary systems to ensure RBOs could provide business services to its members. The project took steps to bolster the business skills available through the contracted NGOs.

LGU support to agricultural services. Under the LGU Municipal Agriculturalists were not mandatory positions - the implications of this situation, for the delivery of extension services generally and PPAEP in particular, were potentially very negative. Reportedly the efforts of PPAEP contributed to twelve municipalities not only confirming positions in the agricultural services but increasing budget allocations in 1995 and 1996[15].

Participation in project management. To strengthen the effectiveness of Technical Working Groups established by the project at provincial and municipal levels, each province established Provincial Management Teams composed of the Provincial Agricultural staff and NGOs, with Technical Assistance Team (TAT) members as advisers. Reportedly these teams proved to be effective decision making bodies which took some of the workload and pressure of the agricultural extension advisers.

14 In fact, before funds could be withdrawn the CDWs/ATs needed to authorise the withdrawals.

15 The status of allocations thereafter is unclear.

Monitoring and evaluation. A Monitoring and Evaluation Adviser designed a M&E system as outlined in the PID. Project reporting was structured to meet AusAID activity and financial reporting requirements which were quite extensive. In Phase 1 a Technical Advisory Group (TAG)[16] conducted six monthly monitoring visits and were part of the MTR team. Project impact was assessed through household case studies, tracer studies of extension staff, independent assessments of NGOs/RBOs and assessments of agricultural extension by Bicol University Research and Statistics Centre (BURSC) and DA Regional Field Office for Region 10. The PCR concluded that the lack of a fulltime M&E adviser was unfortunate.

A2.4 Achievement of objectives

This section examines the project's achievements as directly related to the objectives. The fact that the evaluation occurred four years after project completion is, in reality, an advantage. While many of the projects achievements, such as the impact of training on both project staff and RBO members are difficult to accurately assess and therefore the achievements of this activity may be underestimated, any substantial impact with regard to the project's core objectives would be clearly observable.

A2.4.1 AGRICULTURAL EXTENSION

During Phase 1 (May 1991 - May 1994) extensive training based on training needs analyses of DA staff, were undertaken[17]. The program included communication skills, resource management principles, gender and development, farm systems approach and orientation on participatory approaches and community organising. Technical training was conducted after identification of community needs. Municipal and provincial agricultural offices were upgraded and basic equipment was provided. An effective motorcycle and jeep ownership scheme was introduced with a total of 176 motorcycles and 19 jeeps purchased. Newsletters and radio programs were started and market information systems set up using the radio network and bulletin boards.

The Phase 2 targets stipulating that "by the end of the first year of extension, 10 per cent of RBO members will have adopted one or more project recommended practices and this will increase to 25-30 per cent by project completion". The PCR (p 29-31) concluded, through independent assessments of agricultural extension services, that these targets had been met. Project studies indicated that 47 per cent of RBO members adopted improved practices as a result of PPAEP activities. In the 1994 case studies 40 per cent of respondents reported adoption of practices which also increased production/income. By 1995 over 90 per cent of respondents reported adoption of improved practices and 71 per cent reported that this increased production/income.

These figures seem remarkably high but were supported by the earlier independent assessments of agricultural extension services in 1994 (the BURSC and DA-10 Studies). These assessments

17 However training was limited to individual ATs assigned to target barangays (one AT for each barangay) and some provincial staff

16 The TAG, appointed by AusAID to advise them on the implementation progress, comprised of an agriculturalist and social scientist in support of AusAID staff.

reported 34 per cent of RBO members adopting improved practices as a result of PPAEP cross visits, on-farm trials and demonstrations and field days in Region X, while 77 per cent reported adoption from some form of extension advice. In Region V the assessment found that the number of RBO members adopting recommended practices almost doubled from 33 per cent in 1991 to 64 per cent in 1994. This compared to a drop in adoption reported in control barangays from 29 per cent in 1991 to 17 per cent in 1994.

The DA-10 assessment concluded that "the agricultural services of PPAEP can be perceived to be effective considering the remarkable changes brought in a short period" while the BURSC study noted that "as a whole the above findings manifest noteworthy accomplishments in the Project given the relatively short span of Project implementation". The ATs attributed the improvements to training which boosted technical knowledge and confidence, participation by the community in planning and implementation which greatly increased their receptivity to services, and the effectiveness of activities and demonstrations.

Achievement of Objective. The evaluation team acknowledges that PPAEP enthusiastically promoted training and the development of linkages between the communities, DA and the LGU but finds it disappointing that there is little obvious evidence of the projects endeavours left at the barangay/municipality level only four years after project completion.

While overall AT numbers are generally near Project levels (for the municipal as a whole and not the situation of one AT to each targeted barangay) and the concept of community involvement in developing activities is entrenched to some extent, the current extension system still works under a top-down approach. **Because funding from the municipalities is at an extremely low level, the only activities that are actively being implemented are those related to national commodity-based programs** - rice and maize are prime examples. This situation is resulting in more ATs working as specialists on individual commodities rather than multi-purpose agriculturalists. **The concept of the same multi- skilled AT regularly servicing a number of barangays on a fulltime basis and having access to specialists is invalid or is fast fading.**

A2.4.2 COMMUNITY CAPABILITY

This component was based on the premise that genuine people's participation is essential for any development effort to succeed. Because NGOs are generally better at developing links with communities, NGOs were contracted by PPAEP to assist in the formation and strengthening of RBOs in the target barangays. The ATs (and other government line agencies) were expected to provide support services.

NGO proposals were in accordance with terms of reference prepared by the Project to undertake community development activities in target municipalities. The proposals embodied the following principles:

- the NGOs would directly engage themselves in organising communities by appointing one CDW to each community;

- through a participatory process and involving the ATs, the NGO would encourage the community to identify their own resources and needs, to plan and decide for themselves how to improve their living conditions; and
- the people themselves would determine who, within the barangay, would participate in PPAEP.

Phase 1. The project's approach, through the NGO's CDW's was, firstly to set the stage for community planning through a Participatory Action Research/Community Planning System methodology which was to enable the community to learn how to generate a set of aspirations, identify priority constraints, inventory its resources and opportunities and make plans and programs that were relevant to rural households. The preparation of a CFP, contained a list of community priorities. Agriculture sector specific activities were to be taken from the CFP and placed into an Agricultural Sector Action Plan to be implemented by the community with project assistance.

Phase 2. Activities centred on strengthening the community organising skill training and institutional development activities undertaken in Phase 1. Four Business Development Officers sought to improve the business development skills of CDWs and Municipal NGO Co-ordinators to ensure that the latter had the ability to provide the on-the-job support to CDWs and RBOs. Specific RBO member capability building was undertaken in enterprise development (including the preparation of enterprise business plans), financial management, marketing, credit and activity implementation. Provincial NGO Supervisors, reporting to the agricultural extension advisers, supervised the day-to-day activities of NGOs, with policy direction being provided by the Community Development Adviser.

The Community Framework Plan (CFP), a key planning document was reviewed and updated by the community as a part of the RBO's annual review of operational activities. This was the basis for defining the RBO's agricultural and non-agricultural activities. The RBO workplan based on the CFP defined specific RBO activities and support required from CDWs, which in turn were expressed in the CDW workplan. The CDW and AT assisted the RBO in conducting feasibility studies, preparing proposals and implementing and monitoring activities identified in the CFP and defined in the RBO workplan. Assistance was provided to promote and support improved market linkages and improved access to credit. Financial management procedures developed in Phase 1 were reviewed and improved drawing on the RBO's operational experiences. The Community Development Adviser collected financial reports from RBOs for inclusion in the M & E system.

The CDW and AT made attempts to assist the RBOs to affiliate and/or federate with other RBOs in neighbouring and/or other target barangays according to the interests of the RBO in an effort to further strengthen their ability to deliver services to members. By project completion PPAEP had strengthened 82 RBOs. Of these 55 already existed (but many were inactive) and 26 were established as a result of project promotion.

The PCR's (July 1996) assessment of the RBOs can be summarised as follows:

- RBOs combined assets had increased from about P0.23 million in 1993 to P2.0 million in January 1995 and P2.11 million in 1996 excluding project resources such as the RFs and demonstration funds.
- Most RBOs held regular meetings with 86 per cent farmer RBO members and 88 per cent of fishing RBO members reporting that RBO activities were supporting community activities. Several RBOs were active in advocacy involving issues such as land tenure, illegal logging and fishing and environmental pollution.
- RBOs registered as co-operatives had increased from 4 to 19.
- Since the August 1993 MTR, RBO membership had increased by 26 per cent in early 1996[18]. Female membership was 46 per cent in 1996. RBO membership ranged from 20 per cent in Camarines Sur to 38 per cent in Misamis Oriental, with an overall average of 30 per cent.

The use of "seed money". The project initially provided P65 000 per barangay for RBO Revolving Funds (RFs). These were later augmented by funds for demonstration for new or improved practices. However, in practice both funds served the same purpose and will be referred to as Revolving Funds. Guidelines for use were provided by the Project while detailed procedures were developed by the RBO themselves. The purpose of the seed capital was to give the RBOs experience in managing credit to members, and to build up a track record for access to formal sector credit, as well as providing credit to members for income generating purposes.

The PCR (p 17) stated that "the projects identified and planned by communities with DA and NGO assistance demonstrated the ability of communities to carry out economically viable activities within community and DA constraints. Successful economic projects illustrated the credit worthiness of enterprises and facilitated access to institutionalised credit programs". According to the PCR because some of the 82 RBOs had formed federations to manage the funds, the number of RFs were reduced to 44. Key features of the RFs were:

- there were 169 projects with over 1300 loans to individuals ranging from agricultural inputs to fish vending and 35 loans to groups, usually the RBO itself, for commodity trading agriculture and services, agricultural input stores or consumer stores. The RFs involved did not include demonstration projects;
- where activities were successful repayments were generally high. Defaults occurred where projects failed to prosper for whatever reason;
- while no funds had collapsed, all funds had eroding capital bases brought about by delinquencies in repayments, calamities from typhoons and un-seasonally dry weather and, in instances, poor management;
- four RBOs accessed Land Bank or other credit funding ranging from P10 000 to P1.8 million;
- a further four projects were funded by outside credit and eight were implemented under the Philippines Australia Community Assistance Program or the Australia Direct Action Program;

18 Membership increased from 2720 to 3426 with Camarines Sur showing the highest increase of 55 per cent and Bukidnon the lowest at 19 per cent.

- minimum interest rates were 1.5 per cent per month (same as Land Bank) and usually ranged from 1.5 - 2.0 per cent per month. Informal credit, at the same time, was about 20 per cent per month; and
- if capital build-up is taken as a RBO's total assets, the combined assets of the RBOs increased from P0.23 million in 1994 to P2.4 million in May 1996[19]. In only two barangays were there decreases in assets.

The PCR (p. 38) concluded that initially the preparation and approval of projects was a tedious matter, causing much frustration to all involved. However by PPAEP completion the RBOs, ATs and CDWs were preparing much better proposals, and the approval process was greatly improved and streamlined as experience developed. The farm management skills training in gross margins, partial budgeting and cash flows had been very valuable in this regard.

Some four years after project completion, the evaluation team encountered a dramatically different situation. **Despite intensive efforts to train RBOs in financial matters, the funds were clearly seen as another form of top-down assistance which entailed no obligation to repay borrowings.** Most of the funds are now exhausted due to the non-repayment of loans. While poorly performing enterprises, typhoons and droughts are quoted as main reasons for poor or non-existent repayment, they are, more often than not, mere 'red-herrings'. Appendix 2 summarises the situation with activities funded and the state of the funds in the RBOs visited by the evaluation team.

The reasons for the moribund state of the RFs in most of the 13 RBOs visited by the team are a combination of one or more factors. Undoubtedly the perception of the RF as an anonymous grant is the main reason for the effective depletion of the funds[20]. Other contributing factors include:

- typhoons (particularly in the more exposed areas of Region V) and unseasonally dry weather at critical times;
- financially unviable activities due to poor market knowledge, insufficient demonstrations of potential projects or faulty technical advice; and
- allocation of most favoured activities (e.g. livestock dispersal) among RBO members by raffle, resulting in limited commitment by individuals to less attractive activities.

Participation. A key reason for limited achievement is the manner in which stakeholder participation occurred. The magnitude and effectivity of participation among the various stakeholders (LGUs, NGOs, DA-ATs, and the RBOs) came in varying degrees and styles during the different stages of participatory project implementation. The participatory approach was well conceived and planned but there were weaknesses and problems during field or municipal level implementation. This resulted in differential involvement of the various stakeholders in the design, planning, consultation and implementation of various activities of the RBOs. These factors include among others the following:

19 These figures can be deceptive as they included borrowings, outstanding loans and material assets of dubious real value.

20 The financial statements for some of the RBOs appear quite robust because they include loans outstanding (some for four years or more) and inflated fixed asset values.

- Selection of NGOs. Due to the limited number of NGOs operating in the PPAEP pilot barangays, no competitive or rigid selection process was possible. The majority of selected NGOs were based on referrals rather than credibility or track record - these referrals, more often than not were based on "who you know" and not on "what you know" or "can deliver".
- Devolution. The ATs' assignments or activities are now dependent on the plans/programs and decisions of the Governors and/or Mayors and on nationally funded programs.
- Disparity in the remuneration provided to CDWs and ATs. Whereas CDWs were given honoraria and travel allowances, ATs involved in the project were only able to avail of the motorbike loan assistance program. This arrangement sometimes created some feeling of indifference and limited partnership between the ATs and NGO-recruited CDWs. In some cases, the limited partnership between ATs and CDWs likewise affected the allegiance and harmonious partnership with the RBOs.
- Varying degrees of involvement in the different stages of RBO empowerment. Participation was evident during the early stages of project implementation especially during the community needs assessment wherein a core group (members of the group were drawn from the representatives of various community zones or 'sitios'/'puroks' together with the AT and CDW conducted a community profiling survey to establish a data base on socio-cultural, economic, demographic and agro-physical characteristics. The survey also facilitated the solicitation of men and women farmers' views, interests, needs and requirements in terms of agricultural intervention and livelihood activities. This information was used in the preparation of the CFP.
- The CFP facilitated a wide and comprehensive participatory consultation process with the men and women, community leaders and elders and other interested members of the pilot community. Greater women involvement was partly due to their husbands' inability or absence (due either to their busy farm schedule or migration to the cities for off-farm jobs).

Based on the result of the team's field visits, community participation was less evident in the succeeding stages of project implementation including:

(1) Formation of RBOs and selection of officers and members. Some of the RBOs were re-organised from existing ones comprised of almost the same people as officers (holding the same or different position during PPAEP) and members. This perpetuates a breed of 'professionals' and RBO 'dynasties' and limits the participation of new, young and energetic members of the community with new ideas and different style of management. However there is increased participation of women in the RBOs through membership (project policy provides for 50 per cent membership for women) and election in top management positions of the organisation. The traditional feminine position of Secretary and Treasurer were very evident in most RBOs with a sprinkling of major positions as President or Chairperson and Vice-President or Assistant Chairperson in some areas.

(2) Identification of RBO's projects and activities. In some areas, it was dictated by the NGOs without prior consultation with the RBO members (for instance, in the extreme, the sheep project in barangay, San Pedro, Bato, Carmarines Sur). Other RBOs were given a list of feasible projects to choose from based on the result of the CFP and ASAP and only the officials were commonly consulted. There is an apparent absence of proper consultation/discussion and careful study in the choice of a number of RBO projects. Limited technical knowledge and experience of some CDWs and ATs further aggravated the problem.

(3) Use of revolving funds. In some RBOs, prior approval or signature of both or one of the NGO, CDW and AT is required even after PPAEP project completion. Other negative factors included:

- members having limited or no access to RBO revolving funds because its officers had priority in its use and were unable to repay it back for various reasons. This resulted in drop-outs and/or inactive and lacklustre interest/participation of some of the members;
- the practice of drawing lots among members for participation in the projects to be financed from RBO revolving funds sometimes did not suit the interest, technical and resource capability of the member;
- limited transparency in the financial and management aspect of the seed money for demonstration and revolving fund resulted in distrust and indifference among and between some RBO officers, members and the NGO;
- limited or no accountability provision and absence of structure in place to take over financial management after the completion of the PPAEP project left some RBO officers and members unprepared to take necessary and immediate actions about their revolving fund; and
- kinship and cultural norm of 'pakakisama' (i.e. being considerate, understanding, and giving considerable allowance to one's family, relative, friend or neighbour's financial dilemma or other related problems) makes it difficult to collect unpaid loans on time. **This is further compounded by the 'dole out' mentality pervasive in Philippine rural communities where debtors feel no compelling obligation to pay their loan regardless of the source.**

Achievement of objective. The Project made some progress in devising a system based on community participation which would better enable RBOs to identify priorities and to manage their resources. **The lack of any substantial increases in agricultural productivity as a result of community empowerment (including access to 'seed money') however suggests that attitudinal changes with regard to top-down assistance and increased business skills are still needed if community-driven empowerment is to be converted into increases in productivity and income.**

A2.4.3 FARM SYSTEMS RESEARCH AND EXTENSION INTEGRATION

The aim was to install an effective mechanism for testing and verifying technologies on-farm through closer integration between research and extension. After substantial training in the concept of Farm Systems Research the topics to be tested arising from ASAPs were assessed by ATs and Provincial Technical Verification Teams. The PCR (p. 17) noted that farm trials identified in the program were conducted, monitored and evaluated by researchers and community members. Specific extension information packages were formulated. Simplified economic analyses[21] of some of these packages were made to test their validity.

Achievement of objectives. Clearly PPAEP put a lot of effort into this component early in the life of the project. Some of the soil and water technologies particularly were adopted. Unfortunately the demonstration phase was of insufficient duration, presumably due to a perceived need to quickly commence commercial activities, and an effective distinction was not drawn between demonstrations and on-farm trials. Demonstrations should promote technologies already proven in the field while on-farm trials are a means of verifying promising technologies under farmers' conditions and should remain in the domain of researchers (with linkages to farmers, particularly at the evaluation stage, and extension workers). Because of the perceived need to progress quickly and the lack of clarity between trials and demonstrations some negative effects of the activity were evident. Lessons from PPAEP's experience indicate the following:

- a clear distinction must be made between verification trials and demonstrations;
- both activities should be implemented early in project life and repeated for several years before they can be promoted to farming communities;
- extreme care must be taken in relating demonstrations to the environment[22] and the farmers needs. Unsuccessful demonstrations, while theoretically having a value, can re-inforce negative attitudes among farmers and thereby stifle innovations; and
- on-farm trials and demonstrations must be well conceived and implemented. Researchers must take lead responsibility for on-farm trials while demonstrations should be the responsibility of the ATs with farmer involvement both in planning, implementation and assessment essential.

There is no evidence of any continuing on-farm trials or demonstrations in project barangays (in Region V at least). These activities appear to be limited to national crop specific campaigns entirely.

A2.4.4 LINKAGES BETWEEN INSTITUTIONS INCLUDING NGOS INVOLVED IN RURAL DEVELOPMENT.

The objective was to develop and strengthen effective linkages between and among agricultural sector agencies and LGUs, NGOs, SUCs, government agencies and other institutions at community, municipal and provincial levels.

21 These gross margin analyses formed the basis of the PCR's economic rate of return calculations.

22 The team was informed that some crops, particularly peanuts, were tested/demonstrated repeatedly in clearly unsuitable environments.

Achievement of objective. The PCR sheds little light on what was actually achieved in the way of developing linkages. Undoubtedly PPAEP assisted in formalising the positions of ATs and the Municipal Agricultural Service as integral parts of LGUs and added to LGU planning capacity by facilitating the formation of Municipal Technical Working Groups (MTWGs) and Provincial Technical Working Groups (PTWGs) certainly during the PID preparation phase. The current status of those organisations and their linkages with the LGUs through the PPDC and MPDCs is unclear.

With regard to the project's broader objective of assisting in the development of multi-agency linkages with both government and private sectors, achievements appear quite limited.

A2.4.5 RESOURCE MANAGEMENT

This component aimed to increase awareness of resource management principles within provincial and municipal units of agriculture sector agencies to improve the quality of extension advice to communities. The Project provided training to enhance the capability of the provincial and municipal DA staff to understand the concepts and principles of the resource management and collated existing information to facilitate the preparation of municipal planning directories. In addition, community awareness of resource management implications of their needs was developed by the trained ATs and CDWs. A Resource Management Manual was prepared.

Achievement of Objective. Undoubtedly PPAEP increased the awareness of project staff on resource management. Many of the RBOs interviewed by the team displayed substantial knowledge of environmental issues.

A2.4.6 PROJECT MANAGEMENT

The component was to provide the mechanism for managing, monitoring and evaluating the activities of PPAEP in the target provinces, municipalities, barangays and communities in the Philippines, and for the responsible agency (AusAID) and Contractor (GRM) in Australia.

The Project Co-ordinating Committee (PCC) comprising the Manila based representatives from the GOA and GOP, the two DA Regional Directors from Regions V and X, the PAOs from the four target provinces, the Project Director, and the Australian Team Leader was established. The Committee met bi-annually to discuss the Annual Plan and review implementation progress and performance, and to review and endorse policy recommendations. The PCC was later expanded to include the Governors of the target Provinces. The PID was an initial outcome of this component.

The PCC continued to meet regularly to oversee the implementation of PPAEP during Phase 2. Administration support from the Brisbane office of GRM to the Project and from the Project Head Office to the four Provincial Offices was provided. Regular meetings of TAT members were conducted by the ATL to co-ordinate management of the Project. PPAEP prepared and submitted monthly financial reports to AusAID, Canberra and monthly performance reports to the Australian Embassy, Manila. Annual plans were prepared and AusAID conducted regular

monitoring from the Embassy. AusAID conducted a MTR for Phase 2 in February 1995. The draft Project Completion Report (PCR) was prepared and submitted to AusAID on March 9 and revised in May, 1996.

NGO contracts were monitored by six monthly Provincial NGO Panel meetings. Information generated by the monitoring and evaluation system was analysed by the monitoring and evaluation adviser for inclusion in Project reports. In preparation for the PCR a financial analysis of Project impact was conducted for the MTR and updated for the PCR. Project publicity materials were prepared for distribution in the Philippines and Australia along with the Project Forum held in Manila in April, 1996 with other donors and GOP participants.

On a macro-basis management generally adhered to procedures and met its contractual goals. Contract management involved the overall management of the contract by GRM, the in-country management by the ATL and the M & E of contract performance by AusAID. Regular monthly performance reports were prepared in-country by the Project for AusAID, Manila. Monthly financial reports were prepared in country for GRM, who in turn prepared the Contract Expenditure Monitoring Spreadsheet for AusAID, Canberra. At time there were delays in the conduct of PCC meetings which were planned to be six-monthly. For example, the PCC meeting in November 1994 was some six months behind schedule awaiting finalisation of the PDD for the extension. Regular meetings of the TAT were held both at Regional and Project level. The Annual Plan was prepared and presented to AusAID by March 31 each year as required by the contract.

AusAID (the Embassy) conducted regular monitoring and AusAID Reviews were held in August 1993 and February 1995. Prior to the 1993 Review there were regular six monthly visits by the TAG. All project assets were handed over on an 'as is where is' basis as decided by the PCC and ratified in Memorandum of Agreement between DA, PPAEP and LGUs.

Actual project costs (about A$15.2 million) were about 73 per cent higher than the initial cost estimates (about A$8.8 million) with major additional expenses in long term fees, locally engaged staff office establishment and operation, NGO contracts and travel within country. As summarised in Table A2.2, fees (both long and short term) comprised 52 per cent of total costs while procurements (10.6 per cent) and NGO contracts (9.4 per cent) were the other two main cost categories. The PCR makes no comment about the 73 per cent increase in costs - the evaluation team is in no position to access whether management deficiencies may have been a contributing reason for cost escalating. The considerable time interval between project conceptualisation and realisation was undoubtedly a contributing factor to the budgetary 'blowout'.

Management at field level, as distinct from GRM's performance as the managing contractor, was the key to achieving objectives. The PCR (p.10) noted that the M & E system 'consisted of regular monitoring activities such as reports, meeting and AusAID monitoring and some of the eventual outputs of M & E included:

- a Participatory Action Methods (PAM) manual as a guide to 'action methodology' with inputs from NGO, the Provincial NGO Supervisors and TAT members;

- regular monitoring reports and Annual Plans;
- regular visits by monitoring and evaluation adviser to prepare reports to address the TOR;
- independent evaluations of extension services in Region 5 and Region 10;
- a cost/benefit study based on income generating activities; and
- an environmental monitoring report.

Achievement of Objective. Clearly the project reached many of its physical targets in terms of training, and, to a lesser degree, in RBO sensitisation and mobilisation, demonstrations and on-farm trials, assistance with RBO income generating activities and responding to a changing implementation environment as a result of political devolution. While the team cannot make an overall judgement on the manner in which these activities were managed there were clear deficiencies in failing to identify and/or take corrective actions, perhaps due to ineffective monitoring, in the following instances:

- frequent ineffective linkages between NGOs and ATs;
- inappropriate or inappropriately sited demonstrations;
- inappropriate activities adopted by RBOs; and
- mismanagement of RFs.

A2.5 Impact

The project's goal was 'to increase and sustain agricultural productivity and income of rural households'. Because of the pilot nature of the project and its limited geographical and household cover PPAEP has not expected to make a significant contribution to the overall rural economy but rather to devise mechanisms for making a major impact eventually. The PCR (p. 25) stated that 'considerable progress had been made towards realising the goal and that the participatory methods of PPAEP were both effective and efficient in achieving this end'. The following section examines the impact of PPAEP on both households and institutions.

A2.5.1 IMPACT ON HOUSEHOLDS

The PCR is correct in stating that many benefits, for example the benefits of human resource development and training, attitudinal changes and improved work practices, were unquantifiable. Others such as increased employment opportunities, increased money supply in the barangay as a result of increased income and a consequent reduction in urban drift, are theoretically quantifiable but difficult in practice. Some benefits were quite small but significant to the individual - learning to speak in public, operating a calculator and opening a bank account are significant acts of 'empowerment' for instance.

Surveys commissioned by the project indicated that simple on-farm demonstrations and improved performance by ATs in project barangays had increased adoption of technology and incomes of farmers. Cost benefit analyses of activities adopted by project beneficiaries suggested the practices were at least potentially beneficial. Thirteen case studies showed income increases of between 24 per cent and 421per cent from 1992 to 1995. These increases enabled five out of thirteen households to exceed the poverty line as against only one in 1991.

The PCR (p. 28) cited greater awareness of land resource management principles by project targeted RBO members than non-members as well as considerable adoption of soil conservation technology. The team saw examples of rotational cropping between hedge rows of leguminous shrubs established along contour lines and were informed that the practices of annual burning had ceased.

Independent surveys in both Regions noted a consistent pattern of improvement in PPAEP areas compared to non-PPAEP areas in adoption, income, contact between ATs and farmers and the effectiveness of extension. The PCR (p. 29) reports that the same pattern was evident in comparing RBO members and Non RBO members within PPAEP areas.

The almost complete lack of monitoring of income levels and adoption of technology since project completion makes an assessment of longer term impact impossible. **The team's findings are generally disappointing in that the major income generating activities attempted as a result of the project have failed and few new enterprises have been attempted**[23] Crop husbandry, except for commercial vegetables, remained fairly rudimentary. **The team's assessment is that impact has been quite small in terms of raising incomes even in the targeted barangays.**

A2.5.2 IMPACT ON INSTITUTIONS

PPAEP installed, to some degree in all the barangays visited, the concept of an extension system based on community participation in needs identification. However an extension system as designed under the project is still a long way from being operational for some of the following reasons:

- there is a limited array of appropriate enterprises suited to the situation of most households;
- insufficient access to inputs and, often, an unwillingness to purchase inputs even if cash is available;
- high AT to farmer ratios compounded by very limited operational funds;
- generally the only enterprises ATs can suggest to farmers involve commodity-based programs implemented under a classical 'top-down' approach from the national level.

A2.5.3 GENDER-SPECIFIC IMPACT

The PCR claims that 'there was a distinct change in attitude to gender issues amongst all those involved. Initially treated lightly, gender and equity issues became integral and normal considerations in all 'project activities'. A gender specialist was employed during Phase 1 and project team members and the PMT undertook gender sensitivity training. Fifteen PPAEP staff (eight women and seven men) were accredited as Gender Trainers - they in turn conducted gender awareness and equity workshops for project-associated implementers and RBO members. Table A2.3 summarises the proportion of women involved in various aspects of the project.

23 Goat enterprises as well as large ruminant dispersal schemes have been mentioned but they are generally not a direct result of project intervention.

Table A2.3: Disaggregation of participants in PPAEP on a gender basis

Training courses	Total number of participants	5749
	Total number of Females	2588
	percentage of Females	45
RBO Membership	Total number of Members	3426
	Total number of Females	1569
	percentage of Females	46
Project Implementers	Total number of Project Implementers	219
	Total number of Female Project Implementers	93
	percentage of Female Project Implementers	42
Municipal Agriculturists	Total number of MAs	13
	Total number of Female MAs	3
	percentage Female MAs	23
PPAEP Staff	Total Number of Staff	26
	Total number of Females	13
	percentage Female Staff	50

Source: PCR p.49 PPAEP Records. Cagayan de Oro City 1996.

Undoubtedly participation in most activities by women is quite high in the project barangays but it cannot be concluded that this is significantly because of project impact due to an absence of any comparative data.

A2.5.4 IMPACT ON THE ENVIRONMENT

According to the PCR environmental issues were treated as an integral part of the Project. Environmental issues were raised and addressed as part of the community development process. In some instances the environmental concerns of barangay people were used as entry points in the RBO strengthening process. Examples were depleted marine resources in Magsaysay Municipality in Misamis Oriental and Presentacion Municipality in Camarines Sur and resource management issues in Cagayan de Oro City municipality. The environment was given consideration in any RBO's assessment of proposals for funding under the RBO revolving fund.

The team's impression was that RBO members were environmentally aware particularly with regard to fisheries resources. The installation of artificial reefs (using old tyres and concrete) was successfully promoted by the project to assist with fish breeding. The successful introduction of soil and water conservation measures, particularly the reduction in the level of grassland burning, in parts of the project area was an achievement of importance.

A2.5.5 IMPACT ON PROJECT STAFF

Undoubtedly training received by project staff at provincial and municipal level has been valuable and has increased their skills in a multitude of ways and, in some cases, has assisted with employment opportunities for them.

A2.6 Sustainability

A2.6.1 EXTENSION SYSTEM

Although elements of the PPAEP approach appear to have been adopted by some municipalities and provinces, the extension system as visualised by the project has not become entrenched in any LGU. Both the 1995 MTR and the PCR report believe that the limited number of target municipalities and barangays did not give a critical mass of barangays within a municipality or municipalities within a province to enable sustainability and expansion. While it is true that, in percentage terms, the project only targeted between 5 per cent and 18 per cent barangays in the various municipalities and 1 per cent to 2 per cent of barangays in a province[24], this fact should have little influence on whether the extension system devised is appropriate or whether it is sustainable.

There is little doubt that an extension system which takes into full account the expressed needs and perceptions of the communities coupled with the presence of competent ATs is preferable to the traditional top-down approach entrenched in the Philippines. However the PPAEP, at best, has demonstrated the elements of a methodology that may serve farmers better in the future provided the following conditions can be put in place:

- support, including adequate finance, at municipality level;
- adequate numbers of ATs to effectively service farmers;
- ATs well grounded both in terms of practical and financial competence; and
- a weakening of the entrenched dependency and anti-investment attitude in farming communities.

A2.6.2 COMMUNITY EMPOWERMENT

Undoubtedly some of the target barangays have benefited through training in planning and financial matters and a general broadening of their awareness of individual and community rights. The PCR (p. 50, 51) quoted examples of self reliance including the use of advocacy in matters concerning destructive mining, illegal fishing, industrial pollution and land tenure.

The RBOs with strong leadership and one or several common purposes will survive. However some that were formed as a result of project prompting are unlikely to survive as strong sustainable RBOs because they did not have the necessary time to develop and, in most cases, they were artificial creations often with little or no common purpose.

Many individuals would have benefited from the PPAEP experience. Indeed the substantial number of individuals from project-targeted barangays now in official positions at barangay and municipal level can be taken, at least partly, as a project effect.

The PCR (p. 51, 52) quotes the substantial funding increases to the municipal agricultural services in both Regions V and X as a Project effect which enhances prospects for the

24 The project targeted three to four municipalities in the farm target provinces whereas the number of municipalities ranged from 17 in Albay to 36 in Camarines Sur and the number of barangays ranged from 11 to 53 with only two or three targeted in each municipality.

sustainability of the services. This claim may well be correct - however comparisons with non-PPAEP municipalities are not made.

A2.6.3 PROJECT-PROMOTED ENTERPRISES

As indicated in Table A2.4, few of the project-promoted enterprises have been sustained for any length of time. Many of these were poorly conceived and managed despite substantial CDW/AT inputs and should never have been undertaken. Livestock enterprises, provided they were managed on an individual household basis, appeared to be the only successful enterprises. There was also a strong indication that individually managed enterprises were preferable to community-owned undertakings.

A2.7 Conclusions, lessons and recommendations

A2.7.1 CONCLUSIONS

Despite the very considerable efforts in training (both agricultural staff and RBO members) project achievements are modest. Although the core objective of the project was to establish an effective extension system with the appropriate linkages between rural communities, other players in the agricultural sector and local government units (LGUs), a disproportionate amount of attention become centred on funding provided for what were, essentially, project-promoted rural enterprises. With regard to the project's specific objectives, the team's main conclusions, four years after project completion, are as follows:

- It was intended that the project would deliver a model to help access external funding to develop the national agricultural extension system. This has not happened. The objective of establishing a replicable extension system was never achievable. **The inputs needed under the project design were simply not replicable or even sustainable.**[25]
- Although devolution has caused disruption to the national extension system, the system at municipal level remains under-funded and dependent on national (generally donor-assisted) programs as the basis for its activities.
- A large amount of effort focused on promoting a participatory decision-making mechanism using the RBOs as the conduit. Clearly the concept has taken root (in some RBOs at least) but concrete benefits and examples of community empowerment remain limited.
- The participatory approach helped to empower women by raising their awareness and ability to articulate and assert their needs, rights and capabilities.
- Despite considerable efforts with on-farm testing/demonstrations during project life, except for irrigated rice and maize using a top-down approach, such undertakings have now ceased.
- Linkages between and among the various actors in the agricultural sector (LGUs, NGOs, SUCs etc) at community, municipal and provincial level remain tenuous.
- Undoubtedly the project assisted in increasing the awareness of resource management

25 At municipal level the ratio of barangay to ATs varies from 6 to 10 while PPAEP's design stipulated one AT and one CDW for each barangay for a period of four years.

principles in agricultural agencies at provincial and municipal level. However the impact of the awareness cannot be quantified.

- The project did not adhere to the principle of "progressive engagement" whereby stakeholders demonstrate commitment at each stage before advancing to the next (e.g. there was no equity contribution needed to access revolving fund credit and new loans were sometimes advanced before old ones had been repaid).
- Indications are that the project was managed satisfactorily at the macro-level but that the effectiveness of the project's NGO partners was often inadequate. Cohesion between the NGO-employed CDWs and the ATs was frequently lacking.

The project's objective was to use participatory methods to strengthen the delivery capacity of the agricultural extension services and the capacity of communities to express their needs. Although achievements were limited this does not render the objective invalid (particularly as the objective is in line with the GOP's emphasis on increased and sustained agricultural productivity at the rural household level) but points to the need for modifications in future approaches. Most rural communities are prevailed by a feeling of dependence which adversely affects initiative together with a 'dole out' mentality where debtors feel no compelling obligation to pay back their loan regardless of the source, must be given prime priority in designing rural assistance activities.

Project Impact. Clearly the project failed to develop a suitable, sustainable extension system which could be replicated. The team's field visits indicate that the project's impact on production and productivity has been modest. In terms of human resource development, impact is difficult to quantify – the concept of participatory development has been strengthened in some communities, some RBOs have developed the capacity to access other development programs and services, and judging by their improved employment prospects, the training provided to some DA staff has been useful. The project also contributed to the establishment of a more productive working relationship between some RBOs, ATs and in some cases, NGOs.

Sustainability. Although there has been no monitoring since project completion, the extension system, as devised, with its high human resource requirements is clearly unsustainable. The mismanagement of 'seed-money' provides valuable lessons in 'what not to do'. The training efforts of PPAEP have undoubtedly added to prospects for sustainability of RBOs provided they have a common purpose and strong leadership. Certainly some communities and RBOs feel more empowered as is shown by examples of self-reliance and advocacy. There has been some adoption of improved upland technology which has proved to be sustainable and, reportedly, development of individual livestock enterprises as a result of PPAEP initiatives.

A2.7.2 LESSONS AND RECOMMENDATIONS

Overall many of the project's experiences are disappointing and it is questionable whether the participatory approach aimed at community empowerment as applied to the project is feasible on a broad scale given the large inputs of resources needed - the project only serviced

37 barangays and 82 RBOs. However if AusAID is to use extension as an instrument of its rural incomes policy the following lessons warrant consideration:

- participation, both in design and implementation, are critical for the beneficiaries to gain a sense of ownership and thereby enhance prospects for sustainability;
- carefully select existing cohesive RBOs and provide them with training in financial management, monitoring and accountability. Groups formed for project purposes alone are unlikely to be sustainable, particularly if concessional credit or grants are used as incentives;
- clearly define the roles of NGOs and the LGUs' ATs and include performance indicators as monitoring tools;
- apply stringent selection criteria for NGOs and budget for focused training of NGO employees for project purposes, as necessary;
- LGUs must be fully involved in project preparation and be fully committed to the undertaking to the extent of providing a counterpart cost contribution;
- the organisational framework at RBO, LGU and National level must be clearly understood as a basic ingredient for designing projects;
- the NGOs and LGUs' ATs should be closely linked and not perceived as entirely separate entities by the target group. ATs should receive some incentives preferably a performance-based allowance in addition to further training in community organisation, participatory development and project monitoring;
- the issue of incentives should encompass all participants in the project including the beneficiary, project staff, other participants (e.g. NGOs, SUCs) and local authorities;
- the use of 'seed-money' should only be considered if the RBOs are willing to make a significant cash contribution (in the interests of ownership and therefore financial accountability);
- the 'seed-money' should be seen as a mechanism to kick-start thoroughly researched enterprises, preferably on individual basis;
- stringent monitoring of all project activities (including those conducted by NGOs), particularly the use of 'seed-money', must be obligatory;
- national technical staff as distinct from full-time consultants can play a useful role as a tier between the TAT and the beneficiaries without large budgetary consequences;
- for a participatory project, particularly one involving low income communities, a timeframe of five years is grossly inadequate. With PPAEP the actual implementation phase was less because of the period taken to prepare the PID. A preparatory phase, largely dependent on the amount of effort needed to 'train the trainers' is essential;
- in a participatory project, skills in addition to technical skills were found to be crucial. It is important that advisers are seen as facilitators on projects of the nature of PPAEP. The role of the adviser is not to do a particular activity but to facilitate the undertaking of an activity by others. Facilitation is a skill and it is important that this skill is combined with the technical skill on participatory projects; and

- more care is necessary in matching the work requirements in the design of a project to the number and quality of advisory staff.

Because of the current institutional LGU organisation, projects should incorporate entire municipalities while selectively giving emphasis to the less developed upland barangays. A single NGO should be engaged in each municipality and the situation of 'overkill', that is one AT to one barangay, in PPAEP not repeated.

Table A2.4: Status of project RBOs and various enterprises attempted

Target Barangay	Activity	Status of Activity	Status of Group
Colacling (CS)[a]	Vegetable growing	On-going	Active, meets monthly;
	Pig raising	On-going	about 70 000 in RF
	Poultry, broilers	Non competitive	
	Rice trading	Failed	
	Soap making	Failed	
	Cattle fattening	Failed	
Barera Junior (CS)	Goat raising	On-going	Meets regularly;
	Pig raising	Just starting	about 17 000 in RF
	Cattle, buffalo raising	Successful	with large amounts
	Talapia pens	Failed	outstanding
	Maize	Failed	
	Citrus	Failed	
San Pedro (CS)	Pineapple	Failed	Marginally active;
	Talapia pens	Failed	RF situation unclear
	Pig raising	Failed	
	Tillage equipment	Lost	
	Feedlot fattening	Failed	
	Cattle, buffalo	On-going	
Binaliw (CS)	Nursery	Failed	Marginally active;
	Maize	Not adopted	only 7 000 in RF
	Machinery pool	Sustainability unsure	which was seen as a
	Pig raising	Failed	donation
Bonot (CS)	Mud-crab raising	Failed communally but some success individually	Marginally active; only 8 000 in RF
	Rice trading	On-going	
	Duck raising	On-going	
	Money lending	Very little repaid	
Bawa (A)[b]	Artificial reef	Established	Marginally active;
	Nursery	Failed	RP situation unclear
	Upland rice	Failed	
	Peanut	Failed	
	Drying Pad	Incomplete	
	Copra trading	Suspended	
	Money lending	Very little repaid	
Banoa (A)	Maize trading	Failed	Active;
	Maize	Poor repayment	reportedly 86 000 in RF
	Ginger	On-going	
	Pineapple	Failed	
	Sugar cane	Inappropriate demonstration	
	Goat raising	Just started	
	Bakery	Planned	

Pistola (A)	Rice trading	Suspended	Disenchanted;
	Rice	Very little repaid	about 20 000 in RF
	Demonstrations[c]	On-going	
	Peanut demonstration	Unsuccessful	
	Paddy storage	Not completed	
Buenavista (CS)	SALT[d] methodology	Significant Use	Active:
	Taro	On-going	RF situation unclear
	Artificial reef	Established	
	Tiger grass production	On-going	
	Poultry	Failed	
	Pigs	Failed	
	Fish fry production	Dormant	
	Store	Failed	
	Floating cottage	Failed	
Cagnipa (CS)	Fishing enterprise	Failed	Being revived;
	Artificial reef	Established	RF situation unclear
	Cattle enterprise	Dormant	
	Passenger boat	Failed	
	Pigs	Failed	
San Roque (CS)	Rice trading	On-going	Some activity;
	Hard tractor	On-going	only 4 000 in RF
	Sheep	Failed	
	Sponge production	Failed	
	Potable water[e]	On-going	
Cawagagan (CS)	Rice trading	Ceased 1997	Marginally active;
	Fish culture	Failed	only 3 300 in RF
	Drying pad	In use	
	Pigs	Failed	
	Poultry	Failed	
San Juan	Fish cages	Ceased	Inactive; only 1 200 in RF
	Ducks	Failed	
	Vegetables	Failed	

Note: The three project RBOs in San Pedro, Binaliw and Bonot formed a Federation which received 75 000 from the Australian Embassy's PACAP program after the phase-out of PPAEP. Its milling enterprise failed.

a CS - Camarines Sur province

b A - Albay province

c Inter cropping (e.g. cacao under coconut), different species on different levels of a hillside

d SALT - Sloping Agricultural Land Technology

e Scheme established 1996/7 with PACAP grant

APPENDIX 3 FORAGES FOR SMALLHOLDERS PROJECT

Table A3.1: Summary of performance and potential[a] impact, FSP[b]

Objective		Achievement of Objectives	Potential Impact			
			Social	Institutional	Income	Environment
1	Selection of Forages					
2	Delivery of Forage Systems					
3	Training					
4	Information Systems					
5	Project Management	/				

a FSP was completed in December 1999 and had a limited geographical coverage.

b The performance of the project and its elements was assessed using a five level scale ranging from weak to best practice as follows
= weak effect; = marginal effect; = moderate effect; = high effect; = best practice effect.

A3.1 Introduction

This evaluation of the AusAID – assisted Forage for Smallholders Project (FSP) is part of an assessment of three agricultural-orientated projects undertaken in the Philippines. The purpose of the overall assessment is to draw on experiences from the three projects to assist in developing strategies for best addressing problems faced by rural communities in marginal and rainfed situations. It is expected that the lessons learnt from the evaluation will have wider implications for AusAID's rural development projects.

The project, which was implemented from January 1995 to December 1999, was externally reviewed (Review Report) in April 1998 and a draft Project Completion Report submitted in December 1999. The FSP also includes Indonesia, Malaysia, Thailand, Laos, Vietnam and China aside from the Philippines. This evaluation, while broadly taking into account regional issues, concentrates on experiences in the Philippines. The appendix is preceded by a summary of project performance in Table A3.1.

The project commenced in January 1995 and the Project Implementation Document (PID) was prepared and submitted in May 1995. Letters of Understanding were negotiated with member countries and copies provided to AusAID. Annual Plans were submitted in March each year and six-monthly reports were submitted in February and August each year. CIAT and CSIRO commissioned an external mid-term review of the project from 19 March to 9 April 1998 and a copy of the report has been made available to AusAID.

A3.2 The project

The regional FSP was developed during the final stages of the Forage Seeds Project, which operated in Indonesia, Malaysia, Philippines and Thailand from January 1992 until December 1994. The new FSP also included Lao PDR, Vietnam and southern China with a major focus on development activity in Lao PDR, Indonesia, Philippines and Vietnam.

A draft Project Design Document (PDD) for the FSP was submitted to AusAID in April 1994. The draft PDD was modified in line with suggestions from AusAID and a revised PDD submitted in September. The project was approved in November 1994. CIAT was then authorised to proceed with the project following an exchange of letters between AusAID and CIAT, which was concluded on 6 December 1994.

A3.2.1 RATIONALE AND OBJECTIVES

Rationale. The project design noted that families living in upland agricultural areas were among the poorest rural people in Southeast Asia. They lacked assets and their farms were located in fragile environments. Livestock played a crucial role in the livelihood of rural families in upland areas. Livestock constituted 20 to 30 per cent of the total assets of smallholder farmers in Asia and contributed more than 50 per cent of the cash income of upland farmers (FAO, 1989). Apart from cash income and capital accumulation, livestock also provided draught animal power for land preparation and transport, and manure for organic fertiliser for improved crop production.

Despite the importance of livestock in upland areas productivity (liveweight gain and reproductive rates) of animals was low because of insufficient feed. Traditionally, feed resources were plentiful but increasing population pressure had resulted in over-use and farmers find it increasingly difficult to adequately feed their animals. The importance of feed supply had been confirmed in a recent consultation of International and National Livestock Specialists in Asia (Vercoe el at., 1997) which concluded that feed supply, both in quantity and in quality, was the major constraint to improving livestock production in the region.

Increases in animal production could only be achieved by providing animals with an adequate supply of nutritious feed of high digestibility. The alternatives available to farmers are to purchase high quality commercial feeds or to produce high quality forage on the farm. The latter alternative is the more attractive option for resource-poor upland farmers.

Benefits of planting forages (grasses and legumes) on smallholder farms also could contribute to more sustainable land use in upland farming systems. Planting of forages can help improve soil fertility through the use of nitrogen-fixing legumes, reduced erosion via hedgerows, increased soil cover in hilly lands, and improved animal control through the use of living trees as fences.

Considerable research on forages has been conducted in southeast Asia over the last few decades but unfortunately there had been **little adoption** by farmers. The reasons for this were thought to include:

- a shortage of forage species adapted to smallholder farming systems;
- problems involved in making these species available to farmers; and
- the lack of multiplication and distribution systems for improved species.

Other factors, such as animal disease, which may restrict production and marketing, are always present but are considered manageable. Credit schemes for purchasing livestock are available

and common in the region, but frequently have reduced effect due to inadequate feed availability.

To address these issues, the project employed a strategy of:

- facilitating effective partnerships at regional, national and local levels; and
- actively involving farmers in the process of selection and developing forage technologies.

Key constraints in the Philippines, according to the design document, included the lack of an effective technology transfer methodology, poor integration of improved forage technology with other sector inputs and a lack of adopted germplasm for some soils.

Objectives. The goal of the project was to increase agricultural productivity and soil sustainability on smallholder farms in Southeast Asia.

The purpose of the project was to contribute to this goal by increasing the availability of adapted forages and the capacity to deliver them to appropriate farming systems, in particular, in agroforestry and other upland systems. The component objectives and key outputs are listed in Table A3.2. These objectives were determined following discussions with government officials and development agencies in the target countries and take into account the experience obtained in the Forage Seeds Project.

Table A3.2: Project component objectives and key outputs

COMPONENT OBJECTIVES	KEY OUTPUTS
Component 1: Selection of Forages **–** to increase the availability of forages for different eco-regions and farming systems within the Southeast Asia region.	Efficient project management based on monitoring and evaluation of activities and outputs.
Component 2: Delivery of Forage Systems **–** to facilitate the integration of forages into smallholder farming systems.	Twenty new forage varieties available for different eco-regions and farming systems. Component Forages integrated into smallholder farming systems. This will be demonstrated in at least 18 target areas, throughout the region.
Component 3: Staff Development **–** to increase the capability of local staff in forage agronomy and technology transfer.	Local staff trained in forage agronomy and technology transfer. Training for trainers, followed by national training courses in local languages.
Component 4: Information Systems **–** to facilitate and create effective information exchange systems on forage research and development.	Information system on forage R&D for researchers and development workers in Southeast Asia.
Component 5: Project Management **–** to ensure these above objectives are met through efficient project management.	Efficient project management based on monitoring and evaluation of activities and outputs.

A3.2.2 TARGET GROUP

The main target group was smallholder households often located in upland areas where there is little opportunity for off-farm employment. The families were under increasing pressure to reduce shifting cultivation and often associated cropping on steep slopes and to adopt a more sedentary form of agriculture or turn to forestry systems. The design document stated that the project was essentially gender neutral but women and children would benefit by a reduction in time devoted to feeding animals and from the resultant increase in farm income. Their labour productivity was also expected to rise.

Another important target group were the technical staff of government departments whose capacity to carry out further development work would be enhanced by training, through experience in working in the Project and from improved communication with other forage research and development workers in the Philippines and the region.

Indirect beneficiaries would be village and urban people who would benefit from the provision of meat and dairy products as well as wealth generated by increased trade in livestock. The environment was potentially a major beneficiary through the introduction of agro systems which could conserve groundwater, mitigate flooding, decrease erosion and increase dry season stream flow.

A3.2.3 PROJECT COMPONENTS

Tables A3.2 and A3.3 summarise project components and outputs and key activities and inputs respectively. The following special features/strategies were to be used to increase the role of improved forages in farming systems:

- **Introducing forage as a component of farming systems.** Forages can contribute to soil improvement and erosion control as well as increasing livestock productivity through enhanced feed availability. There was opportunity to develop predominantly livestock-forestry systems in upland areas in the Philippines. The emphasis would be to use forages to enhance the natural resource base rather than to exploit it.
- **Using new sources of forage germplasm.** The FSP would tap sources of forage germplasm identified for acid infertile soils of the humid tropics by CIAT and forage germplasm that was selected on the basis of dry season performance by CSIRO. By evaluating forage germplasm from the genetic resource centres CIAT and CSIRO over a wide range of conditions it would be possible to identify species for different environmental and farming system niches. Species that have very wide adoption would receive particular attention.
- **Achieving adoption using participatory research.** The FSP aimed not only to identify forage germplasm but to achieve adoption of new forage species. Farmers would participate in the evaluation of forage species and as such would come to realise the value of forage as a 'crop' that produces benefits but also requires management input. Appropriate systems of multiplication by seed or vegetative cuttings would be developed hand-in-hand with on-farm research. The project would focus on low-cost input systems.

According to design there had been a considerable effort in evaluation of forages in Southeast Asia during the last 20 years. New species better adapted to the environment and local farming systems than the available commercial Australian cultivators had been identified in many instances. However, due to a lack of suitable seed multiplication technology coupled with on-farm evaluation which might lead to adoption, they were not exploited. Thus development projects continued to rely only on commercial cultivars from Australia some of which are suitable and some are not.

- **Networking of forage scientists with development projects.** The FSP was to capitalise on the experience of local forage scientists and examples of the successful integration of forages into farming systems by networking. The FSP was to also rely on other development projects within the region to produce a multiplier effect from technology generated within the project.

Implementing arrangements. The project was to be administered by CIAT who has the overall responsibility for the project and jointly managed by CIAT and CSIRO. Two senior Agronomists, based in Lao PDR and the Philippines were to co-ordinate activities through consultation with national partners and project managers.

Each year a regional meeting was to be held with national partners and project managers which would review progress, discuss the activities and outputs for the past year of the project, and plan activities for the coming year. These annual meetings would provide an opportunity for all partners to contributed to the project as a whole and suggest changes to activities which were incorporated in the following Annual Plan. CIAT was to prepare 6 monthly reports (February and August) and Annual Plans (March) for submission to AusAID.

A3.2.4 PROJECT COSTS

Total cost for the regional project were estimated at A$4.8 million over five years. The recipient countries were to contribute about A$0.54 million and Australia A$4.3 million. Neither the design document or the Project Completion Report (PCR) disaggregates costs on a country by country basis.

Table A3.3: Key activities and inputs.

ACTIVITIES	INPUTS
Selection of Forages	**Australian Government**
• Assessment of local forage systems	• Personnel
• Introduction of forages	• Two forage agronomists and support staff based in Laos and the Philippines
• Evaluation in different agro-ecosystems	
• Multiplication of promising species	• Technical assistant in seed production
Delivery of Forage Systems	• Consultants in participatory research, forage agronomy and English language training
• RBA of farming systems sites	
• Participatory evaluation of forages by farmers	• Part-time involvement of CIAT and CSIRO staff in project management
• Farmer training in forage management and utilisation	• Procurement
	• A vehicle for project staff
• Development of multiplication and distribution systems for seed and vegetative planting material	• Office equipment and supplies
Staff Development	• Training
• English language training to enable intra-regional communication, reading and further study	• Courses and workshops
	• Extension Material
• Training in participatory R&D methodology	• Other
• Training in forage agronomy	• Travel and services
Information Systems	**Recipient Governments**
• Annual regional project meetings	• Personnel
• Newsletters, reports, manuals	• Country co-ordinators
• Liaison and communication with other sectors and projects within countries	• Site Staff
	• Procurement
• Creation of regional forage R&D network	• Vehicles at FSP sites
Project Management	• Office Facilities at sites
• On-site management	• Training
• Preparation of PID	• Workshop and training facilities
• Internal monitoring, review and annual plan preparation	• Other
	• Office and field supplies at FSP sites
• Project financial management and reporting to AusAID	• Local Transport
• Project completion report for AusAID	

A3.3 Implementation

The external Review Report (April 1988) concluded that the FSP was ahead of its schedule. At project completion the Philippines component had carried out most of the activities as planned. Experiences with the activities are summarised in the following sections.

A3.3.1 SELECTION OF FORAGES

Table A3.4 shows the forage species tested at six regional evaluation sites. As a result of the assessments eight grasses, six herbaceous legumes and six shrub or tree legumes were selected as forage species with potential.

Table A3.4: Forage accessions tested in the different regional evaluation sites

Species	Gamu, Isabela	Aglipay Quirino	Matalom, Leyte	Guba Cebu	Cagayan de Oro	PCA Davao
Grasses	5	4	15	9	16	17
Herbaceous Legumes	4	8	15	7	8	18
Shrub/Tree Legumes	4	0	10	7	7	11
TOTAL	**13**	**12**	**30**	**23**	**31**	**46**

A3.3.2 DELIVERY OF FORAGE SYSTEMS.

Some of the forage species were grown at four Farmer Participating Research sites in Leyte, Cebu and Mindanao. Farmers participated in the establishment of these sites and they, and their neighbours as well as trainees undertaking NGO-sponsored training courses, were encouraged to participate in evaluation (participatory diagnosis). The project collaborated, particularly with regard to site selection with the Regional Department of Agriculture (DA), Local Government Units (LGUs), NGOs and farmers. Farmers were encouraged to take planting material of species selected by themselves for propagation on their own farms.

Table A3.5 lists numbers of farmers participating in initial evaluation together with farmers evaluating forages in 1999. The spread of forages through unrecorded access to material and farmer to farmer exchange has not been completely documented[26].

Table A3.5: Numbers of farmer collaborators in FSP.

Site	No. of farmers participating in initial evaluation	No. of farmers evaluating forages in 1999	No. of farmers expanding their area
Matalom, Leyte	14 (1995)	26	7
Guba, Cebu	6 (1997)	187	61
Cagayan de Oro	14 (1995)	126	33
Malitbog, Bukidnon	15 (1996)	180	48

Activities at the selected sites (Table A3.5) included:

- group meetings and individual visits to plan on-farm activities;
- establishments of forages (initial evaluation and source of planting materials);
- monitoring through follow-up meeting, individual visits and adoption tree survey;
- facilitating exchange of information through field days, cross-visits;
- participatory evaluation (group and individual); and
- impact assessment (in Malitbog)

The project recognised the need for closer monitoring of adoption somewhat belatedly. In 1999 it commissioned a study by the Australian Centre for International Agricultural Research (ACIAR) for this purpose specifically.

26 Farmer trainees from throughout the country are known to have taken material home with them while undergoing training in soil and water conservation by an NGO in Cebu, for instance.

A3.3.3 TRAINING

Training undertaken by the project included formal training, hands-on training, actual exposure, cross-visits by participants and potential participants to collaborating farmers as well as formal workshops. Workshops and formal training are summarised in Table A3.6.

Training activities targeted the following potential stakeholders:

- existing and potential collaborators and farmers;
- a core group of trainers from collaborating agencies were formed for 'Developing Forage Technologies' training; and
- towards the end of the project, trainings were conducted upon request by and in conjunction with other interested agencies such as LGUs and Regional DA.

Table A3.6: Formal training including workshops conducted by FSP.

Trainings/Workshops	Date	Participants	No. of Participants
Farmer Participatory Research	Oct 1995	• potential collaborators	17
Developing Forage Technologies with Farmers	Aug 1997	• site and potential collaborators	16
	Oct 1998	• collaborators and DA staff from Visayas and Mindanao	23
	Nov 1998	• collaborators and Regional DA staff	26
	Jun 1999	• municipal technicians of Cavite Province	31
	Sep 1999	• collaborators and farmers from FSP sites and Luzon	22
	Nov 1999	• representatives from DA Region XI	44
Experience in participatory development of forage technologies	Jan 1999	• collaborators	13

In addition FSP sponsored/facilitated attendance at international workshops and symposia including the following:

- 1996 - Cross-visit to Australia in relation to a Philippine Grassland Congress;
- 1997 - Training course on 'Management and Utilisation of Fodder Trees in Asian Farming Systems' as part of an International Grasslands Congress;
- 1998 - International Workshop on Leucaena Regional Meeting of FAO Working Group on Grazing and Feed Resources in Southeast Asia; and
- 1999 - International Workshop 'Working with Farmers: the Key to Adoption of Forage Technologies'[27]

A3.3.4 INFORMATION SYSTEMS

The FSP, on a country-wide basis, established working relationships in the following manner:

- at National level with institutes involved in livestock including the Bureau of Animal Industries;

27 The workshop, attended by about 100 people mainly from SE Asia, communicated the experiences of FSP and compared its results with others working on participatory technology development.

- at regional levels with Regional DAs;
- with LGUs in municipalities/provinces where the project was operating;
- other agencies, including NGOs and SUCs, who availed themselves of forage germplasm and training; and
- informal networks between collaborators within sites.

At Southeast Asian level, FSP has developed the basis for on-going co-operation and exchange of ideas within (and outside) the seven member countries of the Project. Major achievements included:

- the regular production, with member countries taking production responsibility in turn, of a Southeast Asia Feed Resources Research and Development Network (SEAFRAD) newsletter;
- the production of training manual for 'Developing Forage Technologies with Farmers';
- a series Technical Reports in relation to regional meetings of FSP as well as relevant regional workshops; and
- specific booklets, in association with CIAT and ACIAR, targeting farmers and extension staff in topics such as:
  (1) developing forage technologies with smallholder farmers; and
  (2) field experiments with forages and crops.

A3.3.5 PROJECT MANAGEMENT

The PCR concluded that the key outputs under this component were delivered in time.

A3.4 Achievement of objectives

While data on some aspects of achievements is limited, due to insufficient formal monitoring and evaluation, the FSP has achieved its core objectives of increasing the availability of adapted forages and identifying mechanisms for enhancing adoption by farmers.

A3.4.1 INCREASING THE RANGE OF SUITABLE FORAGE SPECIES

Through evaluation at six sites, eight grasses, six herbaceous legumes and six shrub or tree legumes were identified as having potential. Confirmed adoption by farmers in Cebu has been limited mainly to a few grasses partly because appropriate leguminous shrubs and trees already exist in many of the farmers' situations and because vegetative propagation of grasses is easier than seed propagation of most legumes. A wider range of varieties has been adopted in Malitbog, Mindanao. More work with herbaceous legumes would appear necessary particularly if their benefits to livestock nutrition and soil fertility are to be imparted to farmers.

The process of integrating new forages into farming systems is at an early stage. Only a small part of the potential benefits of improved forages have been tapped but examples of improved livestock nutrition, soil and water conservation, and reductions in labour requirements for cut-and-carry feeding, together with other benefits, have been articulated by farmers.

A3.4.2 DELIVERY OF FORAGE SYSTEMS

The project developed a delivery system which followed a similar pattern at all sites. Farmers were exposed to forage varieties through farmer-established demonstration sites which acted as nurseries or through other farmers who had already planted forages. The delivery systems depends on the following actions:

- through surveys and discussions with farmers select a site which appears suitable for forage-based activities;
- assist farmers in establishing a communal plot containing a number of forage types;
- encourage farmers to choose and plant varieties according to their own preference; and
- train and assist farmers as necessary.

A3.4.3 TRAINING

The project provided substantial training to national staff either directly through the project's own resources or indirectly at on-farm level, through an NGO with participatory skills in the case of Cebu. However the pool of national staff able to effectively interact with farmers on a participatory basis as well as having a high level of expertise with forage species is still quite limited.

Importantly the FSP has established a training methodology for both farmers and trainers and has institutionalised the concept of 'farmer-trainers'. Its publications aimed at the field level for both promoting forages and developing forage technologies through the co-operation of smallholder farmers are valuable and these, together, with the training manual, provide an excellent guide for an expansion in activities.

A3.4.4 INFORMATION SYSTEMS

The FSP facilitated the formation of a 'Southeast Asian Forage and Feed Resources Research and Development' network which seeks to publicise the experiences of its member countries. Informal networks both within and between countries have been established while closer links between member countries and ACIAR are evident. Booklets, training manuals and workshop proceedings have been produced. It is expected that the Asian Development Bank's (ADB) regional forage project, partly a follow-up to FSP will continue to foster network linkages including the development of a website on forages.

A3.4.5 PROJECT MANAGEMENT

Both CIAT and CSIRO provided excellent support for the Project both at international level and in the Philippines itself. FSP management responded positively to the bulk of Review Report's observations and recommendations particularly with regard to developing stronger links with other relevant regional organisations/networks/development projects that emphasise participatory approach.

There was insufficient credence given to monitoring in the earlier stages of the project. To its credit the project did intensify monitoring efforts by commissioning ACIAR to undertake a monitoring exercise towards the end of the project.

In the interests of sustainability FSP, in the Philippines at least, chose to work through existing agencies, including LGUs, SUCs, Bureau of Animal Industries and NGOs where possible rather than employing project-dedicated staff. While such an approach is commendable, an additional few project staff could have expended and consolidated the project's geographic coverage.

A3.5 Impact

Project impact has not been quantitatively monitored and it is largely limited to a core area in Cebu where an NGO, with expertise in soil and water technology promotion is active, and to the municipality of Malitbog in Mindanao. There has been one assessment of farmers' perceived benefits in Mindanao which highlighted the diversity of farmers perceptions and differences with regard to benefits. Mission observations and farmer interviews in Cebu suggest that the impact on soil and water conservation, animal production and labour utilisation is likely to be very substantial. In reality, because of the modest scale of the project, its impact has been localised.

However a project involving forages as a component has the potential to have a major impact and to be very efficient in terms of cost. FSP was a small and very cost efficient project which made good use of local NGOs and/or LGU staff, farmer-extensionists, and low-cost forage development strategies. It has developed a model which is affordable by even the poorest upland and rainfed farmers, since planting material is free and only requires a small amount of labour to plant. There are labour savings later due to reduced time needed to cut and carry livestock fodder.

There has been a study of the benefits of FSP interventions in Mindanao[28] which describes the benefits attributed to the interventions by stakeholders. Almost 40 'impact indicators' were identified with the most frequently mentioned benefits being:

- feed for animals;
- can fatten cattle;
- soil erosion control;
- save labour for caring for animals;
- additional income;
- increased number of cattle;
- improved soil fertility;
- healthy animals;
- landscaping/clean and green;
- no need to tether animals far afield; and
- more time to devote to other activities.

The large number of benefits listed by stakeholders indicates that the benefits are complex, difficult to quantify, and vary between sites. Animal production benefits could be estimated

28 Purcell T, Nacalaban W, Gabundada F and Cramb R. "Assessing the Impact of Agricultural Technologies in Smallholder Farming Systems - Results from a Participatory Monitoring and Evaluation Study on Forages in Maltibog, Northern Mindanao, Philippines" Paper presented at that Tropical Forages Conference, Cagayan de Oro, October 1999.

from forage yield measurements but these have not yet been undertaken. Valuation of the other benefits would be more difficult. However if expansion or replication of FSP is to be considered an attempt should be made to quantify the financial and economic benefits of the project interventions. Given the low-cost of the technology used, rapid and sometimes spontaneous adoption and experience from similar initiatives in other countries, it is likely that the financial and economic gains would far outweigh the costs. Moreover, the approach is ideally suited to upland farming systems at risk from erosion where there is a concentration of the most disadvantaged social groups.

A3.6 Sustainability

Because little, if any, additional effort is needed to merely sustain the forage species adopted from FSP, and farmers generally appreciate the benefits, most of the areas established by farmers are considered sustainable. The full benefits of forage development in upland erosion-prone areas are yet to be widely appreciated in government agricultural services.

The sustainability of the FSP approach is another issue. While the ADB project in Mindanao will consolidate the efforts of FSP in the Philippines its effects are likely to remain localised. Considerably more funding, together with an increase in the cadre of personnel with expertise in forages and participatory development, would be needed to spread the technologies to other parts of the Philippines.

A3.7 Conclusions and recommendations

A3.7.1 CONCLUSIONS

The main conclusion is that the project has achieved its objectives of increasing the availability of adapted forages and has devised mechanisms for enhancing adoption by farmers. FSP has adopted a highly participatory approach to ensuring that the forage development interventions are relevant to the perceived needs and aspirations of the target beneficiaries. After on-station trials have confirmed that the forages are adapted to local conditions, the target beneficiaries are presented with a menu of options from which they select species according to their own needs and expectations. Key elements in the project's success include the following:

- the project, through a regional and within-country process of testing was able to present farmers with a range of attractive forages;
- forage development of the type demonstrated under the FSP project is a low cost, low risk, effective and sustainable mode of assistance for poor farm families in marginal and upland areas;
- the project confirmed the relevance and practicality of using forage strips to stabilise farming on steep slopes which would otherwise be subject to severe erosion risk, while at the same time improving the nutrition of ruminant livestock which play an important role in the farming system; and

- women and children receive a significant share of the benefits through reduced forage cut-and-effort and a potential general increase in household income.

Management. The Philippines component of FSP was implanted within a management framework established for a regional project in which a number of other countries also participated. The implementing agency was CIAT working in partnership with CSIRO, and there was minimal involvement of GOP institutions. Whilst this arrangement was appropriate and necessary for a project spanning several countries, and is continuing in the follow-up phase, it has the disadvantage that there was very limited consultation with official institutions at all levels of government. The result is that the project's achievements are not widely understood and there is a low level of forage agronomy capability in government ranks. If the approach developed by FSP is to be expanded or replicated on a broader scale more appropriate implementation arrangements will need to be developed.

In essence although FSP has demonstrated a successful and replicable approach to forage development there has been limited involvement of national and regional agencies. Whilst the DA is aware of the project's achievements and supports its continuation under the follow-up ADB-supported regional project, FSP has not so far had a significant influence on rural development planning.

Policy Implications. GOP does not have a clearly defined policy towards forage development and has had limited involvement in the project so far. In Mindanao one LGU has participating in the project, mainly through the efforts of a single particularly enthusiastic AT. However, in a general sense the objectives of the project to conserve soil and water and increased farmers' incomes are consistent with government priorities.

The design of FSP is regarded as highly relevant to AusAID's objectives and policies. Forage development as practised in the project is virtually cost free and has been adopted by resource-poor farmers who do not have the means or access to credit required for many other agronomic interventions. There are substantial environmental benefits through enhanced soil and water conservation, and women benefit from reduced time and effort required for cutting forage and feeding animals. The project also focuses on upland rainfed farming areas where there is a high incidence of poverty.

Monitoring. The project has maintained basic records of the number of sites and farmers participating at each site, and the technologies adopted, and there has been a qualitative impact assessment (Purcell et al) at one site in the Philippines. These are important functions for a project which is intended to identify forage species and technologies suitable for use by smallholders. However a more intensive monitoring and evaluation effort would be needed if the benefits and costs of various forage development systems are to be quantified.

Follow-up to FSP. The ADB-financed follow-up will further promote the initiative but its geographic coverage will be limited. Considering the potential of forages to improve the living standards of a substantial proportion of the rural poor in marginal and rainfed areas, and conserving soil and water resources, much more assistance and promotion is justified. Thus a longer-term and larger financial commitment will be needed by assistance agencies and GOP if the promise revealed by FSP is to be realised on a larger scale. The employment of forages as a key activity in development investments is justified provided the integrity of the approach developed under FSP is retained.

A3.7.2 LESSONS/RECOMMENDATIONS

An array of lessons arise from the project's experiences including the following:

- the technology offered to farmers must be rigorously tested before it is offered for consideration;
- the project was only successful where there was an enthusiastic individual or organisation prepared to test, demonstrate and promote potentially successful interventions;
- in principle, beneficiaries should be presented with technologies and allowed to assess the innovations themselves without undue prompting - basically there should be a balance between giving enough information without stifling initiative;
- project resources need to be adequate and/or appropriate for an activity's immediate objective. FSP, on purpose, employed few staff directly - this situation hampered more widespread implementation and prevented adequate monitoring at the on-farm level;
- the use of an existing activity popular with farmers as a springboard for introducing new or complementary technologies is an effective mechanism for stimulating adoption. However the development and promotion of core activities (such as soil and water conservation) are often long-term undertakings including the development of mutual confidence between communities and organisations providing assistance;
- farmers can be 'natural researchers'; self-discovery empowers them; farmers situations vary substantially from one to another; farmers are willing to participate in groups; farmers are capable of developing their own systems; and there is a need to respect indigenous knowledge;
- for technicians to succeed in the participatory approach there is a need for patience; hard work; ability to link within and outside organisations; perseverance; an understanding, respect and belief in local political leaders and existing norms; and a willingness to learn; and
- for facilitators (in the case of FSP, CIAT, PCARRD and LGUs) to successfully extend technology through a participatory approach they should work with the existing system; have patience, be sensitive to needs of farmers and collaborators; be open-minded (to account of the farmers' agenda as well as that of the project); have the necessary technical expertise; and take into account the capability/capacity of the collaborators;

The bottom-up/participatory approach works and it can be used to accelerate agricultural development. To be successful the process must give sufficient emphasis to:

- the need for political and bureaucratic support both in principle and action;
- local institution building must be included;
- local people should be empowered and emphasis must be given to human relationships;
- sustainability must be a major consideration;
- there is a need for strategic alliances, partnerships and linkages; and
- the principle of starting slowly in order to go fast is very true.

APPENDIX 4 AusAID'S COUNTRY AND SECTORAL STRATEGIES

A4.1 Country Program Strategy (CPS)

AusAID's Country Program Strategy (1998/99-2002/03) is aimed at poverty reduction. The objective of the program is to improve the living standards of men, women and children living in poverty in the Philippines and promote sustainable and equitable development. To achieve this, the program will:

- focus on the rural poor in the Southern Philippines, particularly Mindanao;
- assist government working in cooperation with civil society and business to meet the human development needs of the poor by improvements in their incomes, health, education and environment;
- support good governance by assisting with the development and implementation of pro-poor enabling policies and building capacity at the community, local and national level;
- support government programs for vulnerable groups, rural and urban, affected by structural and economic change with short-term targeted assistance; and
- improve the outcomes and sustainability of Australian assistance by ensuring its responsiveness to Philippines circumstances and conditions through better program planning and improvements in the efficiency and effectiveness of program delivery.

Within a strategy framework that aims to promote development with equity, the program centres on the welfare of rural men and women through improvements in four key livelihood areas: incomes; health; education; and environment.

The rural incomes strategy includes the following four priorities:

- agriculture and trade policy reform to provide better efficiency incentives for rice and corn production;
- rural infrastructure improvement (including investment, management and maintenance), especially roads and irrigation through assistance in developing capacity at the local level to qualify for and access national investment programs and those funded by multilateral and other bilateral donors, and nationally by supporting planning and budgeting for rural infrastructure;
- training and extension for women and men to improve production technology in major crops and fishing, supported by needs focused research in agriculture and fishing; and
- improving and reorienting agricultural education services to better meet the agricultural development needs of rural men and women.

The rural health strategy has three main priorities:

- provision of primary health care through locally appropriate LGU-community-private development organisation partnerships;

- provision of cost-effective basic services, such as: immunisation; micronutrient and vitamin supplementation; nutrition education, breast-feeding and child growth monitoring; oral rehydration therapy; activities aimed at women's health and safe motherhood, including family planning and health education; and
- improving the efficiency and effectiveness of health service delivery systems and increasing the involvement of the private sector in health service delivery.

The main priorities of the **education strategy** are:

- support to improving the quality of basic education in primary and lower secondary schools in rural areas;
- improvements in the quality of teaching methods and materials especially in the key areas of language, science and mathematics - through curriculum development, improved in-service and pre-service teacher training, administration and methods and materials which help eliminate gender bias and stereotyping; and
- support to technical and vocational education.

The priorities for support to **environmental improvement** are:

- sustainable management of degraded uplands and coastal fishing areas;
- improvements in irrigation water management;
- rural water and sanitation, especially where linked to primary health programs; and
- land use and land management aimed at poverty reduction.

The program also includes two new facilities to deliver timely and responsive assistance. The Governance Facility will respond to specific requests for support in good governance at the National, local and community level. A Vulnerable Group's Facility will provide targeted funding support to programs affected by budget cuts for groups impacted by structural reform and economic change.

The strategy adopts the process of **progressive engagement** in which the first level of Australian support will be on a small scale and progression to larger inputs will depend on the demonstrated performance and commitment of the partner agency. In addition, efforts are made to identify niche roles for Australian assistance, in cooperation with other donor agencies, which will add value to grant aid and promote Australia's profile as a key partner in development in the Philippines. Poverty, equity and governance (PEG) will be mainstreamed in all activities by appropriate assessments at key points of activity identification and development.

A4.2 AusAID's Rural Incomes Strategy (RIS)

The goal of the rural incomes program as detailed in the 'Rural Incomes Strategy and Program Identification Report' (April 2000) is to sustainably increase incomes for the poor rural people of Mindanao. The program will contribute to the goal through broad objectives of:

- improving the policy and regulatory frameworks to increase their encouragement and facilitation of greater production by rural people;
- improving the efficiency of the rural sectors to facilitate operations of the private sector, especially farmers; and
- increasing participation by the poor in profitable enterprises.

The strategy proposes to employ two tactics to pursue the goal:

Tactic I: Development of Policy Analysis. This will expand domestic capacity for policy analysis, to deepen the understanding of policy issues for advocacy and debate. Assistance will be given for analysis which leads to both strengthening 'pro-poor' policy and easing 'anti-poor' policy. Policy will be considered at three levels:

- national policy which affects the poor in Mindanao and throughout the Philippines;
- national policy affecting Mindanao exclusively; and
- local policy affecting rural people in Mindanao.

Assistance for policy development capability will be in three streams. The first would support policy analysis specifically linked to activities in AusAID's program. The second would support policy analysis in response to demands arising from various interest groups in the Philippines. The third will develop capacity for policy analysis in selected agencies and will target some existing facilities, such as that for governance, towards building domestic capability in policy analysis.

Tactic II: Improvement to Sector Systems. Assistance for improving enterprises of the rural poor would address "systemic" causes of low productivity in the rural sectors, especially as they affect the poor. Proposed criteria for identification of high-priority systemic difficulties are:

- high priority for GOP;
- extensive or intensive impact on the poor;
- potential, if eased, for increasing the efficiency of existing and future capital investment;
- potential, if eased, for promoting efficient farming and selection of high-productivity on and off-farm activities; and
- potential for complementing efforts of GOP and donors and concessional financiers.

Priority groups identified against these criteria include: rural financial services; rural enterprise development; market and technology information flow; research, development and extension; irrigation water use efficiency; linkages between environment management and production; and local institution strengthening.

APPENDIX 5 EVALUATION TERMS OF REFERENCE

A5.1 Introduction

AusAID is undertaking an evaluation of activities that address the main constraints in marginal or rainfed farming systems in the Philippines. The development of communities in marginal or rainfed farming areas is one of the priority areas identified in the rural development strategy to guide the development and delivery of the aid program's contribution to agriculture and rural development. The strategy recognises that the majority of families in rural areas will continue to depend on rainfed farming for their income and subsistence needs.

Previous evaluations of agricultural projects have emphasised the need for projects to tackle the key constraints associated with rainfed agriculture in order to have a wider, more sustainable development impact. This evaluation will examine further the problem areas raised in previous evaluations. It will provide valuable information and lessons on the effectiveness of design as well as information on appropriate approaches and strategies that will better address problems of poverty in marginal farming systems. The evaluation will focus on activities implemented in the Philippines because of the wide range of approaches that have been tried to address key problems associated with rainfed agriculture. Lessons drawn from the Philippines can be applied more widely to programs across the South East Asia region.

A5.2 Evaluation objectives

An initial assessment of the problems facing rainfed agriculture suggests that there is a complex range of issues that need to be addressed in project design to increase and sustain agricultural productivity and household incomes in rainfed areas. In light of AusAID experience, this evaluation will focus on examining the impact and effectiveness of two design approaches that have been tried to address key problems associated with rainfed agriculture, and on developing guidelines and design strategies for the future:

- Some project designs have sought to target the constraints to rainfed farming systems through the introduction of improved agricultural technologies or through improved and diversified farming practices to achieve better farm incomes.
- Other designs have sought to complement the above technical approach through activities aimed at strengthening agricultural education and training to better meet the agricultural development needs of rural communities. The aim is to develop skills from which research and technically-based extension programs relevant to the communities' needs can be developed. It is recognised that the dissemination of improved farming techniques for adoption is dependent on effective research-extension and farmer linkages. Emphasis has also been placed on participatory approaches in project designs, including involvement of women and minority groups in project activities.

By drawing on the experiences and lessons from the three projects selected for the evaluation, specific assessments can be made to allow more general judgements and action-oriented recommendations on how designs should best tackle the key problems in rainfed agriculture, to improve the well-being of target communities in a sustainable way.

A5.3 Evaluation questions

The Evaluation Team will examine, assess and report on:

RELEVANCE AND DESIGN

- the key constraints associated with rainfed agriculture;
- alternative design approaches or strategies used to address these constraints;
- the appropriateness and relative effectiveness of the design approaches in addressing the major agricultural development issues in rainfed areas. The evaluation will examine the status of the development of technology suited to rainfed systems and the implications for agricultural production, farm management, and training and education. The study will also assess the success of the agricultural education, extension support, and farmer training approaches in meeting agricultural development needs of farmers in rainfed farming systems;
- the extent to which the design goals and objectives are consistent with the policies and strategies of the Government of Philippines, are able to contribute to meeting the perceived needs and expectations of the target beneficiaries, the recipient government priorities at national and provincial/regional level, and AusAID's objectives and policies.

IMPACT

- the extent to which the ultimate goal of improving rainfed agriculture in target areas has been, or is likely to be, achieved. What, if any, follow up strategies are necessary to ensure long term viability of rainfed farming benefits?
- the consequences and project impacts (both beneficial and adverse, economic and non-economic) in target areas and on beneficiaries, including the impact on poverty;
- the factors which have positively contributed to or hampered the achievement of objectives, impacts and consequences;
- the distribution of project benefits between groups of target beneficiaries such as between resource-rich and poor farmers, men and women, and minority groups;
- the environmental effects (both positive and negative) that have, or are likely to, result from projects;
- feedback to agriculture and rural development and strategic planning of government and key industry agencies at both national and regional levels;
- the impact on the capacity of the provincial and municipal units of resource planning and management; and
- the extent of skills enhancement for extension workers and sector managers.

EFFICIENCY

- cost efficiency of design approaches or strategies in addressing the major agricultural development issues in rainfed areas. Does it appear that the benefits represent a reasonable return on the investment? The evaluation will assess the economic and financial gains from improved efficiency or productivity in rainfed farming.

SUSTAINABILITY

- the sustainability of benefits on the target populations including the sustainability of the:
  - technologies and techniques supported by the project;
  - impact on poverty;
  - institutional strengthening of target institutions;
  - skills transfer to farmers, extension workers, researchers and sector managers in government institutions; and
  - resources to support the initiatives and technologies developed and extended by the projects to ensure continued flow of benefits post-project.

PARTICIPATION

- the level of participation of the target communities (both men and women) in determining project design, consultation arrangements in place during implementation, the management of project activities, and in determining maintenance arrangements;
- the extent to which NGOs and farmer groups were able to positively influence or manage activities supporting improved rainfed farming. The evaluation will also assess the contribution of the private sector in improved rainfed farming systems; and
- the degree of collaboration and cooperation with other similar development projects and International Agricultural Research Centres, and the benefits resulting from this collaboration.

MANAGEMENT

- appropriate implementation arrangements and management procedures, including the involvement of partner government agencies in design, management, policy and strategy planning during implementation to ensure improved project performance;
- coordination, consultation and decision-making mechanisms to ensure effective collaboration among implementing agencies;
- the monitoring systems in place to measure project impact and progress, and the relevance, appropriateness and reliability of the data collection and reporting system used to monitor implementation and impacts. The evaluation will comment on appropriate monitoring and evaluation systems for rainfed farming, including performance indicators to assess project performance.

A5.4 Activities selected for the evaluation

The projects selected for this evaluation are:

PILOT PROVINCIAL AGRICULTURAL EXTENSION PROJECT (PPAEP)

The PPAEP was a pilot agricultural extension project situated in the provinces of Albay and Camerines Sur in Region V, and Bukidnon and Misamis Oriental in Region X. The goal of the project was to increase and sustain agricultural productivity and incomes of rural households. The objectives of the project were to:

- enhance the capacity of agricultural extension workers to effectively respond to the needs of rural farming families;
- strengthen and organise rural-based organisations to gain access to, control over, and management of resources to enhance community agricultural productivity;
- promote and strengthen farming systems research approach to test and extend appropriate technologies on farms;
- develop and strengthen effective linkages between and among agricultural sector and local government units, NGOs, state colleges and universities, other government agencies and other institutions at community, municipal and provincial levels;
- increase awareness of provincial and municipal units within agricultural sector agencies of resource management principles to improve the quality of extension advice to communities; and
- project management

The project commenced in May 1991 and was completed in May 1996. It was implemented by GRM International Pty Ltd, with the Philippines Department of Agriculture as the partner agency. Total project cost was $15 million.

THE PHILIPPINES COMPONENT OF THE FORAGE FOR SMALLHOLDERS PROJECT

The project seeks to increase the availability of adapted forages and the capacity to deliver them into different farming systems, in particular, upland farming systems in Lao PDR, Philippines, Vietnam and Indonesia. Specific objectives of the project are to:

increase the availability of forages for different ecoregions and farming systems within the SEA region;

- facilitate the integration of forages into smallholder farming systems;
- increase the capability of local staff in forage agronomy and technology transfer;
- facilitate and create effective information exchange systems on forage research and development; and
- ensure that the above objectives are met through efficient project management.

The main benefit expected from the project is that the adoption of improved forages will diversify and improve farm income for smallholder families farming upland forestry and agricultural areas. The project is jointly implemented by CSIRO and Centro International de Agricultura Tropical (CIAT). The main project activities are in Lao PDR and Philippines. The

project commenced in 1994 and is due for completion in March 2000. Total project cost is $4.3 million. The project coordinator in the Philippines is the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development. The project partners are:

- Municipal Government, Malitbog, Bukidnon Province;
- City Government, Cagayan de Oro City, Misamis Oriental Province;
- Farm and Resource management Institute, Visayas State College of Agriculture, Leyte,
- Maguug-mad Foundation, Guba, Cebu;
- Philippines Carabao Center, University of Southern Mindanao, North Cotabatu Province;
- Philippines Coconut Authority, Davao Research Center and Provincial Extension Service, Davao City;
- Bureau of Animal Industry, Research Division, Manila;
- Cagayan Valley Integrated Agricultural Research Center – Livestock Experimental Station, Department of Agriculture Region 2, Isabela Province; and
- Cagayan Valley – Upland Research Outreach Station, Department of Agriculture Region 2, Aglipay, Quirino Province.

PHILIPPINES: THE PHILIPPINES AUSTRALIA AGRICULTURAL TECHNOLOGY EDUCATION PROJECT (AGRITECH) (DUE FOR COMPLETION IN DECEMBER 2000)

The goal of the project is to assist the Government of Philippines (GOP) to improve and reorient agriculture education services at provincial and regional levels to better meet the agricultural development needs of the rural community. The objectives of the project are to:

- develop the capacity of twelve institutions to undertake their functions as Provincial Technical Institutes of Agriculture (PTIAs), and four institutions to undertake their functions as Regional Colleges of Agriculture (RCAs), for effectively developing and delivering the Diploma of Agricultural Technology/Bachelor of Agricultural Technology (DAT/BAT) through a network of agriculture education institutions in Regions II, IV, XI, and XIII;
- develop within students the skills, attitudes and knowledge which will allow them to increase agricultural productivity and rural incomes and/or gain productive employment in local agribusiness enterprises;
- develop the skills, attitudes and knowledge of faculty and other staff of PTIAs to deliver the DAT/BAT through experiential learning; and
- effectively manage and deliver Australian Project inputs on cooperation with GOP and target beneficiaries.

The project expects trainees to return to the farm or to enter an agribusiness enterprise. Students are also expected to act as change agents within their local communities, spreading their knowledge and problem solving skills to groups of cooperating farmers. It is also expected that benefits will accrue more widely to farmers who are involved in the strengthened farmer training programs and the upgraded extension and adaptive research activities that PTIAs will be supported to carry out. The AGRITECH project commenced in 1993 and is due for completion in December 2000. Total project cost is $33 million.

A5.5 Evaluation method

The evaluation study design, methodology and work plan will be prepared by the team leader based on a review of all the available project reports and data. The team leader will spend up to 5 days in AusAID preparing the evaluation methodology and discussing the evaluation program with the Philippines program officers, Rural Development Advisers and other relevant AusAID staff.

The Team Leader will prepare a brief document containing an outline of the evaluation framework/methodology, including:

- the issues that require investigation/clarification;
- identification of the data sources and methods of data collection;
- delineation of all persons and organisations with whom the study should consult;
- discussion of the study's approach to measurement, including relevant indicators for impact measurement and strategies for data collection against these indicators in the time available to the study team;
- an itinerary and schedule of meetings and data collection for the field component;
- a briefing and report preparation schedule.

A pre-departure presentation of the approach and method will be conducted by the team. The field component will be conducted according to the itinerary developed by the team leader.

A5.6 Evaluation team

The evaluation team will consist of two Australian short-term consultants (a team leader and one team member) and an AusAID officer. The participation of an in-country consultant on the evaluation team is also under consideration.

- The team leader will have high level skills in the design and evaluation of rainfed farming systems, including assessment of research-extension and farmer linkages programs. The team leader will have responsibility for the conduct of the evaluation and for the preparation and finalisation of the evaluation report.
- The team member will have a sound general background and experience in socio-economic analysing of projects, including economic and financial analysis of project outcomes. Experience in participatory community development is desirable.
- The consultants will have a thorough understanding of AusAID policies on gender and development, environment, and poverty alleviation. The consultants will assess and comment on these cross-cutting issues in the evaluation report.

The team leader will be required for approximately 50 days, including up to 5 days preparation for the mission and up to 14 days following the field component to finalise the report. The second consultant will be required for up to 39 days, including up to 3 days pre-fieldwork preparation and up to 5 days following the field component to finalise the report. The consultants will be required for one day in AusAID to present a seminar on the evaluation findings following the completion of the final report.

An advisory group has be formed to assist the evaluation. This consists of Desk officers from the Philippines and Asia Regional Desks, an RDG Adviser, an officer from PIA. A possible inclusion of an external agricultural development specialist on the Advisory Group is under consideration.

A5.7 Study duration

The workplan for the evaluation will consist of three phases:

- a desk review of all project documents within AusAID to develop the evaluation methods, and team briefings prior to the field mission (see sections 5);
- a field mission, beginning about 8 May 2000 for about four weeks in the Philippines; and
- finalising the report and study findings presentation/discussion.

A5.8 Reporting

The team will prepare an aide memoire for discussion with the Philippines aid coordinating agency and other relevant counterparts at the completion of the field visits. A draft report will be submitted to AusAID within three weeks of the return of the evaluation team. The draft will be circulated for comment in AusAID, and a final draft prepared following the receipt of comments. The report will consist of evaluation findings and recommendations, supplemented with essential appendices. Emphasis will be on lessons and how rainfed agricultural projects can be better designed and implemented. The evaluation report format described in the AusGUIDE will be used as a framework.

Following the completion of the final report, the evaluation team will present a seminar to AusAID on findings, recommendations and lessons learned from the evaluation study.

LIST OF DOCUMENTS REVIEWED

AGRITECH Project

Philippines – Australian Agricultural Technology Education Project (AGRITECH). Design Document, May 1991

Philippines – Australian Agricultural Technology Education Project (AGRITECH). Project Implementation Document, March 1994

AGRITECH Draft Project Completion Report, March 2000-05-29

Project Completion Report on the Agricultural Technology Education Project in the Philippines. Asian Development Bank June 1996.

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Philippines-Australia Agricultural Education Project (PA-AGRITECH) Project Brief (undated).

Self-Reliance: the emerging entrepreneurs. PA-AGRITECH Project (undated)

BAT Graduates Tracer Study, Cagayan State University, March 2000

Community Benchmark Survey: Consolidated Report. Project Management Information System. AGRITECH Project Management Office, October 1999

AGRITECH Procedural Manuals

Pilot Provincial Agricultural Extension Project

Pilot Provincial Agriculture Extension Project (PPAEP) 1989, Project Design Document, August.

—1992, *Project Implementation Document*, April.
—1993, *Mid-Term Review*, August.
—1994, *Completion Report*, Agribusiness Adviser, May.
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Northern Mindanao Agricultural Extension Project, *Project Design Document*

Forages for Smallholders Project

Forages for Smallholders Project (FSP) 1994, *A Proposal for AusAID*: from CIAT, September.

—1998, *Review Report*, April (commissioned by AusAID).

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Forages and Livestock Production - LAOPDR. *Project Design Document*

Feed Reserves for Smallholder Livestock Production in SE Asia, *FSP Technical Report No. 1*

Summary of FSP Experiences in the Philippines

Forage Seed Supply Systems, FSP *Technical Report No. 3*

Developing Forage Technologies with Smallholder Farmers, *ACIAR Monograph No. 62*

Numerous FSP progress reports and pamphlets

Quality Assurance Series No. 23 September 2000

Developing Rural Communities in Marginal and Rainfed Areas: Contributions of Agricultural Projects in the Philippines

Many rural communities in the Philippines continue to face serious challenges to improving their livelihoods. The majority of families in marginal agricultural areas continue to depend on rainfed farming for their cash and subsistence needs. However, low productivity of agricultural systems and limited access to alternative sources of income lead to worsening poverty, food insecurity and the degradation of natural resources.

Australia has supported efforts to improve the livelihood of families in these areas for many years. This evaluation study examines the impact and effectiveness of three projects in the Philippines that embraced a range of approaches aimed at addressing poverty under marginal and rainfed farming systems.

The study found that the availability of appropriate technology was a key requirement for assisting communities in marginal and rainfed areas. Low cost/low risk technologies suited to resource-poor areas are not common. However, they can be developed through close collaboration between applied researchers and farmers, and the study identified the need for further work in this area.

The quality and outreach of agricultural extension and support services is declining in many marginal and rainfed farming areas. Whilst the experience with extension projects is disappointing, the worsening plight of communities in these areas suggests that extension is too important to abandon. The evaluation outlined an approach to developing a local-government based extension system which is capable of disseminating appropriate technologies to resource-poor farmers, using lessons from past experience to direct efforts towards more effective outcomes.

Projects that support post-secondary agricultural education, however successful in their own right, are unlikely to directly reach the rural poorest. Investment in elementary and secondary education with specific focus on agriculture and farm management issues is more likely to generate direct benefits for poor farm households.