



Australian Government
**Australian Centre for
International Agricultural Research**

Final report

project

Sustaining landcare systems in the Philippines and Australia

project number

ASEM/2002/051

date published

May 2013

prepared by

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final report number

FR2013-03

ISBN

978 1 922137 35 7

published by

ACIAR
GPO Box 1571
Canberra ACT 2601
Australia

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1 Acknowledgments

The project was a great team effort and the following team members are acknowledged and thanked for their contribution to project outcomes and impacts:

- **Landcare Foundation of the Philippines (LFPI):** Ben-Errol Aspera, Maria Aurora Laotoco, Lyndon Arbes, Eldon Ruiz, Lorena Loma, Felipe Turnos, Edwin Sardido, Roy Joseph Balane, Evy Elago, Nic Paday, Nelson Tomonglay, Alex Tabbada, Emily Garcia, Maricynth Pabua, Rose Dilag
- **University of Queensland:** Dr Rob Cramb, Dr Jono Newby
- **World Agroforestry Centre (ICRAF):** Dr Rodel Lasco; Dr Agustin Mercado, Dr Delia Catacutan, Maria Noelyn Dano, Rubie Monera, Johnny Sumaylo, Edith Tejada, Edilbert Campomanes, Marilyn Sebial, Celerino Bongaos, Jr, Glorylyn Acaylar
- **SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA):** Dr Arnulfo Garcia
- **CRS-Philippines (Catholic Relief Services):** Terry Tuason, Don del Castillo, John Muir, Jessan Catre, Veronica Avila, Democrito Badino, Betty Fuenconchillo
- **University of the Philippines Los Banos (UPLB) – National Crop Protection Centre (NCPC):** Valeriana Justo
- **Department of Employment, Economic Development and Innovation (DEEDI) – formerly Department of Primary Industries and Fisheries:** Noel Vock, Debby Maxfield, Di Crane

The project team would like to specially thank the following:

- **Dr Ken Menz and Dr Caroline Lemerle** (ACIAR Research Program Managers) and their program staff for their encouragement and support throughout the project;
- **Jenni Metcalfe and her staff from Econnect Communication**, who contributed a wide range of services to the project, much of it at no cost to the project. These services included development of two landcare books, communications training for staff, photography and videography services, preparation of email newsletters, and purchase of seven microscopes and scientific equipment for schools at landcare sites;
- **The many Australian landcarers** who supported the project by hosting visitors for training and other services – these include Land Connect (Vick Mack and Sue Marriott), Mary Johnson, Rob Youl, Horrie Poussard, Barung Landcare Association, Noosa Landcare, Landcare Queensland, Samantha Morris, Geoff Penton, Ashley Sewell and Christine Rinehart;
- **Michelle Sinn** (DEEDI ACIAR Projects Coordinator) for efficiently managing contracts, acquittals, collaborator payments and a myriad of other services for the commissioned agency and the Project Leader.

2 Executive summary

The southern Philippines rural uplands are plagued with problems of extreme poverty, unsustainable farming practices, poor infrastructure and lack of government services. Landcare (a facilitated, farmer-led, group-based program of research and extension, directed towards sustainable farming systems and rural livelihoods), had proven itself in a previous project to be a very effective approach for achieving rapid adoption of sustainable farming systems. It also showed considerable promise in improving farmer livelihoods from the platform of more sustainable farming systems, as well as providing a more effective process for community engagement and extension in isolated rural areas.

The first phase of the new project (2004 to 2007) aimed to further develop the landcare program and research the processes of strengthening its institutional structures and scaling up its conservation farming and livelihoods improvement systems. A second phase of the project (2007 to 2009) aimed at strengthening the Landcare Foundation of the Philippines Inc (LFPI) as the lead agency for landcare, and evaluating the economic benefits from landcare community-level activities. A third phase (2009 to 2011) aimed to further secure the future of both landcare as a process and LFPI as the lead agency.

Significant results and impacts included:

- Institutional development of LFPI from a single-purpose, locally-focused organisation with three staff into the lead agency for landcare with a broad strategic plan, regional focus, improved governance, national and international project funding and more than 10 staff;
- Strengthening of the landcare credentials of implementing partners such as LGUs as demonstrated by integration of landcare into provincial, municipal and barangay development plans, provision of staff and funding, and development of landcare ordinances and farmer incentive programs. However, the lack of development at the national government level was disappointing;
- Demonstration of effective scaling up programs in new areas of Bohol and the greenfield Agusan del Sur site;
- Successful development of market clusters built from landcare groups, with involvement in value chain analysis and targeted group marketing. As a result, income was significantly increased, although problems with management of microfinance with two clusters showed a need for careful management of inputs within high risk production environments;
- Positive economic return from landcare interventions with the nett income of adopters two to three times higher than that of non-adopters. Although the income increases came from a small base and in absolute terms were small, the relative increases were large, and resulted in significant income enhancement for farming households;
- Demonstration of the valuable potential role of landcare in improving livelihoods and human security in conflict zones of western Mindanao;
- Selection of landcare by an increasing number of individuals and institutions as the 'tool of choice' for effective and rapid change in rural communities;
- Documentation of outcomes in four books, eight conference papers, three theses, five research papers in international journals, nine working papers, one book chapter, 12 reports, two web sites and 10 newsletter and magazine articles.

Recommendations for future action include continued mentoring support to LFPI to grow its resource base, support for a study tour to Australia to drive national government interest and involvement in landcare, and greater involvement of LFPI in future ACIAR research projects because of the potential extension benefits of using the landcare model.

3 Background

3.1 Philippines component

3.1.1 Phase 1: 2004 to 2007

In the period from 1999 to 2004, the ACIAR Project ASEM/1998/052, working in conjunction with a Spanish aid agency on implementing and testing a landcare approach in upland farming communities in Mindanao, showed significant impact at its three project sites. Major outcomes included the formation of over 400 Landcare groups, participation by up to 35% of households, adoption of conservation measures by up to 65% of farmers, and protection of up to 25% of farmland. The project also had significant impact on both social capital through membership of landcare groups, and farmer knowledge and skills through training provided. There was also evidence of impact on farm incomes through farmers accessing potential livelihood improvements, although the scale of this at the time was not fully evaluated. The project's success also helped re-shape institutional approaches, with 45 Local Government Units (LGUs), National Government Agencies (NGAs) and Non Government Organisations (NGOs) actively involved in the program at that time.

However, as the program was still in its infancy, questions remained on landcare's long-term sustainability without the presence of the current facilitating organisations (ICRAF and SEARCA), and how best to grow landcare outside of the initial pilot sites. Answers to these questions were vital for two reasons:

- Firstly, interest in landcare from other areas of the southern Philippines and other development institutions was increasingly significantly.
- Secondly, the landcare approach appeared to offer potential as an extension approach in addressing the broader issue of rural poverty. This issue remained critical in the southern Philippines, especially Mindanao, where rural poverty continued to rise (from 37% to 40% in the period from 1998 to 2001, according to the National Statistical Coordination Board).

The first phase of the new project (2004 to 2008) was designed to address these questions by establishing an independent network of landcare coordinators and site support personnel at five sites across the southern Philippines, and analysing the most appropriate processes for the network to effectively sustain and grow landcare throughout the region. The ultimate aim was to subsequently integrate the network into a larger independent and self-sufficient non-government landcare agency, and evaluate its performance in sustaining and growing landcare.

3.1.2 Phase 2: 2007 to 2009

In late 2006, the first phase of the project was independently reviewed. The review noted that despite the significant success of the project in terms of increasing farmer level technology adoption, there were shortfalls in the achievement of objectives relating to the implementation of a defined landcare institutionalisation strategy and the economic evaluation of impacts. As a result, an ACIAR review committee, in consultation with AusAID, recommended that the project be extended by two years. The review committee recommended that implementation of a defined landcare institutionalisation strategy be coupled with continuing community level landcare activities consistent with the Australian Government's new Development Assistance Strategy for the Philippines, particularly the emerging Rural and Private Sector Development (RPSD) strategy. The review committee recommended that the community level landcare activities place particular emphasis on the delivery and evaluation of sustainable economic benefits.

For the landcare institutionalisation objective, the Landcare Foundation of the Philippines Inc (LFPI) was selected as the most appropriate agency to take on the roles and responsibilities, based on the assessment of the project review team as well as subsequent analysis and consultation between the project partner agencies and LFPI. Factors supporting this assessment included its status as a formally registered and legal entity, its broad landcare mission, its experience as an independent landcare support organisation including sourcing and implementing landcare projects, its access to the Landcare Trust Fund (then managed by ICRAF under trust from the donor: Agencia Espanola Cooperacion Internacional – AECI), and its broad-based ownership of the landcare ethos through its member organisations and Board of Trustees (BoT).

For the economic benefits objective, it was proposed that these would be enhanced through a more targeted (towards economic growth) and consistent approach (drawing upon relevant technical expertise in agroforestry, vegetable production and marketing) across project sites.

A particular component of the two objectives was a staged handover of project responsibilities from the existing project partners (ICRAF, CRS and SEARCA) to LFPI over the two year extension period. This involved the project partners continuing to advise, support and mentor the evolving LFPI in both institutional development and economic development.

3.1.3 Phase 3: 2009 to 2011

In May 2009, a review of Phase 2 of the project noted that despite significant success, challenges remained surrounding the institutional foundations needed to sustain landcare. It recommended a range of immediate organisational refinements for LFPI and the provision of operational funds by ACIAR as an incentive for LFPI and the Filipino partners in the landcare program to take greater control in planning and implementing these efforts.

A scoping study commissioned by ACIAR in September 2009, to determine the most appropriate deployment of additional ACIAR operational funds for landcare, found the landcare programs at the four current core sites to be robust and operating effectively and LFPI making significant progress organisationally in re-positioning itself to take on the challenges of leading the landcare program. However, the scoping mission noted that the legacy of management difficulties during Phase 2 had left LFPI insecure in terms of its staffing and funding base, and as a result, its continued leadership of landcare development was under significant threat. It recommended that measures be taken to improve the security and sustainability of LFPI and its role in national landcare development. This was the focus of Phase 3. The phase was designed to complement a Small Research Activity (SRA) (ASEM/2009/044) as part of a package aimed at creating a more sustainable platform for landcare by the end of the project. The SRA focused on improving the collaboration between landcare and three other ACIAR projects which overlapped with landcare at its project sites.

3.2 Australian component

3.2.1 Phase 1: 2004 to 2007

In the period from 1999 to 2004, the ACIAR Project ASEM/1998/052 showed that a landcare approach had some promise as an effective extension tool in intensive horticultural industries in southeast Queensland, a challenging environment given rapid population growth, rapid urbanisation, and the close proximity of intensive horticulture to sensitive environmental areas such as the Pumicestone Marine Park. Major outcomes included environmental auditing, on-farm water quality monitoring and the formation of locally based farmer discussion groups. However, it also identified the complexity of the economic, social and environmental drivers for peri-urban horticultural farmers, and the need for these to be better understood if farmers were to be given appropriate support in

adapting to the changes necessary. The first phase of the new project (2004 to 2007) proposed to research these drivers for their impact on farmer viability.

3.2.2 Phase 2: 2007 to 2009

The research conducted during Phase 1 confirmed the difficulty of maintaining and growing viable rural businesses in the peri-urban environment. These difficulties stemmed from a combination of biophysical, socio-economic and socio-political factors, complicated by the gazettal of the South East Queensland Regional Plan, which designated much of the peri-urban land be preserved for regional landscape and rural production purposes. This placed further business pressures on rural landholders as alternative development options were then not available. This phase of the project proposed to consolidate the research data to identify the most important constraints and design a facilitated landcare-based extension approach to be employed with landholders to improve business development.

3.2.3 Phase 2 extension: 2009

While Phase 3 of the project was confined to the Philippines, a no-cost extension of the Australian component was completed over the period from July to December 2009. This was to complete the consolidation of the project with landholders and develop a process for them to move forward on business development beyond the end of the project.

4 Objectives

4.1 Philippines component

4.1.1 Phase 1: 2004 to 2007

The overall goal was to improve the standard of living, social capital and environmental stewardship of poor rural communities in the southern Philippines. The goal was to be achieved through two main purposes:

- Implement, sustain, and scale-up effective landcare practices and the associated institutional structures and processes within selected vulnerable landscapes of the southern Philippines.
- Analyse and evaluate the appropriateness of models used to sustain and scale-up landcare processes.

To achieve the purposes, there were three objectives:

- Strengthen the institutional support structures for landcare by assessing available models and designing a preferred option (such as an independent landcare agency) that effectively sustains existing municipal landcare associations and local landcare groups, and works with government and non-government agencies to scale up landcare to new sites.
- Sustain and scale up adoption of conservation farming systems and diversified livelihoods through the implementation of landcare processes at the farm level in existing and new sites.
- Analyse and evaluate the impacts of the institutional support structures and on-farm implementation of the landcare approach in order to confirm its effectiveness and establish the essential requirements for sustaining and scaling up landcare.

4.1.2 Phase 2: 2007 to 2009

The overall goal was to deliver sustainable economic and other benefits for rural communities through application of landcare processes. To achieve the goal, there were two objectives with underpinning activities:

- Enable the Landcare Foundation of the Philippines Inc (LFPI) to evolve and take on the defined roles and responsibilities for the broader development of landcare in the Philippines.
 - Analyse existing institutional issues for the development of Philippines Landcare as a precursor to implementing an institutional development plan for LFPI.
 - Implement an institutional development plan for LFPI.
 - Monitor and evaluate the performance of LFPI in developing Landcare institutionally in the Philippines.
- Implement community-level landcare activities that will lead to economic growth.
 - Establish a regional/site network of Landcare Coordinators and Facilitators and implement a program of site activities that will lead to economic growth.
 - Monitor and evaluate the economic and other impacts of the site activities.

4.1.3 Phase 3: 2009 to 2011

The overall goal was to further secure the future of landcare as a primary extension and community development approach in the southern Philippines, and the future of LFPI as the lead agency for landcare in the Philippines.

The key objective was to implement and evaluate a number of institutional development processes to achieve the above aim.

4.2 Australian component

4.2.1 Phase 1: 2004 to 2007

To evaluate the viability issues of peri-urban horticultural farmers in selected areas of southeast Queensland and develop improved strategies for farmer action.

4.2.2 Phase 2: 2007 to 2009

Evaluate a facilitated landcare-based extension process for enhancing and sustaining economic benefits for peri-urban landholders in the Sunshine Coast region of southeast Queensland. There were three underpinning activities:

- Consolidate and analyse research data from the existing project to identify the most important constraints to maintaining and growing viable rural businesses, and from this, design a facilitated landcare-based extension approach to be employed with landholders to address these constraints.
- Implement the landcare approach in selected existing pilot sites and evaluate its impact on maintaining and growing viable rural businesses.
- Evaluate a facilitated landcare-based extension process for enhancing and sustaining economic benefits for peri-urban landholders in the Sunshine Coast region of southeast Queensland.

5 Methodology

5.1 Philippines component

5.1.1 Phase 1: 2004 to 2007

To achieve the project objectives, the project firstly established an operational independent network of five full-time professional landcare coordinators (Landcare Coordinators Network or LCN) located at the five project sites throughout Mindanao and the Visayas (three existing landcare sites and two new landcare sites). With back up from a small team of locally oriented support personnel at each site, the network was designed to service the landcare sustainability and growth needs of the existing and new sites. The team of coordinators and support personnel were to be involved in a process of continuous monitoring and evaluation (M&E) of the sustainability and growth processes. A full-time in-country Project Manager was appointed to work closely with the LCN and site teams across the sites to ensure high standards of delivery and research were continuously maintained. To better understand the reach of the landcare process, the research used a livelihoods approach as a framework to understand, explain and evaluate its impacts.

The project proposed to establish an independent landcare agency to sustain landcare activities in the long term by providing on-going support in particular to LGUs, active landcare groups and the landcare associations, and to integrate the LCN into this agency. As an NGO operating above the municipal level, it was proposed that the landcare agency would provide an appropriate mechanism to service the longer-term landcare development needs of a range of institutions from an institutionally independent, farmer-led perspective. It would also potentially provide a more attractive entity for funding agencies, and wean landcare dependence off the organisations currently facilitating landcare (ICRAF and SEARCA).

Objective 1: Strengthening institutional support structures

Landcare institutional support agency

For the research around the design of an institutional support agency for landcare, the project team identified a broad list of required characteristics for such an agency, using advice from civil society institutional specialists. This enabled a shortlist of successful Filipino models of institutional support agencies that broadly met the required characteristics to be identified. These models were then case studied to identify their strengths and weaknesses and the key issues in their successful design and operation. The results of the case study analysis were then reviewed in a special workshop involving the project team and stakeholders with a view to determining important design issues for an effective landcare agency.

Two existing and highly relevant agencies which were pre-determined to be included in the analysis of models were:

- The Mag-uugmad Foundation Inc (MFI) in Cebu, which had established a Sustainable Upland Resource Centre to provide farmer training on soil and water conservation and farm livelihood improvement strategies;
- Landcare Foundation of the Philippines Inc (LFPI), which had been established initially to administer the AECI-funded Landcare Trust Fund in the Misamis Oriental and Bukidnon provinces of northern Mindanao. It was envisaged that LFPI was an appropriate prototype organisation for landcare institutional support, at least in the short term, and it was hoped that it would be willing and able to consider a broader regional and potentially national landcare support role in the longer term.

It was envisaged that the process would achieve either a reconstitution of LFPI towards a broader regional or national landcare support role, or the formal inauguration of a new landcare agency. In either case, it was proposed that the existing responsibilities of the LCN and other project staff, capital infrastructure and funding would then be transferred to the new or revamped LFPI agency.

Existing municipal landcare associations and local landcare groups

At the level of the municipal landcare associations and Farmer Trainer Groups (FTGs), the project helped to build their capacity to service the broader needs of landcare across the southern Philippines and to interact effectively with the proposed new landcare agency. This involved consolidating their training capability, more effectively networking their services and coordinating training requests. The project also helped facilitate a more effective engagement with LGUs and agricultural/NRM units at the provincial levels.

At the level of the local landcare groups, the project helped to build their institutional capacity through group leadership training, facilitation of group strategic planning and a more effective engagement with LGUs to sustain the local progress of landcare in both the areas of conservation farming and the accessing of new livelihood opportunities.

At both levels, the broad approach was to identify the strategically important existing landcare players, collaboratively identify key issues in their development and ownership of landcare, support them in making progress, and evaluate outcomes and impacts.

New landcare programs in Bohol and Agusan del Sur

The broad approach employed to develop programs at these new sites was as follows:

- A scoping study of locations, groups and institutions strategically important for landcare development was initiated. This involve a detailed analysis of the rural development issues and the canvassing of interest and support from LGUs, NGAs, NGOs and private agribusiness, some of which had already expressed an interest in landcare or had visited existing landcare sites in central and northern Mindanao. A key tool in the scoping was the checklist of desirable characteristics for scaling up of landcare derived from the study on the different modes of scaling up in Delia Catacutan's PhD research, completed during the previous project.
- Where the number of interested agencies exceeded the project's capacity, pre-determined criteria were used to identify priority locations, groups, farmer leaders, and institutions. Where the number of interested agencies was less than the project's capacity, special landcare orientation workshops were conducted to promote the landcare concept and its benefits.
- Priority groups were then scoped using needs assessment techniques to determine appropriate entry points and development processes for effective self-sustaining landcare programs.
- A site plan was then developed to commence landcare activities. This involved farmer training, cross site visits to landcare sites, provision of linkages with existing municipal landcare associations and farmer training groups, sourcing of support from outside resource and research agencies, and provision of facilitation training to staff from participating LGU and other agencies. Where LGUs and other appropriate institutions lacked the necessary resources to implement landcare processes, assistance was provided to connect them to potential funding sources such as AusAID's PACAP program.
- An M&E plan to program the monitoring of progress and the evaluation of outcomes and impacts was developed.
- The approach and program were reviewed at each nine-monthly project review meeting.

Because of the limited development of landcare at Bohol and its absence in Agusan del Sur, the experienced landcare coordinators from the established sites in Misamis Oriental, Bukidnon and South Cotabato provided special assistance to the new site coordinators through all of the above stages of developing and implementing the program.

Linkages and networks between landcare members, facilitators and organisations

In order to respond most appropriately and effectively to enquiries and requests for assistance from interested landcare development agencies outside of the project's target sites, the LCN developed a coordinated response strategy on behalf of all landcare stakeholders. This involved two processes:

- An audit by the LCN of their own specialist skills to develop a statement of their capability and potential services.
- An audit by the LCN of landcare services available from other providers, including landcare associations, FTGs and NGOs.

These then formed a portfolio of development services to provide landcare developers with a range of options for skills and services most appropriate to their needs. By managing this service, the LCN was able to spread the load and deploy its limited resources at sites with the biggest pay-off for landcare development and sustainability. The services to new landcare developers included provision of information and orientation seminars, arrangement of farmer cross-visits to landcare sites, facilitation of linkages with landcare groups and associations, training of key site personnel, provision of follow-up facilitation support, and assistance in the development of M&E frameworks.

In order to back up the service and provide further strengthening of the larger landcare network, the project developed a landcare web-based portal to provide a communications gateway to landcare information and service providers.

Objective 2: Implementing landcare processes at the farm level

The method involved the small team of project staff at each site working in collaboration with landcare groups and landcare members. Each site team was headed by the landcare coordinator and consisted of experienced landcare field staff from the previous project together with farmer facilitators where available. At each site, the process used was as follows:

- Identification of existing (or in the case of new sites, prospective) landcare groups and landcare members that were strategically important to the sustainability of landcare processes.
- Engagement with these groups to determine key needs.
- Development of a site work program with a balance of activities aimed at addressing the identified needs.
- Implementation of the site work program.
- Review of the program at each nine-monthly project review meeting.

The landcare processes targeted were a combination of diversification opportunities to improve livelihoods and conservation farming systems to improve resource management. They took the form of formal training events, cross visits to other sites or informal self-learning programs. In all cases, training emphasised the building of skills and knowledge in not only the technical aspects of diversification opportunities and conservation farming systems, but also the process areas of acquiring new knowledge and networking with service providers. To help service the needs, the LCN and site teams collectively consolidated the information base on diversification opportunities and conservation farming technologies to improve farmer access to this material. This ran in parallel with the development of the portfolio of landcare services, mentioned above.

Objective 3: Analysis and evaluation of impacts

Planned outputs, outcomes, and impacts across the two major objectives of the project were developed at a planning meeting conducted at the inception of the project. This involved the establishment of agreed measures of landcare sustainability at both the farm and institutional levels. At this point, a clear statement of respective M&E roles and responsibilities for all project staff was also developed, with specialist guidance from Dr Rob Cramb (Australian Research Adviser).

At the institutional level, agreed measures included:

- Increasing number and membership of landcare groups;
- Improving on-ground leadership of landcare groups and associations (broader and more skilled base);
- Increasing development of peer support systems and networks;
- Increasing engagement with institutional support organisations;
- Increasing investment in landcare;
- Increasing support of LGUs, NGAs and NGOs and increasing involvement of staff in landcare programs;
- Increasing integration of landcare into mainstream extension delivery systems;
- Increasing capacity of municipal landcare associations.

At the farm level, agreed measures included:

- Continuing adoption of conservation practices;
- Sustained adoption of conservation practices;
- Increasing number and range of self-initiated group activities;
- Improving land tenure status for farmer members;
- Improving economic well-being;
- Increasing market/economic/environmental incentives for landcare practices.

Progress was monitored and outcomes and impacts measured against the six capital assets of the sustainable livelihoods framework (natural, physical, social, political, financial and human). Within these, a range of quantitative and qualitative research tools were employed, reflecting the complexity of the processes being studied and the need for triangulation. These tools included the following:

- Simple questionnaire surveys to monitor adoption;
- Longitudinal case studies of selected farmers and landcare groups;
- Focus groups with key stakeholders;
- Key informant interviews;
- Participant observation, for example of landcare activities.

Objective 4: Project management and coordination

To ensure the effective delivery of project outcomes, the project implemented five important management steps:

- Negotiation of roles and responsibilities of project partners;
- Establishment of the LCN and site teams and negotiation of roles and responsibilities of project staff;

- Development of a communication plan including a shared web portal to ensure appropriate communication both internally and externally;
- Establishment of a Project Management Committee comprising leaders from each of the collaborating partner institutions and the local Philippines Project Manager;
- Development of appropriate quality assurance procedures including risk management, financial management, performance indicators, reporting and project level monitoring;
- A major project team orientation and planning workshop soon after project commencement to develop work plans, supervision networks, the communication plan, M&E frameworks, project monitoring and reporting processes, the nine-monthly project review program, and training programs for the LCN and site teams.

5.1.2 Phase 2: 2007 to 2009

Objective 1: Evolution of the Landcare Foundation of the Philippines Inc (LFPI)

The first activity was an analysis of existing institutional issues for the development of Philippines landcare as a precursor to implementing an institutional development plan for LFPI. The analysis consisted of three components:

- Analysis of issues for LFPI through consultation with the Board of Trustees (BoT) and LFPI staff.
- Analysis of issues for ICRAF, SEARCA, CRS and UPLB (as partners in the existing project) in transitioning their project staff to LFPI and working together in a coordinated way in developing Philippines landcare.
- Analysis of issues for other major landcare stakeholders at both the local level and national level.

The first two components of the analysis involved a series of focus group discussions and small workshops facilitated by the Philippines and Australian project leaders in conjunction with managers of existing project partner agencies and continuing project staff. An institutional development consultant was engaged to provide expert guidance throughout this process. The third component of the analysis involved direct engagement with local and national government officials.

During the analysis, a plan for the transitioning of continuing project staff from ICRAF, CRS and SEARCA to LFPI was developed. This involved development of roles and responsibilities, work plans, operational procedures, and training needs, as well as the development of procedures for work contracts, appointment to LFPI and integration of current project activities into LFPI. This interaction with continuing project staff was also used to complete and publish a book of landcare principles and processes to underpin institutional, strategic and operational planning for landcare. A plan was also developed to facilitate the transfer of the AECI-funded Landcare Trust Fund to LFPI as an operational sinking fund.

At the conclusion of the analysis, the issues identified were integrated into an institutional development plan for LFPI. The development of the plan and time schedule for its implementation were achieved through a major planning workshop involving staff and management of LFPI and other project partners, and supported where appropriate by the institutional development consultant.

From January 2008, when project staff were subsequently transferred to LFPI and project activities started to operate under a single entity, greater responsibility for the management of the project and the delivery of project outcomes was transferred from the Australian agencies to LFPI. The existing project partners (ICRAF, CRS, SEARCA and UPLB) continued to advise, support and mentor the evolving LFPI through involvement in

the institutional development processes, project review workshops and LFPI advisory structures.

Monitoring and evaluation of the performance of LFPI in developing landcare institutionally involved a baseline survey of landcare stakeholders at the commencement of the project as a benchmark, development of a performance framework, a special M&E training program for LFPI staff to ensure competence in the research processes being employed in the project, and the appointment of an LFPI-based research specialist to help build capacity within LFPI for ongoing M&E of both institutional development processes and landcare regional/site activities. The M&E process was facilitated by the Philippines and Australian project leaders with assistance from the Australian Research Adviser (Dr Rob Cramb) and Research Officer (Dr Jono Newby).

Objective 2: Implementation of landcare activities leading to economic growth.

To deliver the landcare activities, three regionally based landcare teams were established:

- Northern Mindanao (Provinces of Misamis Oriental, Bukidnon, Misamis Occidental, Agusan del Sur) – located at Claveria (Misamis Oriental) – managed by ICRAF for first 6 months until transition to LFPI;
- Southern Mindanao (Provinces of South Cotabato, Davao del Sur, Sultan Kudarat) – located at Koronadal (South Cotabato) – managed by SEARCA for first 6 months until transition to LFPI;
- Visayas (Provinces of Bohol, Leyte) – located at Tagbilaran (Bohol) – managed by ICRAF for first 6 months until transition to LFPI.

At an initial planning workshop to coincide with the LFPI institutional development plan activities, the teams re-examined current regional landcare priorities, developed work plans and established robust processes for effective teamwork, communication, networking, training, security and M&E. To drive the economic growth agenda, the forward work plans placed particular emphasis on the following:

- Accelerating the adoption of conservation farming systems incorporating NVS and associated diversified high value cropping/agroforestry systems incorporating fruit, vegetable, timber, fibre and ornamental crops (with major technical support from ICRAF);
- Improving farmer access to technical innovations in timber and fruit tree production - species choices, silvicultural/horticultural management, germplasm improvement, tree nursery development (with major technical support from ICRAF);
- Improving market performance through increasing the levels of marketing knowledge and skills, developing market clusters, and facilitating linkages with marketing organisations (such as the Vegetable Industry Council of Southern Mindanao - VICSMIN) and value-adding opportunities (such as timber millers, banana corporations and industry development groups such as the Fiber Industry Development Association) (with major technical support from CRS building on their success with their market clustering agroenterprise model);
- Improving farmer access to technical innovations in vegetable production – higher value crops and higher yielding varieties, lower cost pest and disease technologies such as biofumigation, lower cost soil fertility management systems (with major technical support from UPLB);
- Increasing the involvement of municipal LGUs in investing their staff resources and operational funding, and in providing an appropriate regulatory framework for landcare (with major technical support from ICRAF).

The development of the work plans involved reconfiguring the technical support services provided by ICRAF, CRS and UPLB to a shared services model, avoiding duplication

between sites and maximising deployment of the network's skills and experience across the project sites.

Monitoring and evaluation of the economic growth agenda involved:

- A review and aggregation of existing research data on impacts (economic, social, environmental);
- Completion of the evaluation of economic impacts of landcare at the household, community and watershed levels in Bohol;
- Mentoring and training of the LFPI research specialist and relevant project staff in economic impact evaluation in order to facilitate evaluation of economic impacts in Mindanao landcare sites, similar to those completed in Bohol.

5.1.3 Phase 3: 2009 to 2011

The process to further secure the future of landcare as a primary extension and community development approach in the southern Philippines, and the future of LFPI as the lead agency for landcare in the Philippines, involved 10 different activities:

1. Consolidation and refinement of LFPI's institutional development plan. This included developing a more strategic vision, building better capacity for the Board of Trustees and staff, undertaking business planning to diversify and increase LFPI's funding base, resolving the fate of the AECI-funded Landcare Trust Fund, and building a more professional profile for marketing purposes. Important elements of the process included provision of funding for salaries and site overhead costs to maintain key staff in place; assistance with the business planning necessary to grow and diversify the funding base; assistance in pursuing new project funding consistent with a tighter strategic plan; and development of a new web site to better market LFPI's capacity. In the business planning, a range of fee for service activities were assessed including:
 - Landcare facilitator training;
 - Landcare orientation and visitor hosting services;
 - Service provider to a development aid agency;
 - Provider of specialist technical services to farmers and other ACIAR projects such as soil and plant analysis and seed certification.
2. Conduct of special stakeholder meetings at all four core landcare sites, as well as scaling-up sites, to clarify needs and expectations and produce a 12-month action plan. This was designed to enable the Landcare Coordinator at each site to provide a more targeted interaction with the landcare groups/clusters, as well as to build institutional landcare capacity within the relevant LGUs.
3. Re-invigoration of the Landcare Coordinators Network (LCN) to better consolidate and share learnings and landcare applications, and meet the demands and needs of landcare developers. This included coordination of cross-visits of farmers and LGU personnel between sites; coordination of inputs from technical specialists; working with LGUs to establish a minimum benchmark for effective institutionalisation of landcare at the barangay and municipal levels; and developing and managing the Philippines Landcare Network (see below).
4. Organisation of farmer and LGU cross-visits to facilitate farmer-to-farmer and LGU-to-LGU sharing and development of landcare processes.
5. Scoping of a landcare leadership development program for farmers and LGU officials to address the lack of development of second tier leaders for landcare groups and clusters.

6. Development of a Philippines Landcare Network (PLN) of interested landcare groups and stakeholders to facilitate communication and training.
7. Study of selected landcare scaling up sites to identify success stories and benefits for use in a landcare marketing program.
8. Development and implementation of a program to increase the effective institutionalisation of landcare at the barangay, municipal and provincial levels. This included the production of high-quality video materials profiling the success and potential of landcare to support presentations to Municipal and Provincial Development Councils.
9. Development of a program to facilitate mentoring exchanges between LFPI personnel and inspirational Australian landcarers to assist LFPI to learn from Australian landcare success and inspire innovation and change at the higher institutional levels of Philippines landcare.
10. Evaluate the institutional innovations on a regular basis to assess effectiveness and identify areas for improvement.

5.2 Australian component

5.2.1 Phase 1: 2004 to 2007

Objective: Evaluation of viability issues of peri-urban horticultural farmers and development of strategies for farmer action

Understanding of farmer viability

The project first identified a key study area within the peri-urban southeast Queensland eastern catchments region. The study area was identified by assessment against a number of key criteria including current status and importance of horticulture, economic and social vulnerability particularly in relation to rural-urban conflicts, potential environmental risks to environmentally-sensitive areas, local relevance and implications of planning strategies, and interest and involvement of stakeholders.

Within the key study area, the nature of the peri-urban horticultural industry was then characterised. This involved use of aerial photographs and/or GIS data to analyse land use changes over recent years, analysis of statistics and on-ground data to value economic and environmental services, and personal interviews and focus groups with farmers and other major relevant stakeholders to identify livelihood strategies, viability issues and perspectives on NRM issues. This characterisation also assisted in analysing the appropriateness of existing farmer group structures in responding to farmer needs and achieving attitude and practice change at the farm and landscape levels.

As for the Philippines component, the project used a livelihoods approach as the framework to understand, explain and evaluate the viability issues of peri-urban horticultural farmers.

Effective community-level engagement

The project identified and implemented an appropriate process for bringing farmers into an effective engagement with key regional planning bodies including SEQ Catchments, the regional community-based NRM planning and funding body, and the Sunshine Coast Regional Council. This was designed to help farmers become more involved in the decision-making process and to access available funding, and to help planning bodies better understand the issues for peri-urban rural farmers and landholders.

Identification of effective farmer strategies to enhance viability

Using the data from the characterisation, farmer-led strategies for improving viability were then investigated in conjunction with farmers and stakeholders.

5.2.2 Phase 2: 2007 to 2009

The objective of this phase was to use the strategies identified in the previous phase to develop, implement and evaluate a facilitated landcare-based extension process for enhancing and sustaining the viability of peri-urban landholders. The first stage was to consolidate and re-evaluate the research data from the previous phase to identify the most important issues. This data included:

- Preliminary analysis of biophysical GIS data for the Sunshine Coast Regional Council area;
- Preliminary analysis of socio-economic census data for the Sunshine Coast Regional Council area;
- Preliminary analysis of farm suitability for farm forestry and cattle production for the Hunchy study site using integrated GIS data;
- Detailed analysis of local and state government planning constraints on rural landholders in the Sunshine Coast Regional Council area;
- Detailed analysis of farm planning issues for farm forestry and agriculture for the Hunchy study site using integrated GIS data modelled through Community Viz scenario planning software;
- Social values survey for peri-urban landholders in southeast Queensland (comprising broad based telephone survey, detailed survey at selected sites, and detailed survey and social networks analysis at Hunchy study site).

The analysis consisted of a detailed discussion forum with landholder representatives from the Hunchy study site together with major community stakeholders such as the Hunchy Community Association, Sunshine Coast Regional Council, Blackall Range Institute and University of the Sunshine Coast. From this, a strategy was designed to best service the needs of the landholders as well as the interests of the various stakeholders.

6 Achievements against activities and outputs/milestones

6.1 Philippines component

6.1.1 Phase 1: 2004 to 2007

Objective 1: Strengthen the institutional support structures for landcare by assessing available models and designing a preferred option (such as an independent landcare agency) that effectively sustains existing municipal landcare associations and local landcare groups, and works with government and non-government agencies to scale up landcare to new sites.

Output no	Output	Achievements
1.1	Viable models and support structures relevant to landcare assessed and a robust institutional support agency designed with stakeholders	<ul style="list-style-type: none"> Establishment of a working partnership with the Landcare Foundation of the Philippines Inc (LFPI) and their formal involvement in the project's institutional research. Completion of research on institutional models which included case studies of four organisations involved in natural resource management in the Philippines uplands, as well as an analysis of existing landcare support institutions such as municipal landcare associations and farmer training groups. As a result, six essential characteristics of a landcare agency and nine essential institutional elements for landcare growth were identified and used to design a hypothetical lead support agency for landcare. Capture of the results of the research on institutional models in a project working paper entitled "<i>Learning from institutions and designing a landcare support agency</i>".
1.2	Preferred institutional support agency for landcare implemented and existing responsibilities transferred	<ul style="list-style-type: none"> Use of the institutional research combined with consultation with landcare institutions and recommendations from the external review of the project in November 2006, to guide the development of a longer-term facilitated evolution of LFPI as the nominated lead support agency for landcare. This became the key focus of a two-year extension of the project commencing in July 2007. A series of workshops and consultative meetings with management and staff of LFPI and project partner agencies in March-April 2007 to better inform the development of the two-year project extension – particularly the partnership with LFPI, its institutional development issues, and the processes for an effective transfer of project responsibilities to LFPI.
1.3	Capacity of existing municipal landcare associations and local landcare groups strengthened	<ul style="list-style-type: none"> Development and implementation of three regional strategies to deliver capacity building to municipal landcare associations, local landcare groups and LGUs in Misamis Oriental, Bukidnon and South Cotabato. Conduct of more than 100 separate institutional capacity building activities across the three sites over the three-year period. Development of two notable new private sector linkages of importance to livelihood development – the formal affiliation of the Lantapan Land Care Association with the Agroforestry Tree Seed Association of Lantapan (ATSAL); and the vegetable supply chain linkage between Ned Land Care Association and the General Santos Century Tuna Canning Corporation. Development of two new Farmer Training Teams (FTTs) in the Misamis Oriental scaling-up sites of Alubijid and Kinoguitan. Development of a much greater level of ownership of landcare by barangay, municipal and provincial governments as evidenced by increased budget allocations to landcare, increased deployment of landcare staff, increased adoption of landcare ordinances, provision

Output no	Output	Achievements
		of positive incentives for participation in landcare, and a wider integration of landcare into provincial development programs.
1.4	Effective landcare programs in new sites in Bohol and Agusan Del Sur initiated	<ul style="list-style-type: none"> In Bohol, establishment of landcare programs in three pilot municipalities of San Isidro, Alicia and Pilar with good support from local stakeholders (for example, including specific allocation of operational funding for landcare by LGUs, deployment of LGU-funded landcare staff, drafting of a landcare ordinance, expansion of a Landcare Awards Program, and the development of major community level projects) and good ownership of the program by farmer groups (for example, involvement in group marketing, development of a cooperative community store, and farmer group co-funding of training workshops). In Agusan del Sur, establishment of landcare programs in five pilot municipalities of Bayugan, Bunawan, Sibagat, Sta Josefa and Trento with good support from local stakeholders (for example, specific allocation of operational funding for landcare, designation of personnel for specified landcare projects, provision of office space for the project team by the provincial government, and major support for a six-month training program for landcare farmer trainers and Barangay Extension Workers from the five sites). Conduct of more than 70 separate capacity building activities across the two sites over the three-year period.
1.5	Links and network between landcare members, facilitators and organisations strengthened	<ul style="list-style-type: none"> Establishment of the Landcare Coordinators Network (LCN) with the conduct of seven LCN workshops, and a range of collaborative cross-site initiatives including a Landcare Peoples' Organisation Forum in South Cotabato, a major Landcare Forum in Agusan del Sur, a training of Misamis Oriental farmer technicians conducted by Balay Mindanaw Foundation, coordination of landcare orientation cross visits between project sites, hosting of an international delegation from Indonesia, development of the initial content for a Landcare Facilitator's guidebook, and initiation of planning for a major Landcare Congress in 2007-2008.

Objective 2: Sustain and scale up adoption of conservation farming systems and diversified livelihoods through the implementation of landcare processes at the farm level in existing and new sites

Output no	Output	Achievements
2.1	Capacity of farmer members to appreciate their farming options and implement effective landcare practices on their farms strengthened	<ul style="list-style-type: none"> Conduct of 162 major training, capacity building and networking activities across the five sites during the three year period, reaching more than 5,000 farming households. Facilitation of eight major cross-visits to landcare sites in Claveria, Lantapan and Bohol.
2.2	Productivity and diversification of subsistence and cash options of members farms increased	<ul style="list-style-type: none"> Delivery of a broad program of training and capacity building in nursery management; the production of forage; production of high value vegetables (mainly tomato, bell pepper, potato, eggplant, crucifers, carrots, onions, ginger, mushrooms); production of fruit trees (durian, lanzone, rambutan, mangosteen, banana); production of timber trees (mainly mahogany, mozisi, falcata); production of livestock (mainly cattle, goats, pigs, poultry); production of industrial crops (mainly coffee, coconut, abaca, bamboo, medicinal plants); aquaculture; tree seed collection; integrated crop production; and production of worms for vermicast. Increasing emphasis on post-harvest and marketing issues, in recognition of the importance of the demand and supply chains in determining the impact of diversification on livelihood improvement. Facilitation of linkages between landcare groups and associations and major technical and marketing service providers such as the

Output no	Output	Achievements
		Vegetable Industry Council of Southern Mindanao (VICSMIN) and the Vegetable Industry Development Board (VIDB).
2.3	Practices designed to improve resource sustainability and lessen environmental impact implemented on farm	<ul style="list-style-type: none"> • Delivery of a broad program of training and capacity building in soil and water conservation systems including NVS and enhanced NVS; farm planning; agroforestry; permaculture; soil testing and analysis; integrated pest and disease management; biodynamic production systems; Natural Farming Technology Systems (NFTS); organic fertiliser production; and vermi and rapid composting systems.

Objective 3: Analyse and evaluate the impacts of the institutional support structures and on-farm implementation of the landcare approach in order to confirm its effectiveness and establish the essential requirements for sustaining and scaling up landcare

Output no	Output	Achievements
3.1	The essential requirements for sustaining and scaling up the landcare program evaluated	<ul style="list-style-type: none"> • Completion of a major characterisation of sites, including country, provincial and municipal data on a range of biophysical, socio-economic and socio-political parameters. The characterisation was used to help understand the environment influencing landcare at each site and draw individual site and cross-site conclusions about enabling factors for landcare development. The data served as baseline information for longitudinal studies. • Development of a process documentation system through training provided by Dr Linda Burton of RIMCU. The system was subsequently implemented at all sites with Landcare Coordinators capturing issues of importance and reflections on progress through quarterly reporting and the nine-monthly review workshops. • Conduct of a major two-day participatory evaluation of the landcare program by project staff and partner agency personnel during the Second Review Workshop in Bohol in August 2006. Participants provided reflections on what had been learnt as well as suggestions on what form an expansion of the landcare program should take. The findings formed part of a larger reflective analysis of the landcare program subsequently published as a project working paper "<i>Landcare in the Southern Philippines – Past, Present and Future</i>".
3.2	The appropriateness, effectiveness and sustainability of the institutional structures necessary to support and scale up landcare evaluated	<ul style="list-style-type: none"> • Completion of the research on institutional support structures for landcare including the Landcare Foundation, the Landcare Coordinators Network and selected case studied organisations. The research highlighted the importance of factors such as commitment, competence, leadership, incentives and effective partnerships as key factors in institutional success. • Development of research designs for at least one major area of research at each site conducted either by project staff or supported university students. Some of these were subsequently published as working papers or theses. Topics covered included a comparative economic study of farmer adopters shifting from corn/upland rice to vegetables, an assessment of landcare groups, landcare engagement processes with LGUs, a case study of a Farmer Trainers Team, an analysis of bonding social capital in landcare, and the social costs and benefits of farmer participation in landcare. A research student from Xavier University, supported by the project, completed a socio-anthropological study of landcare's sustainability amongst rural youth at two of the project sites.
3.3	The impacts of the landcare program on community livelihoods and sustainability of the natural resource evaluated	<ul style="list-style-type: none"> • Extensive collection and profiling of adoption data including creative methods for collection such as diagnostic cards and incentives to facilitate more rapid collection. An encouraging feature was the involvement of personnel from LGUs, landcare associations and NGO collaborators in the collection of adoption data. Adoption of landcare technologies was again shown to be significant with over

Output no	Output	Achievements
		<p>1300 farmer adopters profiled in the established Misamis Oriental site.</p> <ul style="list-style-type: none"> Evidence of adoption of diversified livelihoods in more than 80% of the 5,000 farmers involved in training and networking events. Evidence of the impact of this was revealed from a case study of a landcare farmer in South Cotabato, which showed that net profit from a diversified vegetable farming system using similar labour and marketing inputs to be 70% higher than the traditional corn based farming system. A major study of the economic impacts of landcare at the Bohol site with predominantly rice and coconut farmers demonstrated additional income through both the rehabilitation of abandoned degraded cropping land for fruit and vegetables as well as through facilitating the better annual deployment of labour used on their farms. A survey of more than 100 farmers showed that the nett cash income of landcare adopters was two to three times higher than that of non-adopters. The study also completed work on analysing the aggregated impact of changing land use under landcare at the watershed level using crop, household and watershed modelling. In the new scaling-up sites of Bohol and Agusan del Sur, where the initial focus was primarily on adoption of conservation farming technologies, a total of 1000 adopters were recorded – 468 in Bohol and 532 in Agusan del Sur.

6.1.2 Phase 2: 2007 to 2009

Objective 1: To enable the Landcare Foundation of the Philippines Inc (LFPI) to evolve and take on the defined roles and responsibilities for the broader development of Landcare in the Philippines.

no.	activity	outputs/ milestones	completion date	comments
1.1	Analyse existing institutional issues for the development of Philippines Landcare as a precursor to implementing an institutional development plan for LFPI	Written report of analysis completed (December 2007)	November 2007	Two levels of analysis were conducted: 1. A series of structured interviews of 48 individuals from LFPI, the five project partners, and 18 major Landcare stakeholders (LGUs, NGAs, NGOs, Landcare Associations, farmer groups), conducted in July/August 2007. 2. A series of four investigative workshops for LFPI Board and staff, facilitated by contracted institutional development consultants, conducted between July and December 2007. Outputs from the workshops were progressively documented and consolidated for input into a draft institutional development plan for LFPI.

no.	activity	outputs/ milestones	completion date	comments
1.2	Implement an institutional development plan for LFPI	Written institutional development plan agreed by LFPI (December 2007)	April 2008	Using the outputs from Activity 1.1, a Strategic Planning workshop, facilitated by the contracted institutional development consultants, was conducted in December. The workshop involved not only the Board and the five existing LFPI staff, but also the seven incoming staff then employed by the other partner agencies. A draft institutional development plan was then prepared and given in-principle endorsement by the LFPI Board in April 2008. The plan was subsequently finalised and implemented at a further Strategic Planning workshop of Board and staff in May 2008.
		Transfer of project staff and associated responsibilities to LFPI completed (January 2008)	January 2008	In preparation for the transfer of the seven field staff from ICRAF and SEARCA to LFPI in January 2008, a series of three workshops was conducted in July, October and December to discuss and gain agreement on roles and responsibilities, conditions of employment, site logistics and administrative procedures for the transfer. To help orientate and integrate the staff as a working unit, these workshops were rotated around the three regions, with field trips to view project activities at each site. The seven field staff commenced new contracts under LFPI from January 1, 2008.

no.	activity	outputs/ milestones	completion date	comments
		<p>LFPI established as a robust and sustainable organisation</p>	<p>June 2009</p>	<p>A 5-year Strategic Plan developed from the draft ID plan was completed through a special Strategic Planning workshop of BoT and staff in May 2008, amended during the period to December 2008 and approved by BoT in January 2009.</p> <p>The published set of Landcare principles and processes to underpin Landcare scaling-up, indicated as a project output of the project during the two year extension, was completed and published in March 2009 as the book <i>'Landcare in the Philippines: A practical guide to getting it started and keeping it going'</i>. The book was officially launched in April by the Australian Ambassador at a function in Manila attended by more than 50 guests from various sectors relevant to the landcare movement.</p> <p>Transfer of project leadership and responsibilities to the LFPI Executive Director was completed in May 2008 and reviewed in December 2008 with staff input into a new action plan.</p> <p>LFPI conducted the First National Landcare Congress in May 2009.</p> <p>Some internal restructuring of LFPI was undertaken in the July to September 2009 period following identification of a range of institutional development problems during an external review of the project in May 2009. These included communication problems with staff; communication problems between the ED and BoT; lack of resource mobilisation for the future; lack of adequate traction with regard to institutional development changes; and a lack of transparency of some internal management processes.</p>
<p>1.3</p>	<p>Monitor and evaluate the performance of LFPI in developing Landcare institutionally in</p>	<p>Data from baseline institutional survey of LFPI and major stakeholders compiled (September 2007)</p>	<p>November 2007</p>	<p>See Activity 1.1 above. Outputs from the survey of 48 individual Landcare stakeholders were collated into an institutional baseline report.</p>

no.	activity	outputs/ milestones	completion date	comments
	the Philippines	Written performance framework agreed by LFPI (March 2008)	January 2009	<p>A rudimentary performance framework formed part of the draft institutional development plan for LFPI, which was agreed to in-principle by the Board in April 2008. This was further developed during the Strategic Planning process during June to December 2008 leading to their incorporation in the Strategic Plan approved in January 2009.</p> <p>An orientation and training program for the Research Manager appointed in March 2008 was developed and implemented involving formal training interaction with UQ Research specialists in June 2008 (in the Philippines) and February 2009 (in Australia).</p> <p>Initial processes for BoT and staff performance assessment were developed and piloted on one staff member.</p> <p>Institutional development progress at the project team level continued to be evaluated through review workshops in May 2008 and December 2008.</p> <p>To assess institutional development objectively, a survey of all staff was conducted in November 2008. The survey analysed levels of satisfaction with project leaders, supervisors, technical specialists and administrative personnel, as well as the levels of satisfaction with institutional progress (e.g. performance of Board of Trustees, administrative and financial procedures, training processes etc). The survey was followed up by individual interviews and a major staff workshop to address issues of concern.</p>
		Written report on achievement of LFPI's performance against indicators	June 2009	<p>Institutional development progress at the project team level was evaluated through the external review of the project in May 2009 and the findings documented.</p> <p>A further evaluation of the institutional health of LFPI and of the landcare movement in general was completed in September 2009 through a scoping study of landcare sites by the Project Leader and the ACIAR Philippines Horticulture Manager, John Oakeshott. The findings of this study, which was commissioned by ACIAR to direct further investment in landcare, were documented in a report to ACIAR in October 2009, and formed the basis for an extension of the project (Variation 7) and a complementary Small Research Activity (SRA) on improving the outcomes for smallholder farmers through greater collaboration with the ACIAR horticulture projects.</p>

no.	activity	outputs/ milestones	completion date	comments
		Institutional survey of LFPI and major stakeholders completed, compared with initial survey and impact report prepared	June 2009	The scoping study in September 2009 (referred to above) formed the basis for the comparative institutional survey.

Objective 2: To implement community-level activities that lead to economic growth.

no.	activity	outputs/ milestones	completion date	comments
2.1	Establish a regional/site network of Landcare Coordinators and Facilitators and implement a program of site activities that lead to economic growth	Written network workplan consistent with project aims completed (September 2007)	October 2007	<p>In July 2007, three regional teams were established: Northern Mindanao; Southern Mindanao; and Visayas. During the three project team workshops referred to above, a project network plan was incrementally developed. The network plan was engineered around coordinating the seven field staff across their employing agencies (ICRAF and SEARCA) and their intended employing agency (LFPI).</p> <p>Site priorities were developed in line with the objective of demonstrating the role of Landcare in delivering livelihood benefits to farmers, primarily economic growth and human security. These were initially canvassed and scoped during the July workshop, taken back to the regions for discussion with partners and stakeholders, reviewed and refined at the October workshop, and then implemented in the October to December period.</p>
		Written report on implementation of regional team activities and implications for economic growth and other benefits (June 2010; June 2011)	June 2010; June 2011	<p>As a result of review in December 2008, regional coordination meetings were held in the December 2008 to March 2009 period to better plan coordination of the four technical specialists at the site level.</p> <p>Deployment of an AYAD volunteer, Scott Graham, with ICRAF at the Bohol site allowed the building of special skills in training event evaluation and soil health improvement and the production of a soil health training book.</p> <p>A series of six working papers was produced to document the major landcare achievements within each of the above main programs. A further update on progress was provided in the report of the September 2009 scoping mission.</p>

no.	activity	outputs/ milestones	completion date	comments
2.2	Monitor and evaluate the economic and other impacts of the site activities	Written performance framework agreed by site teams and LFPI (December 2007)	May 2008	Once the site priorities for each region had been identified, a draft M&E framework for each work area was then developed. This was facilitated through a special M&E training and development workshop in Bohol in October. The frameworks were subsequently refined through input from the Research Director and other senior project staff, and were consolidated into an overall project performance framework in May 2008. Site teams reported progress against the framework at a special workshop in June 2008. The Research Manager appointed in March 2008 was deployed to assist and oversee the process, as well as help develop site monitoring tools and on farm adaptive research techniques.
		Institutional development/M&E specialist appointed and relocated to LFPI HQ (January 2008)	March 2008	By December 2007, agreement was reached with LFPI to focus the appointment on M&E and title the position "Research Manager". Appropriate terms of reference and a job description were completed and the appointment completed in March 2008.
		Written report on achievement of landcare activities against indicators (June 2010; June 2011)	June 2010; June 2011	The series of six special case studies and working papers referred to above were designed to document the impacts of the project on economic outcomes, other livelihood issues and collaborator institutional development. To help conduct the case studies, a Research Assistant was employed from February to April 2009 to work with the Research Manager and the UQ Research Advisers. The special study of the economic impacts of landcare in Bohol by Jono Newby (commenced during the earlier phase of the project in 2006) was completed and published as a University of Queensland PhD research thesis in July 2009.

6.1.3 Phase 3: 2009 to 2011

Objective 2: To implement and evaluate a number of institutional development processes to further secure the future of landcare as a primary extension and community development approach in the southern Philippines, and the future of LFPI as the lead agency for landcare in the Philippines

no.	activity	outputs/ milestones	completion date	comments
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no.	activity	outputs/ milestones	completion date	comments
1.1	Consolidation and refinement of LFPI's institutional development plan	Revised strategic plan completed and approved (June 2010)	March 2010	During the July to December 2009 no-cost extension of the project, a major review of the Strategic Plan was completed as part of the internal restructuring of LFPI. The restructuring involved changes to staffing, changes to the composition of the Board of Trustees (BoT), review of mission, objectives and operational procedures, and re-analysis of budgets and resource mobilisation strategies. The revamped Strategic Plan together with By-laws and other documents was then endorsed by the BoT at a special General Assembly of LFPI in October 2009 and finally approved by the incoming BoT at the General Assembly in March 2010.
		Capacity building program for BoT and staff documented (March 2010)	March 2010	The training needs of both BoT and staff were assessed by the Executive Director (ED) following the General Assembly in March. A capacity building program was subsequently developed for both groups, including BoT and staff development sessions run back-to-back with BoT meetings and quarterly staff meetings, and a more proactive on-site coaching in local governance issues. The full BoT and key LFPI staff were also facilitated to attend special NGO governance training provided by PACAP in Cagayan de Oro in March.
		Business planning of funding options completed (December 2010)	December 2010	Significant progress was made in pursuit of a major funding opportunity - service provider to the development aid agency ACDI/VOCA in their major new CoCoPAL project. As a result, LFPI was named as one of four national service providers and given responsibility for implementing the project in western Mindanao.
		LFPI profile upgraded (December 2010)	December 2010	A new website for LFPI using Content Management Systems (CMS) software was established in April and commissioned in August. The CMS approach allowed LFPI to maintain a more dynamic and effective website at significantly lower cost than other alternatives. The final draft of a revamped LFPI brochure was completed in April and published in July.

no.	activity	outputs/ milestones	completion date	comments
1.2	Conduct of special stakeholder meetings	Stakeholder meetings completed and action plans documented	April 2010	Special landcare stakeholder meetings to clarify needs and expectations of farmers and partner agencies were held during the February to April period in all six core landcare sites (Claveria, Lantapan, Ned, Pilar, San Isidro, Koronadal City). Action plans were developed and implemented. The meetings were instrumental in analysing work roles and work demands for senior LFPI staff with cross-site responsibilities, resulting in the hiring of additional staff resources within LFPI to maintain existing commitments to site programs
		Second round of meetings conducted and action plans revised (April 2011)	June 2011	Landcare group needs were re-assessed through consultation with stakeholders during the course of activities conducted during the January to June 2011 period. Action plans were reviewed during a team workshop in Bohol in July 2011.
1.3	Formation of Landcare Coordinators Network (LCN)	Initial meeting conducted and action plan documented	March 2010	During staff planning meetings in March, the LCN was initiated and a preliminary action plan developed. The action plan included improved email communication, improved updating and reporting, and a program of mentoring for junior Landcare Coordinator staff.
		Action plan revisited and evaluation of performance completed (March 2011)	July 2011	The operation of the LCN was reviewed during regular LFPI staff and BoT meetings to ensure appropriate inputs into project activities. Its performance was further reviewed during a team workshop in Bohol in July 2011.
1.4	Organisation of farmer and LGU cross-visits	Program of cross-visits in place	May 2010	During the landcare stakeholder meetings and staff planning meetings, a program of cross-visits was arranged to be implemented in the period March to August. The planned cross-visits included a two-way cross-visit between the Ned and Lantapan sweet pepper clusters; a cross-visit of Bohol personnel to Claveria to study the Claveria banana cluster and the ICRAF banana propagation program; a cross-visit of San Isidro personnel to Pilar to study the PILAR DAM Program; and cross-visits of Kapatagan and Tupi personnel to nearby Southern Mindanao landcare sites. Planning was also implemented for a special workshop for landcare market clusters, Landcare associations and collaborating POs to share experiences on enterprise development.

no.	activity	outputs/ milestones	completion date	comments
		First round of cross visits completed and evaluated (April 2011)	May 2011	<p>Four major cross-visits were completed, albeit with some from the 2010 proposed program delayed until 2011. The four visits were:</p> <ul style="list-style-type: none"> • Bohol San Isidro farmers and LGU to Northern Mindanao (May 2010); • Southern Mindanao farmers and LGUs to Northern Mindanao (August 2010); • Southern Mindanao farmers and LGUs to Leyte (April 2011); • Bohol Pilar farmers and LGU to Northern Mindanao (May 2011). <p>Outcomes of the cross-visits were documented in trip reports and reviewed during a team workshop in Bohol in July 2011.</p>
1.5	Implementation of a landcare leadership development program	Study of concept completed	June 2010	Initial discussions on the topic by the LCN were completed during staff planning meetings. However, because of other project demands, further development was focused on developing the leadership skills of the LCN, including nomination of a senior Landcare Coordinator to the John Dillon Fellowship Program in August 2010.
		Pilot study program developed and documented (December 2010)	December 2010	In lieu of a formal program, emphasis was placed on the John Dillon Fellowship Program, where Lyndon Arbes (Landcare Coordinator for Northern Mindanao) was successful in receiving a Fellowship for training in Australia in early 2011.
		Initial pilot study implemented and preliminary evaluation completed (June 2011)	June 2011	Lyndon Arbes undertook a John Dillon Fellowship in February/March 2011 and provided training and mentoring to LFPI staff on his return.
1.6	Development of Philippines Landcare Network (PLN)	Network proposal documented in LCN action plan (March 2010)	March 2010	During staff planning meetings, the PLN was further conceptualised including what services might be provided and a listing of the people and organisations likely to be interested. Planning was commenced for the Network to become operational in late 2010.
		Network established, communication system in place (July 2010)		The PLN became operational in November 2010 and held its first meeting in Cagayan de Oro in January 2011. Agreement was reached on the purpose of the PLN and a preliminary action plan developed. One of the first functions of the PLN was to provide input into a project activity to produce a series of landcare videos.
1.7	Study and documentation of selected landcare scaling up sites	Selected sites identified and rationale documented	Not completed	Due to other demands, principally from the new ACDI/VOCA CoCoPAL Project, activity for this output was temporarily deferred.

no.	activity	outputs/ milestones	completion date	comments
		Interviews completed (September 2010)	Not completed	Due to other demands, principally from the ACDI/VOCA CoCoPAL Project, activity for this output was permanently abandoned in January 2011.
		Landcare marketing program completed (January 2011)	July 2011	Despite the unavailability of inputs from the study of scaling up sites, a marketing program was completed in July 2011. A new website for LFPI using Content Management Systems (CMS) software was established in April and commissioned in August. The CMS approach allowed LFPI to maintain a more dynamic and effective website at significantly lower cost than other alternatives. The final draft of a revamped LFPI brochure was completed in April and published in July.
1.8	Development and implementation of a program to increase the effective institutionalisation of landcare	Benchmarking study completed	April 2010	At the project planning meeting in February, a concept of effective institutionalisation of landcare was developed. As a result, immediate priority was assigned to helping facilitate the Ned Landcare Association to become a member of the Barangay Development Council and potentially the Municipal Development Council, and an action plan was developed. A second priority established was a program to help incorporate landcare in the Medium-Term Plan of the South Cotabato Provincial Development Council, to be initiated following the major elections in May.
		Workshop and/or study of provincial experience completed (June 2010)	January 2011	In addition to the above priorities, LFPI staff and BoT developed a broad program of landcare institutionalisation including goals at the municipal LGU level in Bohol, provincial LGU level in Misamis Oriental and Bukidnon, advisory council level in Mindanao and national NGA level. As a result, LFPI became a member of six councils across the region, and the only NGO member of two of these. It also received pending accreditation with the Agricultural Training Institute (ATI) of the Department of Agriculture.
		South Cotabato presentation completed (August 2010)	January 2011	After consultation with Rey Legaste of the South Cotabato Provincial LGU, the strategy was changed to a more targeted membership of sub-councils within the PDC, resulting in LFPI becoming a member of the Provincial disaster Risk Reduction and Management Council in early 2011.

no.	activity	outputs/ milestones	completion date	comments
1.9	Development of a concept paper and scoping of funding options on facilitating exchange between Philippines and Australia	Concept paper completed	Deferred to early 2011	Due to other demands, principally from the new ACDI/VOCA CoCoPAL Project, activity for this output was temporarily deferred until early 2011.
		Funding options explored and decision reached (December 2010)	July 2011	After input from the LFPI team, the Australian Project Leader submitted a proposal for a Philippines-Australia Landcare Mentoring Program to the Crawford Fund in early 2011. Funding was acquired and the first stage of the program (mentoring of five LFPI personnel in Australia) will be delivered in early 2012.
1.10	Evaluation of institutional innovations	Evaluation framework agreed and documented	March 2010	During staff planning meetings and the development of the above activities, performance criteria were discussed and noted. However, documentation and agreement on implementation was deferred to August to allow uniformity of evaluation processes across the landcare and CoCoPAL projects.
		Mid-term review completed (September 2010)	Deferred to early 2011	Due to the demands of the ACDI/VOCA CoCoPAL Project, the review activity was temporarily deferred until a team workshop in July 2011.
		Final report and evaluation completed (June 2011)	December 2011	Performance against project objectives was assessed by the Australian Project Leader during a team workshop in Bohol in July 2011. These were subsequently incorporated into the project's final report in December 2011.

6.2 Australian component

6.2.1 Phase 1: 2004 to 2007

Objective: To evaluate the viability issues of peri-urban horticultural farmers in selected areas of southeast Queensland and develop improved strategies for farmer action

Output no	Output	Achievements
1.1	Improved understanding and knowledge of the broader issues affecting peri-urban horticultural farmer viability	<ul style="list-style-type: none"> In the scoping of the project and engagement with stakeholders, 43 meetings were held with 19 identified stakeholders to present the project, document issues and interests, and develop appropriate linkages. In the characterisation of the Regional Landscape and Rural Production Area of the Sunshine Coast, a range of key biophysical, socio-economic and socio-political data requirements were identified, and a preliminary interrogation of the data to produce indicative thematic maps completed. In preparation for the research on rural landholders to determine needs and aspirations, criteria for selection of study areas were established, three study areas identified (Hunchy Valley in the Maroochy Shire; Cooroy/Lake MacDonal in the Noosa Shire; and

Output no	Output	Achievements
		<p>Cooran/Six Mile Creek in the Noosa Shire), and engagement with landholders and preliminary scoping with key influentials commenced.</p> <ul style="list-style-type: none"> Two workshops were conducted with landholders at one of the study sites to explore landholder issues in relation to legislative restrictions, resource mapping and farm forestry (in conjunction with visiting researchers from the University of Wyoming).
1.2	Effective engagement between key peri-urban horticultural farmer groups and regional planning bodies, particularly Natural Resource Management SEQ Inc	<ul style="list-style-type: none"> In the scoping of the project and engagement with stakeholders, 43 meetings were held with 19 identified stakeholders to present the project, document issues and interests, and develop appropriate linkages. Regular consultation was then maintained with the key stakeholders in the project including the Office of Urban Management, Blackall Range Institute, Maroochy Shire Council, Noosa Shire Council and the University of the Sunshine Coast. This was used as part of the action research process to revise project activities and directions.
	Identification of effective farmer-led or farmer-managed processes to enhance viability	<ul style="list-style-type: none"> In the Hunchy study site, the biophysical and socio-economic datasets that had been gathered previously were further interrogated by overlaying data pertaining to State Government vegetation laws, local government special management areas (SMAs), and local government compliance codes for specific development activities. This was to assess the overall impact of biophysical and socio-political parameters on landholder business and development options. To support the research and gauge the potential for specific economic opportunities, a series of workshops was conducted to explore the development opportunities for farm forestry and cattle operations. A collaborative partnership was established with the Centre for Rural and Regional Innovation of the University of Queensland to undertake the major survey of landholders within the study sites. This enabled the surveys to be part of a broader research project analysing value frameworks of people living in peri-urban landscapes of south east Queensland. This enabled not only a more detailed survey of the study areas, but also the opportunity for valid comparison of the study areas with other communities in south east Queensland. Surveys were commenced in the Hunchy study site and continued into the two-year extension of the project.

6.2.2 Phase 2: 2007 to 2009

Objective: To evaluate a facilitated Landcare-based extension process for enhancing and sustaining economic benefits for peri-urban landholders in the Sunshine Coast region of southeast Queensland

no.	activity	outputs/ milestones	completion date	comments

no.	activity	outputs/ milestones	completion date	comments
1.1	Consolidate and analyse research data from the existing project to identify the most important constraints to maintaining and growing viable rural businesses, and from this, design a facilitated landcare-based extension approach to be employed with landholders to address these constraints	Written report of analysis of research data completed (October 2007)	August 2008	An essential component of the research data was a social values survey of peri-urban landholders, conducted under contract by Uniquet for the project and two collaborating agencies with similar information needs (SEQ Catchments and Department of Infrastructure and Planning). The survey was scheduled for completion by September 2007 to service the research analysis milestone of October 2007. However, because of complications with the Uniquet contractor, the results of the survey were only made available in May 2008. As a result, the milestone was re-scheduled to accommodate this delay. The results of the research were then consolidated with other research data in readiness for subsequent steps. It was also resolved that because of the delay, any further work would proceed at one study site only.
		Written outline of design of landcare approach completed (December 2007)	October 2008	As a result of an analysis of the findings of the social values survey in conjunction with Hunchy landholders, the project elected to pursue an alternative approach to that proposed in the project document – aligning future activities with the evolving Sunshine Coast Regional Council Rural Futures Strategy. This was designed to interface landholders more directly in the processes of development of the Strategy which they believed would have greater longer-term benefits to the development of rural businesses. However, this process was again delayed by the slower than expected evolution of the Strategy within Council. As a result, approval was obtained from ACIAR to continue the project to December 2009 under a no-cost extension.
	Implement the Landcare approach in selected existing pilot sites and evaluate its impact	Needs/aspirations study of Hunchy landholders completed (April 2008)	November 2008	During the period from late 2008 to mid 2009, the project provided facilitation of input from the Hunchy Community Association into the evolving Sunshine Coast Regional Council Rural Futures Strategy. This involved a series of three meetings with SCRC staff to provide input into the Strategy, including specialised input into a position paper on the sustainable future of the Sunshine coast canelands. The interaction further cemented the view amongst the project stakeholders that the project investment in clarifying and informing some of the macro-issues of the environment for peri-urban business development was more appropriate than investment in farm level or regional level issues.

no.	activity	outputs/ milestones	completion date	comments
		Written report on activities and initial outcomes and decision made on testing in Noosa study site (December 2008)	Not completed	As mentioned above, it was resolved that because of the delays in completion of the social values survey report and the release of the Rural Futures Strategy, further work would proceed at one study site only – Hunchy.
		Written report on achievement of Landcare approach on business growth (June 2009)	December 2009	<p>The interaction between representatives of the Hunchy Community Association and the Sunshine Coast Regional Council to provide input into the Rural Futures Strategy continued until the end of the project in December 2009.</p> <p>Project personnel also provided input into a proposed new project developed by the University of the Sunshine Coast for an ARC grant on researching the effectiveness of extension and engagement processes in peri-urban regions of southeast Queensland.</p>

7 Key results and discussion

7.1 Philippines component

7.1.1 Phase 1: 2004 to 2007

Strengthening institutional support structures for landcare

Output 1.1: Design of a landcare institutional support agency

The research involved three major activities:

1. Case studies of relevant institutional models for landcare in order to identify the main required features of a likely successful institutional support agency;
2. Establishment of a working partnership with the Landcare Foundation of the Philippines Inc. (LFPI), as the most advanced existing support agency for landcare;
3. Establishment of a Landcare Coordinators Network (LCN) to better coordinate input into the research and to identify working issues of potential relevance to the design of the institutional support agency.

1. Case studies of relevant institutional models

This research was undertaken by Ms Ma Noelyn Dano (Philippines Project Manager) under the supervision of the project's Research Adviser, Dr. Rob Cramb. Key concepts from related literature were first reviewed to better understand the institutional mechanisms that help shape interactions among key development players. Of special interest was the discussion on the different modes of landcare scaling-up. The 'coalition of actors' mode, necessitating a 'convenor' or a 'sponsoring or initiating agency', was revealed to be most reflective of the current situation.

Through other development programs and agencies, a search was then made for existing government or civil society NRM institutional support structures for case study. The two most appropriate structures identified as relevant to NRM issues in the uplands were the Mag-uugmad Foundation Inc (MFI) and the Philippines Watershed Management Coalition (PWMC). In addition to these, LFPI and the LCN were earmarked for further study. The case study process involved a combination of focus group discussions, participant interviews and review of published documents.

The research was not designed to be an evaluation of the respondent institutions, nor of their performance or impacts. Instead, the aim was to document perspectives from respective staff, and draw out lessons learned from their experiences regarding the enabling factors for the more effective and sustainable operation of a 'sponsoring agency'. As a result, the following essential characteristics of a 'sponsoring agency' were identified:

- A learning organisation that advocates adaptive management;
- Employs participatory and flexible approaches in its structure, procedures, and systems of operation;
- Continuously refines its focus, keeping it relevant amidst changing contexts;
- Concentrates on process and capacity-building more than on project quantifiable 'targets';
- Adequately resourced and professionally managed, employing a core staff of experienced facilitators and with strong involvement of 'landcare leaders' and the scientific community;

- Resource allocation for participatory monitoring and evaluation (M&E).

To enrich the analysis, the project's experiences with the institutional arrangements needed for landcare to grow were further analysed through the LCN and workshops of staff and stakeholders. As a result, the following essential institutional elements for landcare growth were identified:

- Community groups, including farmer trainers;
- Active support from local government, especially on institutionalisation to address the issue of sustainability;
- National Government Agencies (NGAs) whose well-funded programs can complement landcare;
- Like-minded Non Government Organisations (NGOs) and other service providers such as research institutions and academe, forming part of the network of landcare advocates;
- A pool of competent site coordinators (preferably with a mix of technical background and management skills) and well-trained facilitators, providing technical assistance and facilitating information flow and exchange;
- A comprehensive training program for coordinators and facilitators (both project-based and external), especially on landcare facilitation skills and on 'appropriate technologies';
- A senior multi-disciplinary advisory group that can provide sound direction and oversight for an effective landcare program;
- A well established monitoring and evaluation (M&E system);
- Some coordinating mechanisms to organise specific relationships amongst various key players of landcare for a more integrated effort.

From the research, a hypothetical institutional lead support agency for landcare was developed as a focus point for more in-depth discussions with landcare stakeholders. The results were captured in a project working paper in December 2006 (*Learning from institutions and designing a landcare support agency*, Working Paper No 9).

2. Establishment of a working partnership with LFPI

Since its establishment in 2003, largely to administer a Small Grants Program for landcare using the AECL-funded Landcare Trust Fund, LFPI had continued to evolve with the establishment of a Board of Trustees, the appointment of an Executive Officer, and the establishment of project activities outside of the Trust Fund in a number of Mindanao sites. Although its focus at that time remained in the northern and central Mindanao provinces only, it was still the most advanced institutional structure for landcare at the time, and worthy of further study. To this end, the Executive Officer attended the initial project planning workshop in Cagayan de Oro in February 2005, and the Project Management Committee held a special meeting with the Board of Trustees (BoT) of the Foundation during the workshop. The meeting resolved to develop a Memorandum of Understanding (MOU) as a precursor to a more formal partnership, and to continue collaborating at the operational level. In the interim, the Executive Officer became an 'associate' within the project, providing information on project activities and attending the 1st Project Review Workshop in Bohol in November 2005. This led to the project making a formal approach to the BoT seeking a more formal involvement of the Foundation in the project's institutional research. The proposal sought agreement for exploratory data gathering through semi-structured interviews, focus group discussions, observations, and document review between the project's research staff (Dr Cramb and Ms Dano) and the BoT and staff of the Foundation. The proposal was endorsed by the BoT in February

2006, and data gathering conducted between March and June of the same year. The results were captured in the project Working Paper mentioned above.

3. Establishment of the LCN

The network consisted of the five site Landcare Coordinators within the project and the Philippines Project Manager. It was established by the project as a special innovation to help facilitate cross-agency and cross-site collaboration in the development and support of landcare across Mindanao and the Visayas. As a new institutional support structure for landcare, it was worthy of further study. As a result, processes were developed to monitor its performance and evaluate its impact in effectively sustaining and growing landcare throughout the region.

Output 1.2: Development of preferred institutional support agency for landcare

The intention was to use the findings from the above research to either inform the development of an appropriate existing landcare institution – for example, LFPI – or as a basis for the formation of a new landcare institution. However, as the project proceeded, it became obvious that because of the need for complex institutional integration, and an emerging broader coalition of landcare stakeholders, agreement on the outcome would not be possible within the current timeframe of the project.

The external review of the project in November 2006, after consulting with various landcare institutions and studying institutional options, suggested that the information be used to guide the longer-term facilitated evolution of LFPI as the nominated lead support agency. This then became a key focus of the two-year extension of the project from July 2007 to June 2009.

To better inform the development of this two-year project extension – particularly the partnership with LFPI, its institutional development issues, and the processes for an effective transfer of project responsibilities to LFPI – the Project Leader conducted a series of workshops and consultative meetings with management and staff of LFPI and project partner agencies in March-April 2007. This culminated in a major planning and review workshop in Davao City involving all relevant staff from the project and LFPI.

Output 1.3: Strengthening of municipal landcare associations and landcare groups at the three existing sites of Misamis Oriental, Bukidnon and South Cotabato

Misamis Oriental

Re-scoping of institutions and issues and development of a strategy

Although a landcare program had operated within the province for a number of years (under the International Centre for Research in Agroforestry – ICRAF and the previous ACIAR project), the opportunity was taken to re-scope the needs and issues. This involved analysis of data and consultation with key stakeholders such as ICRAF, Claveria Land Care Association (CLCA), Farmer Training Groups (FTGs) and LFPI. This proved to be not only a useful strategic planning process but also a useful learning and team building exercise for the project team. As a result, the following strategy was devised:

- Focus efforts on five core sites across the province – the well-established landcare sites of Claveria and Malitbog as key learning and innovation sites, and three strategically-located satellite learning sites in Alubijid, Sugbongcogon and Kinoguitan;
- Focus the main effort on building and enhancing the effective landcare capacity of Local Government Units (LGUs) and the provincial government to facilitate their greater involvement in landcare, while providing strategic assistance to the CLCA, FTGs and other interested agencies, particularly where they interface with LGU and provincial government programs;

- Maintain a watching brief on potential landcare scaling-out sites in neighbouring provinces to the west of Misamis Oriental, such as Misamis Occidental where there was potential complementarity with an AusAID Project (PALS Project).

A wide range of services and activities were provided by the project including meetings, presentations, workshops, training events, cross-visits and write shops. Significant outcomes are summarised below.

Significant institutional strengthening outcomes at the LGU level in Claveria and Malitbog

Claveria

- Development of an ordinance to provide LGU priority incentives to landcare adopters in obtaining projects and services from the Municipal Agriculture Office (MAO);
- Designation of a specialist Landcare Coordinator within the MAO;
- Organisation and provision of landcare training and cross-visits by the LGU Landcare Coordinator to all 28 MAO technical personnel and to farmer leaders in all 24 barangays of the municipality;
- Increased annual budget allocation for landcare from P50,000 to P100,000 for each barangay;
- Provision of improved services to farmers, including an increase in the number of agricultural technical personnel from 8 to 20, a direction to all Agricultural Technicians (ATs) to promote landcare conservation practices, and the provision of a satellite service office in the more remote 'Tabuk' areas of the municipality.

Malitbog

- Funding and support from the LGU to the Malitbog Land Care Association (MLCA) to develop a joint Landcare Training Center including a training building and agroforestry demonstration farm;
- Funding and support from the LGU for cross-visits of farmers and LGU personnel to Claveria, Lantapan and Manolo Fortich.

Significant institutional strengthening outcomes at satellite learning sites

Kinoguitan

- Launch of a landcare orientation program with backing from the LGU, Department of Land Reform (DLR) and Balay Mindanaw Foundation Inc. (BMFI);
- Formation of a Farmers Training Team (FTT) involving identification of potential farmers to be trained as FTT members, conduct of a Training Needs Analysis (TNA), and development of a training program. Twelve farmers became members of the FTT and backing was provided by the LGU, BMFI and TESDA-Kinoguitan;
- Graduation of the FTT after a one-year training program, with a ceremony including a farm tour; a forum for farmers and technical service providers from Department of Training and Industry (DTI), Department of Environment and Natural Resources (DENR), Department of Agriculture (DA), Provincial Agriculture Office (PAO), and the Municipal LGU; a range of landcare awards including the Best Farmer Trainer; and farmer produce stalls;
- Formulation of a municipal-wide landcare plan including the formation and training of FTTs, promotion of conservation farming practices, development of learning sites in priority upland barangays, and enhancement of community tree nurseries;

- Provision of funding to the landcare program, including P30,000 from the LGU on initiation of the program and P18,800 from BMFI and TESDA-Kinoguitan on the formation of the FTT.

Alubijid

- Launch of a landcare orientation program with backing from the LGU, DLR and BMFI;
- Formation of a FTT involving identification of potential farmers to be trained as FTT members, conduct of a TNA, and development of a training program, with backing from the LGU and BMFI;
- Graduation of the FTT after a one-year training program, with a ceremony including a farm tour; a forum for farmers and technical service providers from DTI, DENR, DA, PAO, and the Municipal LGU; a range of landcare awards including the Best Farmer Trainer; and farmer produce stalls;
- Provision by the FTT of four specialist training events involving 112 farmers from the priority barangays of Benigwayan, Tugasnon, Sungay and Tula; and 14 landcare orientation events involving 357 participants. All training events were jointly funded by the municipal and barangay LGUs;
- Completion of a training cross-visit to Lantapan for the FTT involving 13 FTT members, four barangay captains, and three staff from the MAO. As a result, action plans were developed for implementation in the respective barangays, and targets set for the number of farmer adopters of soil and water conservation practices;
- Provision of funding to the landcare program, including P78,156 cash and in-kind support as well as incentives to FTT members in the form of priority access to seeds and seedlings and training opportunities; and support to the Suarez Farmers Association for the propagation of durian and other tree species in the organisation's communal tree nursery. In addition, the project, through working closely with the LGU was able to influence a budget increase for agriculture from P1.6m in 2006 to P2.4m in 2007;
- Development of barangay ordinances in Tula and Benigwayan encouraging farmers in upland areas to adopt landcare technologies and endorsing priority to barangay dispersal programs for landcare adopters;
- Development of Peoples Organisation (PO) policies that further mainstreamed the promotion of landcare technologies – for example the Tula Farmers Cooperative imposed an annual P100 cash or deducted share capital penalty for those members not adopting contour farming technologies; and the Benigwayan Farmers Multi-purpose Cooperative adopted landcare practices as one requirement of members' application to the cooperative's dispersal program.

Sugbongcogon

- There were no significant long-term outcomes from the Sugbongcogon site.

Significant strengthening outcomes at the provincial government level

- Formation of a Technical Working Group (TWG) for Landcare, involving the Provincial Agriculture and Natural Resources Office (PANRO), the Provincial Planning and Development Office (PPDO), DENR, DA-Region, DLR, LFPI and ICRAF (on behalf of the project), with PPDO as the interim secretariat. The TWG was backed by an Executive Order from the Governor with a mission to raise awareness of landcare and facilitate better formulation and implementation of landcare-related activities in the respective offices represented by TWG members;

- Conduct of a special TWG strategic planning workshop where each involved agency set targets for landcare, which constituted the plan for landcare institutionalisation at the provincial level. This was followed by the first regular meeting of the TWG where four subcommittees (Information Extension Communication – IEC, M&E, Resource Mobilisation and Capacity Enhancement) were formed;
- Presentation by the TWG to the Provincial Development Council where endorsement for the plans and an office for the TWG was provided;
- Completion of a survey of competencies of TWG members to determine training needs of key implementers at different levels within the TWG;
- Development and adoption by the TWG provincial offices of a survey tool to improve the level and quality of information from municipalities on agri-NRM issues. As a result, agri-NRM profiling of the province was undertaken as a key platform for scaling up landcare at the provincial level.

Significant outcomes at the municipal landcare association and FTG level

Claveria Land Care Association (CLCA)

- Completion of leadership and team building training for 20 officers of CLCA, including board members, FTG members and chapter presidents. This was instrumental in revitalising the Association; creating a committee structure with committees for capability-building, advocacy, resource access, membership, special projects; revitalising Farmer Research Committees (FRCs); and obtaining commitment from the Association to help in the collection and verification of adoption data at the barangay level;
- Planning, development and construction of the LASANG Center, a central office and demonstration complex to showcase planting material of various tree species. The project was made possible through a P20,000 grant from the LFPI Landcare Trust Fund;
- Continuing development of the FTG to provide farmer-to-farmer training and landcare orientation services for new landcare groups as a major income generating activity for CLCA. For example, from July 2006 to June 2007, the FTG hosted nine visits involving 163 personnel from a wide range of organisations and programs including PATSARRD, PACAP, PALS, SEARCA, SNCAT and VSO Indonesia. In addition to income generation, the visits provided a great opportunity for exchange of experiences on the scaling up of landcare, as well as serving as a venue for enhancing the facilitation skills of farmer trainers.
- International recognition of its achievements through the awarding to CLCA of the inaugural Rick Farley International Landcare Award at the Australian National Landcare Awards in Melbourne in 2006. President of CLCA, Manuel Gawangon, received the award from the Governor-General of Australia in front of more than 300 Australian landcarers.

Malitbog Land Care Association (MLCA)

- Formulation by the MLCA of a Strategic Plan in conjunction with the MAO of the LGU. This identified activities, which were then incorporated in the Annual Investment Plan (AIP) of the municipal LGU;
- Joint development with the LGU of the Landcare Learning Centre (mentioned above).

Scaling out sites

Because of heavy project commitments on both sides, there were no significant outcomes from the interaction between the landcare project and the PALS project in Misamis Occidental.

Bukidnon

Re-scoping of institutions and issues and development of a strategy

As in Misamis Oriental, because of the existence of previous ICRAF and ACIAR landcare programs at the site, the opportunity was taken to re-scope the needs and issues. This involved analysis of data and consultation with key stakeholders such as ICRAF, Lantapan Land Care Association (LLCA), FTGs and LFPI. This proved to be not only a useful strategic planning process but also a useful learning and team building exercise for the project team. As a result, the following strategy was devised:

- Focus efforts on the well-established landcare site of Lantapan; re-invigorate the landcare program in the municipality of Manolo Fortich; and develop a new program in the municipality of Maramag;
- Focus the main effort on building and enhancing the effective landcare capacity of LGUs, the provincial government, LLCA, FTGs and landcare groups to facilitate their greater involvement in landcare;
- Maintain a watching brief on potential landcare scaling-out sites in neighbouring municipalities of Bukidnon including Malaybalay city and Impasugong as well as other provinces to the south and west of Bukidnon.

A wide range of services and activities were provided by the project including meetings, presentations, workshops, training events, cross-visits and write shops. Significant outcomes are summarised below:

Significant institutional strengthening outcomes at the LGU level in Lantapan

- Designation by the LGU of a Landcare Coordinator in the MAO to manage landcare-related activities and strengthen linkages between the MAO office and the LLCA. As a result, landcare was integrated into the MAO's annual targets and budget, LLCA was included as part of the MAO's Rural Based Organisation network, and LLCA members and other adopters of appropriate upland farming practices were given priority in the LGU's livestock dispersal programs.

Significant institutional strengthening outcomes at the satellite sites of Manolo Fortich and Maramag

Manolo Fortich

- Development and integration of a two-year Municipal Landcare Program as part of the Municipal AIP for 2007. The Program integrated landcare into the MAO and MENRO agendas; designated a Landcare Coordinator; identified a Farmcare program for eight pilot barangays; and introduced a major information campaign on issues such as solid waste management and river care;
- Designation of three Landcare Facilitators/Coordinators from the MAO and one from the MENRO to facilitate and oversee the implementation of the landcare program.

Maramag

- LGU support for a landcare program with active involvement of the MAO, MENRO, DLR and BENRO offices;

- National Power Corporation's (NAPOCOR) integration of landcare in their Watershed Management Plan for the Pulangui River to protect the longevity of their hydro-electric power plant.

Significant institutional strengthening outcomes at the Bukidnon provincial level

- Integration of landcare into the development agenda of the Bukidnon Watershed Protection and Development Council (BWPDC);
- Adoption by BENRO of Lantapan, Manolo Fortich and Maramag municipalities as provincial key learning or pilot sites on watershed management plan implementation using the landcare approach. It is planned that these municipalities will become the learning sites for the other municipalities and cities in the province.

Significant institutional strengthening outcomes at the LLCA level

- Development of an institutional strengthening and capacity building program for members resulting in more robust financial management and reporting systems to comply with funder requirements; better services to landcare members; review of policies, constitution and by-laws; revision of committee structure; renewal of registration with the Securities and Exchange Commission (SEC); and registration with the Department of Labor and Employment (DOLE);
- Construction of a central office, nursery and training centre;
- Development of a partnership with Syngenta to develop and implement a Total Crop Management Training Course for farmers;
- Development of a partnership agreement between LLCA and the Agroforestry Tree Seed Association of Lantapan (ATSAL) for a tree seed and seedling enterprise, in response to the growing demand for tree seeds and seedlings;
- Collaboration with LFPI on the establishment of two new landcare programs – a UNDP-LFPI project developing landcare in Sitio Kibulay, Lantapan; and a LFPI-Broederlijk Delen (BD) project in Sitio Bul-ogan in Barangay Songco, Lantapan.

Significant institutional strengthening outcomes at scaling out sites

- Collaboration with the Philippine Eagle Foundation (PEF) on the development of a 24 sq km biodiversity corridor in Arakan, North Cotabato to link the northern and southern Mindanao natural habitats for the endangered eagle species. The development of the corridor involved a combination of landcare processes and technologies in conjunction with landowners and three POs;
- Collaboration with Catholic Relief Services (CRS) on the use of landcare in a CRS project in Impasugong involving the Kaanib Foundation. As a result, training and orientation was provided to Kaanib staff in five intervention barangays;
- Strengthening of capacity through training and other support for trainees from the EU funded Upland Development Project in southern Mindanao, which adopted the landcare approach for its community engagement processes.

South Cotabato

Re-scoping of institutions and issues and development of a strategy

As in Misamis Oriental and Bukidnon, because of the existence of the previous ACIAR landcare program at the site, the opportunity was taken to re-scope the needs and issues. This involved analysis of data and consultation with key stakeholders such as SEARCA (managers of the previous ACIAR project at one site within the province), Ned Land Care Association (NLCA), and farmer groups. This proved to be not only a useful strategic

planning process but also a useful learning and team building exercise for the project team. As a result, the following strategy was devised:

- Focus efforts on enhancing the landcare structures and processes established during the previous project at the Barangay Ned site using a combination of project staff and farmer facilitators;
- Scaling out landcare to a small number of strategically-important upland municipalities elsewhere in the South Cotabato province (primarily in the Mt. Matutum, Mt. Parker and Mt. Roxas mountain ranges);
- Building more robust partnerships with LGUs, the provincial government, NLCA and NGOs to facilitate their greater involvement in landcare.

A wide range of services and activities were provided by the project including meetings, presentations, workshops, training events, cross-visits and write shops. Significant outcomes are summarised below:

Significant institutional strengthening outcomes at the Ned site

- Building of effective local long-term capacity through the project's deployment of three farmer facilitators to plan and deliver services to farmers jointly with the project Landcare Facilitator. As a result, programs were more diverse, more practical and more effective with nine new landcare groups organised, seven existing groups revitalised, and significant farmer leadership potential developed;
- Significant progress in getting landcare more firmly on the barangay and municipal LGU agenda through a program of more effective engagement with LGUs, despite the problems of distance and isolation of Ned from administrative centres. A key event was a cross-visit to Lantapan and Claveria landcare sites by 17 Barangay Ned LGU representatives which enabled an insight into how other LGUs have integrated landcare into their plans and priorities. As a result, the Ned LGU formulated its own supportive barangay ordinance;
- Development of a multi-partner committee to assist in the implementation of the Ned watershed project, an initiative of DA and the provincial government. The committee represented eight POs along with the LGU and DLR, with project staff as advisers. The process represented a good example of how the landcare model can provide leadership in uniting groups to implement projects;
- Identification of Ned as a pilot site for the South Cotabato Convergence Project, which is designed to assist the community in identifying the basic services they need and then to work with the different government and non-government organisations to deliver those services;
- Recognition of the potential of landcare by the Development Alternative Framework (DAF) Project of South Cotabato which provided funding to enable the project to provide specialist training to Ned farmers on soil and water conservation, vegetable production and farm planning. The reputation of landcare was instrumental in the Ned site being visited by the DAF Project Implementing Team, the Technical Working Group (TWG) and a range of other convergence workers;
- Provision of hundreds of tree seedlings for planting during the landcare anniversary in Ned through collaboration with DENR-Region XII;
- Integration of landcare into school and church programs – see below.

Significant institutional strengthening outcomes at the NLCA level

- Registration of the NLCA with SEC, which enabled the Association to submit project proposals to funding agencies;

- Development of an institutional strengthening and capacity building program which involved development of a new strategic plan; review of mission and vision; selection of a logo; election of a Board of Trustees; and development of a committee structure;
- Construction of the first stage of an Association office and training complex;
- Organisation of a program of approximately 12 activities per year involving around 500 participants, 30% of which were women. Activities included daygaw on farms and the NLCA office, tree planting, meetings on vegetable marketing and integrated crop management planning, capacity building, action planning and anniversary celebrations;
- Development of partnerships with LGU, DLR, DA, CSDO, MASIPAG (Magsasaka at Siyentipikong sa Pag-unlad ng Agrikultura), VICSMIN (Vegetable Industry Council of Southern Mindanao) and PARCOM (Presidential Assistance on Agrarian Reform Communities). An example is the project between NLCA and DENR, supported by DLR, which resulted in more than 2,500 mahogany seedlings being made available for planting in eight Ned schools;
- Development of an NLCA cluster production plan for vegetables involving 50 farmers representing a range of Ned landcare groups.

Significant institutional strengthening outcomes at the scaling out sites (Tupi, Lake Sebu, Polomolok, T'boli, Tampakan)

- In Tupi, strong support for landcare at the LGU level (Municipal Council, Mayor, Association of Barangay Councils), including development and training of a Municipal Extension Team of 11 Barangay Extension Workers (BEWs); a 55-member FTG; and provision of funding for training;
- In Tampakan, support for landcare by the LGU indicated by the MAO's allocation of one staff member as a point person, and interest in ordinances to support adoption of conservation farming practices;
- In Lake Sebu, integration of the landcare approach into a co-management project in Lake Seloton, implemented by Provincial Social Welfare and Development (PSWD) and said to be a model project of the provincial government'

Significant institutional strengthening outcomes at the provincial level

- Significant increase in use and ownership of landcare by the provincial government with linkages and partnerships with the Office of the Provincial Agriculturist (OPAG), the South Cotabato Convergence Project, the Development Alternative Framework (DAF) Project, and the Provincial Land Reform Office. Examples include OPAG's continued provision of material inputs to landcare such as seeds, polybags and fruit tree seedlings through their 'Plant Now, Pay Later' program; the selection of the Ned site as a pilot for the Convergence Project with the landcare project serving on the technical working group; and integration of landcare into the DAF Project's agricultural component;
- Major partnerships with NGOs in the scaling-up of landcare across the province. Examples include the partnerships with AMORE (Alliance for Mindanao Off-grid Renewable Energy) across a number of sites; Muslim-lumad Farmers Association Inc in the province of Sultan Kudarat; Tribal Leader Development Foundation (TLDFI) and Lamla Community Development Association (LAMCODA) in T'boli; and Sustainable Agriculture Advocates (SAA) of the World Vision/Gentud Foundation where landcare is being adopted in training programs across the province;

- Collaboration with the EU-funded Upland Development Project (UDP) where the UDP's Sustainable Upland Development (SUD) model worked closely with the landcare project in conducting skills enhancement activities in Lake Seloton. Landcare project staff were accredited as UDP provincial trainers and through this were given the opportunity to interact with and provide training to an isolated Muslim community in a conflict-affected area of Sultan Kudarat (Barangay Malisbong, Municipality of Palembang);
- Development of a landcare in schools program involving four high schools and four elementary schools in Ned, covering more than 1,300 students. Significant amongst the activities was a Landcare in Schools Leadership Training Program at Lake Sebu National High School, the first such leadership training conducted in the school, in which 49 senior high school students participated;
- Development of a landcare in church program where landcare was integrated into the Farming and Livelihood Ministry of the Catholic Church throughout Ned. A Church Trainer's Group (composed of Lay Ministers) was formed with the support of the Farmer Facilitators.

Output 1.4: Effective Landcare programs in the new sites of Bohol and Agusan del Sur initiated

Bohol site

Scoping and site selection

The first step was to meet with the various stakeholders within the province, present the basics of the project, obtain details of their current programs, and determine the extent of their interest and potential involvement in the project. Key meetings involved the Bohol Environment Management Office (BEMO), Office of Provincial Agriculture (OPA), the Governor representing the Technical Working Group for the Reforestation Summit, the Provincial Planning and Development Coordinator, Carood Watershed Management Council (CWMC), and the Technical Advisory Committee of the Loboc Watershed Health Monitoring Project.

The scoping identified a number of key issues which needed to be incorporated into project planning. These included:

- The need for the project to align with the Bohol Program Framework on Poverty Reduction;
- The importance of the sustainability of ecotourism activities and the role that landcare could play in servicing this goal through improving the environment and natural resources;
- The need for project sites to be strategically located to allow landcare to be appropriately showcased;
- The issue of *Kaingin* (slash and burn farming) and its resultant damaging brush fires, for which landcare might be able to provide some appropriate answers;
- The importance of support and commitment from the LGU at both barangay and municipal levels for sustainable upland development processes;
- Effective engagement with NGOs and the need for a suitable area of engagement. Agroforestry was identified as a suitable area of engagement owing to its importance in upland watershed development programs and the general lack of expertise amongst NGOs;
- The need to emphasise the research focus of the project to avert unrealistic expectations of grant assistance and to offset previous negative experiences of some NGO projects which were perceived to be creating 'government' structures.

Based on the scoping, the project developed a broad strategy for the development of landcare at the municipal and barangay levels. The three components of the strategy were:

- The establishment of model farms at the barangay level to provide farmers with the practical essence of what can be achieved and adapted on-farm through landcare;
- A specially-targeted partnership with LGUs to not only gain their support but to facilitate active involvement in landcare activities;
- The development of local extensionists (or point personnel) at each site to help facilitate the local ownership of landcare and help with the dissemination of technologies and effective monitoring of processes and outcomes.

Target sites were selected on the basis of where the limited resources of the project could be best directed for maximum impact. The selection was conducted in cooperation with MAOs and LGUs, and guided by the initial results of the study conducted by the Bureau of Soil and Water Management (BSWM), and the recommendations of BEMO. As a result of the assessment, two broad locations for focus were selected:

- Carood watershed, particularly the municipalities of Pilar and Alicia. This was based on the fact that the watershed had the least vegetative cover of all the catchments on the island; the existence of the Carood Watershed Management Council (CWMC) as a partner; and the existence of strong municipal LGU programs complementary to the project.
- The municipality of San Isidro. This built on the previous successful landcare developments by ICRAF under the AECl project in the barangay of Baryong Daan. The landcare project proposed to support further development at Baryong Daan to establish it as a showcase site and to scale up adoption of landcare in neighbouring barangays.

Implementation of program

The implementation of the program involved six steps:

1. Project orientation for stakeholders including LGUs, farmer groups, NGOs including Bohol Alliance of Non-Government Organisations (BANGON), Carood Watershed Development Council, United Families for Transformational Development, Inc. (UFTDI), and Philippines-Australia Technical Support for Agrarian Reform and Rural Development (PATSARRD). In all, 25 orientation meetings were conducted over a three month period in 2005.
2. Establishment of project partnerships at each site.
3. Identification of point personnel and project teams at each site. Point personnel at the municipal level were mainly drawn from the MAO or the Municipal Planning and Development Office (MPDO), and at the village level, from the barangay council. Project teams involved the Barangay Livestock Aides (BALAs), village-level farmer volunteers present in every municipality in the province. In some cases such as Alicia, these had already been expanded to cover cropping advice, and the project further expanded these to include agroforestry and landcare technologies.
4. Collection of baseline data to benchmark the project and raise awareness in the community of important issues affecting livelihoods.
5. Program delivery which included training programs in nursery establishment and management, tree farm management and agroforestry; cross visits to other landcare sites; development of IEC materials; and support to the development of better community organising processes to improve farmer involvement and response.
6. Annual review and planning workshops.

Significant outcomes

San Isidro

- Designation of a Landcare Coordinator at the LGU level to whom training in landcare concepts and technologies was provided;
- Allocation by the LGU of P50,000 in 2006 and P40,000 in 2007 for the implementation of annual barangay landcare plans;
- Development of a seven-member San Isidro FTG and strengthening of the Baryong Daan Landcare Farmers' Association (BADALFA) to support the concept of San Isidro being the provincial demonstration site for landcare (achieved in conjunction with the ICRAF TSSC project);
- Development of a communal plant nursery and home-based ornamental plant program as income generation activities by the Masonoy Women's Association in Barangay Masonoy;
- Through facilitation of linkages between BADALFA and the San Isidro Agroforestry Tree Seed Association (SATSA), establishment of an organic fertiliser production facility and vermicomposting project to support the local government's program on organic agriculture. The initiative was instrumental in inspiring BADALFA to establish a consumer store and develop a cooperative to help facilitate bulk marketing of their bananas and coconuts to traders in Tagbilaran and Tubigon.

Alicia

- Designation of a Municipal Landcare Coordinator at the LGU level to whom training in landcare concepts and technologies was provided. Fifteen Barangay Agricultural Workers (BAWs) were assigned and re-tooled to assist the Coordinator;
- Allocation by the LGU of P180,000 in 2006 and P100,000 in 2007 for landcare program activities as part of the Reforestation and Clean and Green Programs for farmer landcare training, cross-visits to San Isidro, farm inputs for landcare adopters and a landcare awards program;
- Integration of landcare into the Municipal Agricultural Master Plan and the AIP;
- Implementation by the LGU of a landcare ordinance for the municipality;
- Development of a partnership with LGU and DLR to support development of agriculture-based livelihoods and natural resource management projects for farmers' organisations within agrarian reform communities. Two agroforestry and conservation farming systems training projects were subsequently approved under the Agrarian Reform Communities Development Project 2 (DAR-ARCDP 2).

Pilar

- Development of a municipal landcare action plan, specifying financial and logistical support from the LGU through the MAO; collaboration with the MPDC to ensure landcare activities have an adequate budget allocation; designation of a Municipal Landcare Coordinator; collaboration with the Municipal Agrarian Reform Office (MARO) to facilitate access to additional funding for training and farm input materials; and deployment and training of a network of farmer trainers at the barangay level to train other farmers;

- Allocation by the LGU P150,000 in 2006 for landcare activities with an additional P125,000 allocated through approved proposals to ARCDP for the establishment of nurseries in six barangays, landcare training, and assistance with livelihood diversification (abaca and coconut production training). An additional P150,000 was allocated from the ICRAF-BSWM-LGU partnership for training and establishment of 12 barangay demonstration farms. In 2007, P500,000 was allocated to the landcare program including contribution to the ICRAF-BSWM-LGU partnership (P150,000), municipal landcare plan (P150,000), and the PILAR DAM Program (P200,000);
- Collaboration with BSWM on the establishment of landcare technologies on the 12 demonstration farms set up under the ACIAR Watershed Project in the Inabanga watershed;
- Collaboration with the NGO Soil and Water Conservation Foundation (SWCF) in providing complementary technical assistance and forage and tree planting materials to barangay nurseries;
- Organisation of a cross-visit of more than 200 Pilar farmers to the San Isidro landcare site;
- Establishment of a dispersal scheme to distribute planting materials of pineapple and banana as an incentive for pioneer landcare adopters;
- Development of a pilot landcare in schools program through collaboration with the Department of Education;
- Invitation to join the Municipal Inter-Agency Committee (MIAC) to provide technical advice to the Kalahi CIDSS project, operating in all 21 barangays of Pilar;
- Development and adoption by the LGU in 2007 of the Productivity Improvement through Landcare and Agricultural Resources Development Program (PILAR DAM Program), which aimed to achieve food security for every family, improve nutrition, and provide opportunities for increased income through intensive backyard vegetable production. To implement the program, the LGU designated agri technicians in every cluster of barangays, the first time this approach had been taken in the municipality. This initiative expanded the scope of work of the previously commodity-based agri technicians into community organisers with assigned farmer associations. Approval for the Program was provided by Municipal Development Council and budget allocated.

Across sites

- Participation of one farmer representative from each of the three sites in the Landcare Peoples Organisations Forum in Lake Sebu, South Cotabato in December 2005. This provided insight into landcare operations in other regions and involved the development of an action plan for organisational strengthening on return from the forum;
- Endorsement of the value of the landcare approach by the Bohol Alliance of Non Government Organisations (BANGON) on the basis of its closer working relationship with local government and its lesser dependence on material inputs such as grants and loan assistance;
- Development by the LGUs of a landcare awards program to give recognition and incentive to involved farmers and stakeholder groups. The awards covered farmers, farmer groups and barangays. In its first year of implementation, the awards system in San Isidro recognised outstanding adoptors of conservation farming systems in three pilot barangays and was extended to all 12 barangays in 2007 because of the high level of interest. In Alicia, the launching of the landcare awards program in four barangays drew an audience of more than 300 residents;

- Significant across site capacity building of the farmer technicians consisting of facilitation training, coaching in the conduct of farmer training, technology inputs, planning and development of work plans and establishing an effective reporting system. It was established that the integration of the farmer technicians' into the program priorities of the MAO was very effective in making the LGU program more responsive to the actual needs and concerns of farmers;
- Collaboration with the Bohol Farmers Multi-purpose Cooperative (BOFAMCO) who provided 50% counterpart funding for a series of 11 landcare group strengthening workshops in Pilar, and subsequently Alicia and San Isidro. The workshops were aimed at reorganising and strengthening the groups, raising environmental awareness and introducing BOFAMCO to them as prospective members. Membership provides benefits such as seed subsidies, livestock assistance, and post harvest/marketing support;
- Support from Bohol Environment Management Office (BEMO) and PAO for the municipal landcare initiatives as a step towards scaling up landcare to the provincial level. BEMO showed particular interest in landcare's potential for promoting agroforestry development (timber and fruit trees), one of their provincial government priorities;
- Participation of three landcare personnel from the province in the International Landcare Conference and Study Tour in Australia from Oct 2 to 12, 2006. The three represented two landcare sites (Pilar and Alicia) and BEMO. On return, the delegates in conjunction with the project team collectively planned strategies for how to scale up and improve landcare in their respective municipalities. The municipal ordinance in Alicia and the development of the PILAR-DAM Program in Pilar were both inspired by the trip.

Agusan del Sur

Scoping and site selection

Unlike Bohol, the Agusan del Sur site was a "greenfield" site with no previous involvement with landcare. Therefore the initial focus was primarily on secondary data collection, followed by mapping of key stakeholders, and then courtesy visits to these key players.

Secondary data analysed included an existing CRS project in Esperansa municipality under the CRS FARMER project, the provincial web page, other internet sites, relevant socio-economic and natural resource reports, and previous AusAID scoping studies of the province.

Mapping of key stakeholders involved identifying existing roles within the province and determining how the team could most effectively deal with them in project implementation. Stakeholders mapped included LGUs, NGOs, foreign assisted projects, business establishments, and service providers.

Courtesy visits were then made to key stakeholders with a presentation on the project and potential areas for collaboration discussed. Significant amongst these was the provincial LGU (PLGU), which expressed significant support for the project, invited the team to present to the TWG meeting of the PLGU and offered to provide office space for the project team in the provincial capital.

Based on the scoping, it was decided to focus on municipal LGUs as the main entry point. Selection of sites was based primarily on the preconditions of success from Dr Catacutan's PhD research with additional input from CRS's policy on project site selection. These were:

- Farming is the main source of livelihood;
- Community has at least one existing social grouping;

- The site has stable peace and order conditions;
- There is strong political will/support from the LGU.

Fourteen municipalities in the province were studied and five selected as key project focus areas – two municipalities in the upper part of the province (Bayugan and Sibagat), and three in the lower part of the province (Bunawan, Trento and Sta. Josefa).

Courtesy visits to the Mayors and municipal LGU (MLGU) officials of the selected municipalities then followed. Those visited expressed their support for the project and delegated their MAOs, MAROs and MENROs to work with the project team. The MAOs and MENROs were appointed as point persons for landcare. For the micro-sites within their municipalities, most of the MAOs suggested convergence areas, while MAROs suggested Agrarian Reform Communities (ARCs), which are PATSARRD areas, as the primary sites.

Program delivery involved training programs; cross visits to other landcare sites; development of IEC materials; and support to the development of better community organising processes to improve farmer involvement and response. The program was reviewed on an annual basis. As there were no landcare sites within the province, project orientation relied heavily on cross-visits to the Claveria landcare pioneer site in Misamis Oriental. To this end, all farmer leaders and LGU ATs from the selected target municipalities participated in a 4-day orientation cross-visit to Claveria as the first activity.

Significant outcomes

Bayugan

The Department of Land Reform (DLR), the Bayugan LGU and the Bayugan Water District (BWD) were identified as the main project partners, with five PATSARRD-assisted ARCs – Magkiangkang, Grace State, Mt. Carmel, Mt. Olive and Wilderness – identified as landcare sites.

- Facilitation of the formation of the Bayugan Watershed Resource Management and Development Council (BWRMDC) – a multi stakeholder group with members from the Provincial Environment and Natural Resource Office (PENRO). The Council was instrumental in developing the landcare-trained Bantay Gubat (forest guards) in Angas in the southern part of the province;
- Approval of an ordinance to implement landcare in the whole municipality. This was largely inspired by the observation of a similar ordinance at Claveria during a cross-visit in December 2005;
- Formation in 2006 of the Landcare Association of Pinagalaan with 36 members and the Mt Carmel Landcare Group with 25 members, and the development of a collaborative partnership with existing farmer groups – Mt Olive Vegetable Growers Association with 20 members; and Magkiangkang Multipurpose Cooperative with 54 members;
- Provision of P65,000 by the MLGU for training of landcare group members; and provision of P200,000 for 2007 and P200,000 for 2008 by the Bayugan Water District for the protection and development of Pinagalaan watershed and strengthening of the Landcare Association of Pinagalaan;
- Development and approval of a PACAP-funded project worth P3,000,000 to implement landcare activities in the Pinagalaan watershed of the Bayugan Water District under the management of the multi-stakeholder Watershed Management Council.

Bunawan

Barangay Imelda, as an Agusan del Sur State College of Agriculture and Technology (ASSCAT) adopted barangay, was selected as the landcare pilot site.

- Establishment of a partnership with ASSCAT through its Research and Extension Department, the Municipal Agriculturist and the Municipal Agrarian Reform Officer, with two staff of the MLGU and one Extension Officer of ASSCAT appointed as landcare coordinators;
- Formation in February 2006 of the Imelda Landcare Group (a federation of five Farmers Associations) with a total of 70 members;
- Provision in 2007 of P41,200 by the MLGU of Bunawan and P100,000 by ASSCAT for capacity building of BEWs and landcare farmer leaders and landcare activities.

Sibagat

Barangay Sinai, an abaca producing community, was selected as the landcare pilot site.

- Appointment by the Mayor of the Municipal Agricultural Officer as the coordinator of landcare activities in the municipality;
- Formation in December 2005 of the Sinai Organic Landcare Association (SOLCA), consisting of 12 members;
- Construction by SOLCA of the SOLCA Landcare Training Center and a concoction house for making localised fertiliser;
- Provision of P30,000 for 2007 and P30,000 for 2008 by the MLGU for landcare activities, primarily for training and the provision of fruit tree seedlings for an agroforestry learning site for landcare groups.

Sta Josefa

Three barangays were identified as landcare pilot sites – Awao, Angas and Sayon. These were key sites under the Community Based Resource Management Program (CBRMP) and the Mindanao Resource and Development Program (MRDP) of the LGU.

- Appointment by the Mayor of the MENRO, the MARO and one Agricultural Technician as landcare staff;
- Development of a partnership with the Angas Watershed Rehabilitation Project – an agroforestry project implemented by the LGU;
- In the Awao and Sayon sites, integration of landcare into the ongoing CBRM project activities through a partnership with the Peoples Organisation (PO) and MENRO;
- Development of a Municipal Ordinance and the formation in June 2006 of a landcare group Bantay Gubat in Barangay Awao with 47 members. A collaborative partnership was also developed with the existing Awao Riverside Vegetable Growers Association with 43 members;
- Collaboration with InFRES (a Japan funded project) to fund the expansion of Natural Farming Technology Systems (NFTS) in rice, with the provision of P306,200 of funding for capacity building of BEWs and landcare farmer leaders.

Trento

Barangay Pangyan was selected as the landcare pilot site under the PALAKAT Program of the LGU.

- Appointment by the MLGU under a Special Order of the MENRO as landcare coordinator, and the provision of funding for the implementation of conservation farming practices in all barangays;

- Provision by the MLGU in 2006 of P144,000 for landcare capacity building of LGU staff and BEWs, and the allocation of P10,000,000 for 2007 to 2010 for the promotion and implementation of NFTS and conservation farming using the landcare approach;
- Development of a collaborative partnership with the Trento Vegetable Growers Association with 18 members.

Across sites and across the province

- Commitment of the provincial government to landcare, with P2,000,000 of funding being provided by PENRO in 2007-2008 for landcare activities across the province. The Provincial Planning and Development Office also provided office space and fitout for a landcare project office and project staff were involved in regular meetings of the Provincial Development Council (PDC) and the Technical Working Group of Natural Resource Management (TWGNRM);
- Delivery of a specialist six-month training program on service delivery using the landcare approach for 31 landcare farmer trainers and 28 BEWs from the five sites. ASSCAT was the lead institution in the program. The trainees were instrumental in the rapid increase of adoption of conservation farming practices through the farmer to farmer extension approach;
- Facilitation of the integration of landcare into other CRS Agri/NRM project sites in the province and in Maragusan and Davao City. Twelve staff from partner NGOs (Kaanib Foundation in Bukidnon, Kasilak Foundation in Maragusan, PCEEM in Davao City), together with 75 farmers and 24 members of the Pilipino Banana Growers and Exporters Association (PBGEA) received landcare orientation and training;
- Co-organisation (with CRS) of the 1st Mindanao Multi-sectoral Watershed Forum in Davao City in September 2005. More than 200 participants from Mindanao including representatives from the five landcare sites attended. A resolution for integrated watershed management was drafted;
- Participation of four landcare personnel from the province in the International Landcare Conference and Study Tour in Australia from Oct 2 to 12, 2006. The four represented the landcare sites in Bayugan, Bunawan, Trento and Sta Josefa. On return, the delegates in conjunction with the project team held a workshop to process the experience and learning, and plan strategies for how to scale up and improve landcare in their respective municipalities;
- Participation of five landcare personnel from the municipal LGUs, Bayugan Water District, and ASSCAT in the CRS Partners Forum in Davao City, where presentations were made on the integration of landcare in local governance;
- Establishment of close working links with a range of stakeholders including PACAP, PATSARRD, ASSCAT, the Provincial Technical Working Group on NRM, the Department of Education and Sport, DENR Regional Caraga Office and NGOs such as World Neighbours, ESSC, Foundation for Philippine Environment and LEAF Foundation;
- Development of a landcare in schools program to facilitate the integration of landcare into the elementary and secondary school curriculum.

Output 1.5: Links and network between landcare members, facilitators and organisations strengthened

The main focus here was the establishment of the Landcare Coordinators Network (LCN). To facilitate its establishment, a process of communication and networking was established between the five Landcare Coordinators and the Project Manager, who make up the Network. The process involved quarterly face-to-face LCN workshops, rotated around the sites to facilitate networking across the site teams and to enhance collective

ownership of the broader issues of Philippines landcare. This was backed up by the development of an email discussion group and web site portal for storage of documents.

Key outcomes of the LCN included:

- Organisation of a Landcare PO Forum in Lake Sebu, South Cotabato. The Forum involved farmer, LGU and NGO representatives from each site. As well as the project Landcare Coordinators being involved, the Forum was used to expose the project Landcare Assistants from each project site to the broader issues of landcare. The Forum provided an excellent venue for sharing and recognition of the contributions of pioneer partners of landcare and several landcare models were enhanced as a result;
- Engagement with the Executive Director and personnel of the Kasilak Foundation in Lantapan in a Forum on involvement of the corporate sector in the landcare program. The forum also involved key stakeholders including the Mayor, LGU technical personnel, NGA representatives and community leaders. As a result, a more comprehensive landcare plan identifying the respective roles of all key stakeholders was produced;
- Development of the core principles of landcare and models of engagement with LGUs in preparation for the production of a Landcare Facilitator's guide book, subsequently produced in 2009;
- Provision of a major Landcare Forum for the new greenfield site in Agusan del Sur;
- Provision of training to Misamis Oriental farmer technicians in a training event conducted by Balay Mindanaw Foundation Inc (BMFI);
- Hosting of international visitors including an international delegation from a pioneer landcare site in Flores, Indonesia;
- Development of a concept for a major Landcare Congress – subsequently conducted in 2009.

Sustaining and scaling up adoption of conservation farming systems and diversified livelihoods

Output 2.1: Capacity for farmers to appreciate farming options and implement effective landcare practices on their farms strengthened

Output 2.2: Productivity and diversification of subsistence and cash options of members farms increased

Output 2.3: Practices to improve resource sustainability implemented

Note: Because the three outputs under this objective overlap significantly, results are reported here together.

While some capacity building was targeted solely at scaling up adoption of conservation farming systems and diversified livelihoods, much was conducted with a dual goal of institutional strengthening. Consequently, capacity building needs to be viewed within the broader context of institutional development outlined under the previous objective and outputs. Capacity building involved a range of key processes:

- Cross-visits to other landcare sites to showcase key technical innovations;
- Local training events with a particular focus on hands-on training;
- Maximising farmer to farmer learning by utilising farmer innovators and FTGs as the key providers of the technical innovations for cross-visits and the hands-on local training;

- Building capacity across the network of farmers, LGUs, NGOs and others at each site by providing the opportunity for all stakeholders to be involved in training and other capacity building events;
- Using visual aids such as “how-to” brochures, flip-charts and presentations to back up the farmer to farmer training, but not as a primary source of information;
- Using real farms for all activities where possible, rather than techno or demonstration farms, to enhance farmer to farmer learning.

In the area of productivity improvement and diversification of livelihoods, the main areas of capacity building provided by the project were:

- Production of high value vegetables (mainly tomato, bell pepper, potato, eggplant, crucifers, carrots, onions, ginger, mushrooms);
- Production of fruit trees (mainly durian, lanzone, rambutan, mangosteen, banana);
- Production of timber trees (mainly mahogany, mozisi, falcata), and collection and sale of timber tree seeds;
- Production of beverage and industrial crops (mainly coffee, rubber, abaca, coconut, bamboo, medicinal plants);
- Development and maintenance of plant nurseries (timber trees, fruit trees, vegetables, ornamental plants);
- Facilitation of the provision and dispersal of farm inputs including fruit and timber tree seeds and seedlings, vegetable seeds, pineapple and banana planting material, and livestock animals;
- Production of forage crops;
- Production of livestock (mainly cattle, goats, pigs, poultry, aquaculture);
- Production of specialist commodities such as honey, worms for vermiproduction and vermicast;
- Development of value adding systems for products (mini-sawmilling and woodworking facilities for timber products; weaving facilities for bamboo; fibre processing facilities for abaca);
- Development of improved marketing systems and supply chains.

In the area of improved resource sustainability, the main areas of capacity building provided by the project were:

- Development of improved soil and water conservation and agroforestry systems including NVS; enhanced NVS; rubber, fruit tree, timber tree, and vegetable-based agroforestry systems;
- Development of plantation forestry and tree plantation enrichment programs;
- Implementation of farm planning systems;
- Development of permaculture systems;
- Implementation of integrated pest and disease management systems, and Natural Farming Technology Systems (NFTS);
- Development of vermi and rapid composting systems and the production of organic fertilisers;
- Soil analysis.

Significant outcomes

- Conduct of 156 major capacity building and networking events across the five sites involving more than 5,000 farmers and 1,200 LGU and other agency personnel;
- Conduct of 14 major cross-visits to landcare sites in Claveria, Lantapan and Bohol, involving more than 500 participants;
- Establishment of linkages between landcare groups and major technical and marketing service providers such as the Vegetable Industry Council of Southern Mindanao (VICSMIN) and the Vegetable Industry Development Board (VIDB). For example, 67 South Cotabato landcare farmers became VICSMIN members, and improved their returns by marketing their produce through VICSMIN in Davao City;
- Development of a linkage between LLCA and Syngenta for the delivery of a season-long training course on integrated crop management for Lantapan vegetable growers. An off-shoot of the activity was the formation of a new farmers' group – the Centro Paglambu which enabled more effective training, market organisation for vegetable crops and access to abaca production and marketing support;
- Establishment of linkages between landcare groups and marketers through market exposure trips. For example, a market connection was made between Ned farmers and the GENTUNA Canning Corporation Inc (GTCI) with a major outcome being the negotiation of a contract with GTCI for the supply of Ned produce to the company. The NLCA also produced a cluster production plan for vegetables involving scheduling the planting time of certain crops amongst its members for a continuous supply to the market. In Lantapan, the project facilitated a new linkage between the Centro Paglambu vegetable cluster and the GTCI, which enabled contracts for the supply of up to 60,000 kg of carrots, 60,000 kg of bell pepper and 100,000 kg of potato, as well as investigation of new markets for cabbage in Taiwan and bulb onions in western Mindanao;
- In Agusan del Sur, clear evidence of change in marketing practices from individual farmer marketing and lack of appropriate packaging to collective marketing and improved product packaging. For example, 10 banana growers from Trento and Sta Josefa completed their first collective delivery of bananas to Butuan in March 2007;
- Evidence of adoption of diversified livelihoods by more than 80% of the farmers involved in training and networking events;
- Clear evidence of the benefits of adoption of diversified livelihoods. For example, a case study of a landcare farmer in South Cotabato showed that net profit from a diversified vegetable farming system using similar labour and marketing inputs was 70% higher than the traditional corn based farming system. Similarly, studies in the Bohol site of predominantly rice and coconut farmers demonstrated additional income through both the rehabilitation of abandoned degraded cropping land for fruit and vegetables as well through facilitating the better annual deployment of labour used on their farms. A survey of more than 100 farmers showed that the nett cash income of landcare adopters was two to three times higher than that of non-adopters. In Agusan del sur, an analysis of 293 farmers who had reported an increase in income as a result of the landcare process showed that 180 rice growers had increased their income by between 18 and 77%; 70 corn farmers by between 12 and 18% (by adding vegetables into their farming system); and 43 vegetable growers by 20%;
- In the new scaling-up sites of Bohol and Agusan del Sur, where the initial focus was primarily on adoption of conservation farming technologies, almost 1000 farmers became adopters – 460 in Bohol and 532 in Agusan del Sur. In Bohol, the majority adopted NVS and agroforestry systems, while in ADS the majority adopted biodynamic and NFTS in rice, vegetables and livestock. About 60% of the adopters initially learned the technology from project events;

- Generation of new non-farm income sources. For example in Lantapan, the LLCA generated a gross income from the conduct and hosting of training and cross visits which totalled P90,000 for the six-month period from August 2006 to January 2007;
- Provision of significant quantities of farm inputs through various LGU and NGA schemes such as the South Cotabato Provincial Government's 'Plant Now, Pay Later' Program. For example, under this Program, 4,500 seedlings of durian and 1,000 seedlings of lanzone were distributed to 106 Ned farmers in February 2007 alone;
- Provision of other livelihood services through the landcare network. For example, support of the 'Banga Pinoy' project saw the construction of five ferrocement or wire reinforced water tanks within landcare communities in Agusan del Sur, saving villagers walks of up to three kilometres to their water sources. Similarly, the project team was able to connect ADS landcare rice farmers with a buyer of carbonized rice hull to address the problem of disposing of more than 1000 tonnes of this by-product which had previously been burned or dumped with obvious health hazards to villagers.

Analysing and evaluating impacts

The first step was to establish the broad research process, and orientate and train project staff. These issues were vital to the research success of the project, given that most field project staff had minimal previous involvement in research processes and methodologies. The research process established involved the following steps:

1. Develop a broad research plan at the Project Planning Workshop at the commencement of the project in February 2005;
2. Refine the plan throughout the remainder of 2005 through two workshops of the LCN and an M&E mini-workshop;
3. Implement the plan from early 2006 and review it at each nine-monthly review workshop.

Project planning workshop, February 2005

The project planning workshop emphasised the fact that all staff in the project had some research responsibilities, but leadership would be provided by the research 'specialists' in the form of Dr Cramb (and subsequently Dr Jono Newby), Ms Dano (Project Manager) and Dr Delia Catacutan, who had at that stage recently returned to the Philippines from completing her PhD studies on landcare scaling-up under an ACIAR Allwright Fellowship. The workshop established a list of research issues for further development. These included:

- Process documentation – identifying the essential requirements for landcare;
- Baseline data and site characterisation;
- Institutional research on models of NRM-type organisations, LFPI and the LCN;
- Researching local government structures and dynamics;
- Landcare impacts on NRM and livelihoods (on-farm, off-farm, aggregate);
- Where possible, engagement of research students from local universities to participate in the research.

Potential research ideas or topics were sought from team members, both during the workshop, and subsequently if they arose during field work. The team endorsed a strategy of all project staff, including Landcare Assistants, being involved in or responsible for a small research project, or at least being involved in some aspect of the process documentation, and in that way contributing to or being part of the overarching research program managed by the research specialists.

Refinement of the plan

At a Landcare Coordinators Workshop in March 2005, the above plan was further developed and the need for baseline data and processes to obtain it, particularly for the new sites, added to the plan.

At a following M&E Mini-workshop in April 2005, some of the individual research designs were consolidated and a broad process for measuring project impacts was developed. This consisted of:

1. Assess what data had already been collected at the site, what data from secondary sources was available, and how reliable these data sources were. This determined the extent of new data collection.
2. For new sites, baseline data was necessary. This needed to be brief and rapid for practical purposes, and be not just data collection but combined with diagnosis and design to identify both the most appropriate data to collect and the methods of collection. For example, an inventory of soil and water conservation and agroforestry practices to ascertain how many farmers adopted, to what extent, problems they perceive, preferred solutions and priorities, and support they already had from POs, NGOs and others. This may be best collected through community gatherings where farmers develop community resource maps, rather than through farm to farm surveys.
3. Regular data collection year by year to assess change and impact over time. In the case of the project, this needed to focus on factors such as adoption and membership of landcare groups. For example for adoption – adoption of what, to what extent, how well, and who drops out? For groups – what groups, how many members, how active, do they meet, how well are they organised?
4. Follow up with targeted surveys and case studies. For example, a good case study might be to case study social dynamics within a sitio, or case study a farm to understand its cropping cycle and how decisions are made.

At a Landcare Coordinators Workshop in June, the process documentation system was put in place in conjunction with specialised training from Dr Linda Burton of RIMCU. A minimum set of baseline information was also established, a list of site research topics and process documentation specialties finalised, and individual research designs further developed.

Process documentation

It was agreed that common areas for which process documentation would be applied would include, but not be limited to the following:

- Scoping process (the criteria that each site used, points of entry etc);
- Engagement strategies employed (with POs, LGUs, NGOs, academe);
- Support structures (social institutions, policy, financial, market);
- On-farm implementation (observed dynamics such as how decisions are made on such things as conservation and production);
- Gender (men-women power relations, potentially linked to access to information and environmental decision-making).

The value of process documentation was that it would facilitate better comparative analyses, and the information gathered could be used to identify emerging themes or topics for exploration in more in-depth case studies.

The process for the system was that Landcare Coordinators would capture issues of importance and reflections on progress through their quarterly reporting and the nine-monthly project review workshops.

To support the process documentation, data gathering tools were employed or developed. These included focus group discussions, key informant interviews, and participant observation. In these processes, the project team was supported in some instances by farmer trainers and LGU personnel.

A particular innovation created by the LCN for the profiling of adopters of conservation practices was the adoption diagnostic card. This facilitated the involvement of LGU staff and Municipal Landcare Associations in the collection of adoption data. Creative methods for more rapid collection, including incentive payments of P10 per sheet, were trialled implemented at some sites.

Baseline data and site characterisation

It was recognised that each implementing agency may have some particular interests or biases in terms of what data should be collected for benchmarking. However, a minimum set of information was agreed on, in consonance with the overall goal of the project in improving standards of living, social capital, and environmental stewardship. The project team agreed that gender issues should be added to the minimum information set. The purpose of the set of information was primarily to later assess changes that had occurred for impact evaluation. The minimum information set developed is listed in Appendix 1.

In addition to the baseline data, a major characterisation of the sites, including country, provincial and municipal data, was proposed. This collected data on a range of biophysical, socio-economic and socio-political parameters. This was to help understand the factors influencing landcare at each site and draw individual site and cross-site conclusions about enabling factors for landcare development. The data would also serve as baseline information for longitudinal studies. The parameters used in the site characterisation are listed in Appendix 2.

To support the characterisation, profiling of existing farmers or residents associations in new sites was undertaken. This measured their varying degrees of functionality and assessed the need and processes for the strengthening of these organisations. For example in Bohol, the assessment focused on 17 identified farmers' and women's associations with technology development and/or livelihood enhancement objectives.

Research projects

In keeping with project's philosophy that all project staff, including Landcare Assistants, should be involved in a small research project, each site team member proposed a potential topic for consideration. As a result, a list of 15 topics was generated. Each region also contributed a site topic for consideration. These lists are shown in Appendix 3.

In the end, only four topics were completed and published as working papers. These were the comparative economic study of farmer adopters shifting from corn/upland rice to vegetables in the Ned site, an assessment of landcare groups, landcare engagement processes with LGUs, and a case study of a Farmer Trainers Team. In addition, two landcare staff commenced Master's degree programs with landcare-related research topics – Lyndon Arbes (Landcare Coordinator, Bukidnon) on the social cost and benefits of farmer's participation in landcare in Lantapan; and Edith Tejada (Landcare Assistant, Bukidnon) on bonding social capital of landcare in Lantapan.

In addition, a research student from Xavier University, Marven Selecios, supported by the project, completed a socio-anthropological study of landcare's sustainability amongst rural youth at two of the project sites (Claveria and Lantapan). A Philippines graduate research student from the University of Queensland also completed a study of the long-term physical and economic effects of different soil conservation technologies adopted in Ned, South Cotabato and Claveria, Misamis Oriental using the SCUAF simulation model.

Significant outcomes

Output 3.1: Essential requirements for sustaining and scaling up the landcare program evaluated

- The essential elements for landcare sustainability, security and growth have been already covered under Output 1.1 in this section. The detailed results of the research were captured in a project working paper in December 2006 (*Learning from institutions and designing a landcare support agency*, Working Paper No 9).
- To support the consolidation of project outputs, outcomes and impacts, a major two-day participatory evaluation of the landcare program by project staff and partner agency personnel was conducted during the Second Review Workshop in Bohol in August 2006. Participants within four groups of Landcare Coordinators, Landcare Facilitators, Project Managers and Partner Agency Managers provided reflections on what had been learnt as well as suggestions on what form an expansion of the landcare program should take. The findings formed part of a larger reflective analysis of the landcare program subsequently published in 2007 as a project working paper *Landcare in the Southern Philippines – Past, Present and Future*, Working Paper No 8.

Output 3.2: Appropriateness, effectiveness and sustainability of institutional structures evaluated

- The essential characteristics of a landcare agency have been already covered under Output 1.1 in this section. The detailed results of the research were captured in a project working paper in December 2006 (*Learning from institutions and designing a landcare support agency*, Working Paper No 9).
- Research findings from the broader evaluation of landcare institutional structures were captured in a project working paper *Landcare in the Southern Philippines – Past, Present and Future*, Working Paper No 8.

Output 3.3: Impacts of landcare program on community livelihoods and natural resource sustainability evaluated

- A major study of the economic impacts of landcare at the Bohol site by Dr Jono Newby was initiated during Phase 1 of the project and completed during Phase 2 (Newby and Cramb, 2011). The study involved a cost-benefit analysis to assess the net economic benefits of the increased adoption of landcare practices as a result of the landcare program. It also used a multidisciplinary approach employing both bioeconomic and spatial modelling techniques to understand how land use change affects the biophysical processes of soil erosion at the farm and watershed scales. The evidence showed that the adoption of the landcare technologies such as NVS creates a stable platform on which other livelihood activities can be built. Overall results were very positive and are reported under Phase 2 below.
- The study by a Philippines graduate student from the University of Queensland, working with Dr Cramb and Dr Arnulfo Garcia of SEAMEO-SEARCA on the long-term physical and economic effects of different soil conservation technologies adopted in Ned and Claveria using the SCUAF simulation model was completed. The data confirmed previous studies that NVS technologies significantly minimised soil erosion and slowed the decline in soil fertility, but the economic benefits were long-term owing to the loss of productivity and additional costs in the early years.
- The innovative collection of adoption data using diagnostic cards and incentives to facilitate more rapid collection showed that with effective tools, personnel from LGUs, landcare associations and NGO collaborators can be effectively deployed in the collection of data.

- Research confirmed adoption of landcare technologies to be significant, with over 1000 adopters in Claveria, 200 in Malitbog, and over 150 in the Misamis Oriental scaling up sites at the end of 2006. In the Ned site, profiling identified 29 active landcare groups with 226 members and more than 50 ha of new land across 33 farmers protected with landcare technologies in one year of the project.

7.1.2 Phase 2: 2007 to 2009

Enabling LFPI to evolve and take on the defined roles and responsibilities for the broader development of landcare in the Philippines

Activity 1: Analyse existing institutional issues for the development of Philippines landcare as a precursor to implementing an institutional development plan for LFPI

In July 2007, the Project Leader commenced a comprehensive two-tiered analysis of existing institutional issues for landcare with the results collated into an institutional baseline report. The two levels of the analysis were:

1. A series of structured interviews of 48 individuals from LFPI, the five project partners, and 18 major landcare stakeholders (LGUs, NGAs, NGOs, Landcare Associations, farmer groups), conducted by the Project Leader in July/August 2007. The 18 landcare stakeholders were drawn from all five sites of Phase 1, although the majority were from the Misamis Oriental and Bukidnon sites.
2. A series of four investigative workshops for LFPI Board of Trustees (BoT) and staff, conducted between July and December 2007. The workshops were facilitated by contracted institutional development consultants to avoid any bias from existing project personnel. Outputs from the workshops were progressively documented and consolidated for input into a draft institutional development plan for LFPI (see Activity 1.2). One of the workshops involved a visit to Cebu to allow the BoT and staff to interact with and study the institutional arrangements of the Mag-uugmad Foundation Inc.

In general, the structured interviews clearly showed that landcare was on a sound footing, with all stakeholders commenting on its success and continued potential for the future. There was high praise for the main site implementing agencies (ICRAF and SEARCA), but there was also a clear understanding that these agencies, as largely research focused, could not fully shoulder the longer-term institutional development of landcare. There were generally very positive feelings about LFPI in a broader future landcare institutionalisation role, albeit that its focus at that time was restricted to the Misamis Oriental and Bukidnon sites. The feedback suggested that for LFPI to take on a broader role, it would need to make significant changes to its structure and mandate to effectively represent the breadth of Philippines landcare; strengthen its project management skills to ensure greater accountability and effective delivery of project outputs; and improve its internal and external communication systems to better articulate issues both inside and outside the organisation.

Together with the Executive Director of LFPI, the Project Leader also advocated for release of the AECI Landcare Trust Fund, which had been recommended to be released to LFPI by an AECI end-of-project report. This advocacy continued through meetings with ICRAF management (as custodians of the Fund) during the in-country visits by the Project Leader through 2007 and 2008. However, the negotiations failed to achieve the Fund's release to LFPI and ICRAF were subsequently instructed to repay the Fund to AECI.

Activity 2: Implement an institutional development plan for LFPI

Using the outputs from the four investigative workshops outlined in Activity 1, a Strategic Planning workshop, facilitated by the contracted institutional development consultants, was conducted in December 2007. The workshop involved not only the BoT and the five

existing LFPI staff, but also the seven incoming staff then employed by the other partner agencies.

A draft institutional development plan was then prepared and given in-principle endorsement by the BoT in April 2008. The plan was subsequently developed as a Strategic Plan at a further workshop of BoT and staff in May 2008, amended during the period to December 2008 and finally approved by the BoT for implementation in January 2009.

The five-year Strategic Plan comprised five components. These components, together with some of the main achievements within each component were as follows:

- **Strategy 1: Strengthening organisational systems and structures.** *Achievements:* Development of a three-person Management Executive; development and approval of an amended operations manual more responsive to current realities; agreement by the BoT on expanding its composition and representation as well as expansion of the general membership; identification of staff training needs and investment in external communications; technical training for staff and some BoT members including specialised external training for five staff.
- **Strategy 2: Formalising and intensifying scaling-up efforts.** *Achievements:* Accreditation of LFPI as an NGO at the municipal and provincial level at project sites; creation of a proposed National Landcare Congress; accreditation of LFPI with NEDA Region X; significant involvement of staff and BoT members in the development of a manual to document landcare principles and processes (Landcare Facilitators guide book); development and approval of a Landcare Enterprise Unit (Landcare Unlimited) within LFPI to more effectively respond to scaling-up requests; building of partnerships with appropriate programs at barangay, municipal and provincial levels.
- **Strategy 3: Mobilising resources.** *Achievements:* Development of a funding partnership with UNDP Act for Peace Program for evaluation of landcare in conflict communities of Koronadal City (South Cotabato); development of a partnership with the Provincial Government of Misamis Oriental and Balay Mindanaw Foundation to provide funded services to the Japanese-funded JICA pilot micro-watershed management project in Alubijid and Gingoog municipalities; development of the Landcare Enterprise Unit (mentioned above); submission of new project proposals to a number of funding agencies.
- **Strategy 4: Empowering local communities and stakeholders.** *Achievements:* Facilitation of a new project funded by AusAID's Enterprise Challenge Fund to develop a small regional enterprise in handmade paper through improvement of an abaca supply chain in Misamis Oriental; facilitation of livelihood improvement programs in conflict areas of Muslim Mindanao through strengthening of local community and service organisations (for example in Malisbong); facilitation of greater ownership of landcare by LGUs (for example, the provision of funds, staff resources and incentive-based policies by the Lantapan LGU of more than Php650,000 per year); development of a more robust partnership with the National Coffee Board to plan joint project implementation on the rehabilitation and expansion of sustainable coffee-based farming systems.
- **Strategy 5: Developing a social marketing program.** *Achievements:* Development of the new Landcare Facilitators guide book (see below); development of a new corporate identity and logo; development of a high-quality LFPI brochure; active promotion of landcare to a range of new stakeholders such as Del Monte, Monsanto and Nestle.

In preparation for the transfer of the seven field staff from ICRAF and SEARCA to LFPI in January 2008, a series of three workshops was conducted in July, October and December 2007 to discuss and gain agreement on roles and responsibilities, conditions of employment, site logistics and administrative procedures for the transfer. To help orientate

and integrate the staff as a working unit, these workshops were rotated around the three regions, with field trips to view project activities at each site. The seven field staff commenced new contracts under LFPI from January 1, 2008.

The published set of landcare principles and processes to underpin landcare scaling-up, (Landcare Facilitators guide book) indicated as a project output of the project during the two year extension, was completed and published in March 2009 as the book *Landcare in the Philippines: A practical guide to getting it started and keeping it going*. Assistance in the production of the book was provided by Econnect Communication, who offered two staff to attend a write shop in Davao in December, where training was also provided in communication and media management. The book was published by ACIAR in conjunction with LFPI and officially launched in April 2009 by the Australian Ambassador at a function in Manila attended by more than 50 guests from various sectors relevant to the landcare movement.

In order to facilitate a greater level of ownership within LFPI of the institutional development process and its future implications, the leadership and major project responsibilities were officially transferred to the LFPI Executive Director in May 2008 and subsequently reviewed in December 2008.

To assess institutional development under the new arrangements, a survey of all staff was conducted by the Project Leader in November 2008. The survey analysed levels of satisfaction with project leaders, supervisors, technical specialists and administrative personnel, as well as the levels of satisfaction with institutional progress (for example, performance of BoT, administrative and financial procedures, training processes etc). The survey identified a number of major concerns with the institutional development outcomes and process including staff dissatisfaction with the rate of progress, internal communication problems, confusion over roles and a lack of transparency in major operations. A major staff workshop attended by some members of the BoT in December 2008 tabled the main issues of concern and developed an action plan to address the main concerns.

Despite the implementation of the action plan, an external review of the project in May 2009 highlighted a range of ongoing institutional development problems of major concern to the sustainability of LFPI. Apart from the lack of significant progress on some of the issues that emerged from the December workshop, a particular concern was the lack of progress in mobilising funding resources for the future. An additional problem was concern about delays with the renewal of SEC registration. As a result, the review recommended a number of changes, the implementation of which were seen as appropriate for ensuring the sustainability of LFPI, and conditional on the agency receiving any additional ACIAR funding that might become available in the future. As a result of the review, an internal restructuring of LFPI was undertaken in the July to September 2009 period to address the outstanding institutional development concerns (see Phase 3 below).

To showcase the achievements of landcare to existing and potential landcare developers, LFPI conducted the First National Landcare Congress in Cagayan de Oro in May 2009. Over 100 delegates attended the two day event, comprising presentations, workshops, a business networking event and a field visit to Claveria landcare sites. The newly-released Landcare Facilitators guide book was prominently featured with a local release ceremony and presentations of books to landcare farmers and practitioners that had provided stories and content for the book.

To better articulate the role of landcare to LGUs and other potential developers, the project team developed and endorsed a standard definition for landcare as follows:

A facilitated, farmer-led, group-based program of research and extension, where possible in collaboration with local government and other partners, directed towards sustainable farming systems and rural livelihoods in marginal upland localities in the Philippines.

Activity 3: Monitor and evaluate the performance of LFPI in developing Landcare institutionally in the Philippines

See Activities 1 and 2 above for details of some of the institutional evaluation processes:

- Two-tiered analysis of existing institutional issues:
- Strategic planning process and review;
- Completion of Landcare Facilitators guide book;
- Staff survey;
- Analysis during external review.

Additional evaluation processes included:

- A rudimentary performance framework formed part of the draft institutional development plan and subsequently part of the Strategic Plan;
- Draft performance assessment criteria for BoT and staff were pilot tested on one staff member;
- Appointment in March 2008 of an LFPI Research Manager to oversee the M&E of institutional development and economic dimensions of landcare activities. The Research Manager underwent orientation and a training program was developed and implemented. This included formal training interaction with Drs Cramb and Newby in the Philippines in June 2008 and Australia in February 2009;
- Monitoring of key institutional development initiatives including:
 - The multi-partner collaboration between LFPI, the Bangsamoro Development Authority (BDA), the Malisbong Community Development Organisation (MACDO), DA-Region 12 and the Malisbong LGU for the evaluation of landcare in Malisbong as a learning site for the potential expansion of landcare within Muslim Mindanao;
 - Pilot project with UNDP Act for Peace to evaluate landcare for livelihoods improvement in conflict zones of Koronadal City, South Cotabato;
 - Alignment of landcare with the Development Alternative Framework (DAF) of the Provincial Government of South Cotabato;
 - Negotiation of institutional partnering in the development of landcare in protected areas of Kapatagan, Digos City;
 - Landcare as the key extension process for delivery of LGU outcomes in the PILAR DAM project of the Pilar LGU in Bohol.
- A further evaluation of the institutional health of LFPI and of the landcare movement in general was completed in September 2009 through a scoping study of landcare sites by the Project Leader and the Philippines Horticulture Manager, John Oakeshott. The findings of this study, which was commissioned by ACIAR to direct further investment in landcare, were documented in a report to ACIAR in October 2009, and formed the basis for an extension of the project (Variation 7) and a complementary Small Research Activity (SRA) on improving the outcomes for smallholder farmers through greater collaboration with the ACIAR horticulture projects. In general, the study noted that significant progress had been made by LFPI with respect to governance issues, the relationship between staff and the BoT, internal communication, and standing with external stakeholders. While relatively little progress had been made in mobilisation of new funding resources, several good new prospects were in progress and importantly, a review of overheads and internal accounting procedures had given the organisation a much tighter financial system on which to base future funding.

Implementing community-level landcare activities that lead to economic growth

Activity 1: Establish a regional/site network of Landcare Coordinators and Facilitators and implement a program of site activities that lead to economic growth

In July 2007, three regional teams were established: Northern Mindanao (with a focus on selected sites within the provinces of Misamis Oriental and Bukidnon); Southern Mindanao (with a focus on selected sites within the provinces of South Cotabato, Davao del Sur and Sultan Kudarat); and Visayas (with a focus on selected sites within the province of Bohol). Each of the three teams consisted of two field personnel – A Landcare Coordinator and a Landcare Facilitator.

During the three project team workshops referred to above (July to December 2007), a project network plan for coordinating the seven field staff across their employing agencies (ICRAF and SEARCA) and their intended employing agency (LFPI) was incrementally developed. Regional priorities were developed and implemented in line with the objective of demonstrating the role of landcare in delivering livelihood benefits to farmers, primarily economic growth and human security. These were initially canvassed and scoped during the July workshop, taken back to the regions for discussion with partners and stakeholders, reviewed and refined at the October workshop, and then implemented in the October to December period. The site priorities are listed in Appendix 4.

In the Northern Mindanao program, the major focus was on enhancing livelihoods through two innovations: agroenterprise development with the testing of a banana marketing cluster at Claveria and two vegetable marketing clusters in Lantapan; and vegetable and rubber-based agroforestry system development.

In the Southern Mindanao program, the major focus was on enhancing livelihoods through agroenterprise development with the testing of a vegetable marketing cluster at Ned; and testing of a landcare approach in improving livelihoods in Malisbong – a conflict area of Muslim Mindanao. As the project progressed, the perceived success of landcare in the Malisbong site was instrumental in LFPI acquiring a new project with the UNDP Act for Peace Program in using the landcare approach to improve livelihoods in two conflict communities of Koronadal City in South Cotabato.

In the Bohol program, the major focus was on testing agroenterprise development for improving farming and marketing systems in San Isidro; and the use of the landcare approach for securing vegetable gardens and other livelihood improvements for households in Pilar (PILAR DAM Project).

In the delivery of the programs, the regional teams were provided with technical support from ICRAF on agroforestry systems and landcare system development; UPLB on integrated pest and disease management; and CRS on agroenterprise development. As the requirement for agroenterprise support was underestimated in the original project proposal, a supplementary proposal achieved additional funding for CRS to provide additional training and mentoring to the regional teams on agroenterprise development. This allowed the conduct of a special agro-enterprise training workshop for 25 project staff and regional collaborators in February 2008 with the objective of facilitating a more rapid development of cluster formation, cluster development and market analysis. As a result of the review in December 2008, regional coordination meetings were held in the December 2008 to March 2009 period to better plan coordination of the technical support specialists at each site.

Deployment of an AYAD volunteer, Scott Graham, at the Bohol site allowed the building of special skills in training event evaluation and soil health improvement. A series of training events on soil health in both Bohol and Mindanao were instrumental in significantly improving the general knowledge of landcare farmers on the topic. The training events were backed up by the production of a soil health manual, which was published in both English and Visayan.

Activity 2: Monitor and evaluate the economic and other impacts of the site activities

Once the site priorities for each region had been identified, a draft M&E framework for each major work area was then developed. This was facilitated through a special M&E training and development workshop in October 2007 and subsequently refined through input from the Australian Research Directors and other senior project staff. The plans were consolidated into an overall project performance framework in May 2008.

The LFPI Research Manager appointed in March 2008 was deployed to assist and oversee the process, as well as help develop site monitoring tools and on farm adaptive research techniques.

In January/February 2009, a series of six special case studies were designed to document the impacts of the project on economic outcomes, other livelihood issues and collaborator institutional development. To help conduct the case studies, a Research Assistant was employed from February to April 2009 to work with the Research Manager and the Australian research advisers. The case studies were published as working papers. A further update on progress was provided in the report of the September 2009 scoping mission.

All three regional programs were able to show significant outcomes and impacts:

- In the Northern Mindanao program, through the agroenterprise development work with a banana marketing cluster at Claveria and two vegetable marketing clusters in Lantapan, the economic impacts were initially limited and in the case of one of the vegetable clusters negative because of mis-management of loan funds, but in all cases the capacity building and social capital development of the groups was significant, providing a platform for future economic benefits to be realised.
- In the Southern Mindanao program, through the agroenterprise development work with a vegetable marketing cluster at Ned, the 17 farmers of the cluster over the initial trial period of seven months were able to produce and direct market more than 40 tonnes of bell pepper for a net income after marketing costs of P850,000. This was the first time that farmers had marketed their produce directly to wholesale buyers outside of their immediate region and the increase in their knowledge and market confidence were significant. Prices received across the duration of the trial shipments ranged from 16 to 39 pesos per kilogram, compared to a previous price range of 8 to 25 pesos per kilogram. The flow-on effects were clearly evident with farmers having the ability to purchase cell phones, send their children to high school, and purchase equipment for new enterprises such as a mini rice mill.
- The continuing evolution and success of the Ned vegetable cluster was demonstrated in the 2009 season when the growing bell pepper cluster of 42 members marketed 62 tonnes of bell pepper over a period of 11 months for a net income after marketing costs of P1.4m. This was despite major challenges associated with transport to market from deteriorating road infrastructure. The determination shown by the farmers in seeing the shipments through, demonstrated not only their commitment to the group marketing concept, but also their satisfaction with the actual and potential economic benefits accruing from the process.
- At the Muslim Malisbong site in Sultan Kudarat, besides improved income, there was a significant development of farmer capacity and social capital from farmers being able to travel out of their municipality to other landcare sites for the first time. Although anecdotal, there was also evidence of improved peace conditions within the immediate region.

- In the Bohol program, the initial success of the PILAR DAM Program in adapting the landcare approach for securing vegetable gardens for households was instrumental in the Pilar LGU broadening the program to include fruit, livestock and forestry and significantly increasing the human and financial resource allocation to service the program. The appointment of over 180 Barangay Farmer Technicians (BAFTECHs) facilitated widespread adoption as well as a rapid transition to commercial and semi-commercial vegetable production for a number of farmers.

The major study of economic impacts of landcare in Bohol (commenced during the earlier phase of the project in 2006) was completed and results published. The study showed clear evidence of a development progression through landcare from the initial adoption of natural vegetative strips (NVS) on degraded land to the establishment of a more diverse and commercially orientated farming system. The study showed that economic return from landcare interventions was generally very positive with the gross and net cash income of adopters surveyed in San Isidro and Pilar being two to three times higher than for non-adopters. Although the income increases were from a small base and in absolute terms may seem insignificant, the increases in income often resulted in significant livelihood outcomes. Much of the benefit for farmers derived from the evening out of their annual incomes, and the reduction in risk associated with a more diversified cropping portfolio. The study also showed that while the primary economic benefit of landcare came from its on-site impacts (such as improved farm productivity, reduced input costs, and increased diversification), off-site impacts (such as siltation of waterways or water storage facilities), were still positive. The study was published as a University of Queensland PhD research thesis in July 2009 and as a research paper in 2011.

7.1.3 Phase 3: 2009 to 2011: Implementing and evaluating institutional development processes to secure the future of landcare and LFPI

Activity1: Consolidation and refinement of LFPI's institutional development plan

As reported above, a number of institutional development issues of concern to the sustainability of LFPI were highlighted during the external review of the project in May 2009. As a result, an internal restructuring of LFPI was undertaken in the July to September 2009 period to position LFPI for further ACIAR funding support for institutional development. This was further informed by the evaluation of the institutional health of LFPI and of the landcare movement in general by the September 2009 scoping study of landcare sites by the Project Leader and the Philippines Horticulture Manager, John Oakeshott.

The internal restructuring of LFPI involved a major review of the Strategic Plan; changes to staffing; changes to the composition of the BoT; review of mission, objectives and operational procedures; and re-analysis of budgets and resource mobilisation strategies. The revised Strategic Plan together with By-laws and other documents was then endorsed by the BoT at a special General Assembly of LFPI in October 2009 and finally approved by the incoming BoT at the General Assembly in March 2010. Significant changes and achievements included:

- Appointment of a new Executive Director (ED), Ben Aspera;
- Reduction of the BoT to seven members and provision for representation from the Southern Mindanao and Visayas landcare regions;
- Relocation of the head office to Cagayan de Oro to improve communication systems, financial management and institutional responsiveness;
- Reduction in overhead operating costs;

- Development of a more targeted resource mobilisation strategy. As a result, in late 2010, LFPI became one of four national service providers to the development aid agency ACDI/VOCA in the implementation of their major new CoCoPAL project, with responsibility for implementing the project in three provinces of western Mindanao. The project is the largest ever project for LFPI and has the highest level of contracted funding of any of the four national partners. In 2011, funded roles were also secured in two new projects – a USAID-funded Climate Change Project, and an ACIAR-funded Watershed Management Project;
- Development and implementation of an improved capacity building program for BoT and staff, including on-site coaching from the ED on local governance issues. The full BoT and key LFPI staff were subsequently provided with the opportunity to attend special NGO governance training provided by PACAP in Cagayan de Oro in March 2010;
- Development of improved institutional marketing systems including a revamped brochure, and commissioning in August 2010 of a new website using Drupal® Content Management Systems (CMS) software, to facilitate LFPI maintaining a more dynamic and effective website at significantly lower cost than other alternatives;
- Purchase and early development in Claveria of a 1.5 ha demonstration farm and training centre through donations coordinated by Landcare Queensland on behalf of the family and friends of the late Scott Graham, AYAD landcare volunteer from Bohol.

Activity 2: Conduct of special stakeholder meetings

Special landcare stakeholder meetings to clarify needs and expectations of farmers and partner agencies were held during the February to April 2010 period in all six core landcare sites (Claveria, Lantapan, Ned, Pilar, San Isidro, Koronadal City). Action plans were developed and implemented. Significant outcomes included:

- Better understanding of the issues and aspirations of landcare market clusters and landcare groups, enabling better tailoring of programs to service needs – for example:
 - In Claveria, facilitating the provision of bridging funds to the banana cluster for market development, and facilitating a linkage of the cluster with the CRS-Jollibee project for project support;
 - In Lantapan, facilitating the sourcing of priority inputs such as rain shelters, seeds, plastic crates and weighing scales for the vegetable clusters in conjunction with UP Mindanao and the Mindanao North Coast Integrated Area Development Program (MINCIADP); support in the development of new market linkages with Gaisano and NCCC; and facilitating the development of the 60-member Kaatuan cluster into a cooperative under Bukidnon Cooperative Bank;
 - In Ned and Koronadal City, delivery of a capacity building program targeted at developing ‘second line’ landcare leaders; development of new agroforestry enterprises built around an integration of timber trees, fruit trees and bamboo for barbecue skewers; and facilitation of a vegetable storage and display center in the General Santos bagsakan centre;
 - In Bohol, development of special technical and facilitation tool kit for Pilar BAFTECHs to enhance their effectiveness as farmer facilitators.
- Development of stronger site collaborative teams involving LGUs, NGOs, private companies and other development players such as UP Mindanao. For example in Lantapan, a ‘landcare cluster support alliance’ was formed with involvement of the LGU MAO, LFPI, Tinubdan sa Kalambuan Foundation Inc (TKFI) of the Bukidnon Cooperative Bank (BCB), Normin Veggies, Department of Trade and Industry (DTI), Growth for Equity in Mindanao (GEM), NOMIARC, UP Mindanao, Syngenta and East West Seeds;

- More effective involvement in LGU programs related to landcare such as the Lantapan LGU's sustainable agriculture incentives program, where LFPI was able to help facilitate the recognition of model farms;
- Better analysis of work roles and work demands for senior LFPI staff with cross-site responsibilities, resulting in the hiring of additional staff resources within LFPI to better target particular local services.

The site needs and expectations were continuously re-assessed during the course of activities and action plans reviewed during a team workshop in Bohol in July 2011.

Activity 3: Formation of Landcare Coordinators Network (LCN)

During staff planning meetings in March 2010, the LCN was re-initiated and a preliminary action plan developed. The action plan included improved email communication, improved updating and reporting, and a program of mentoring for junior LFPI field staff.

The operation of the LCN was reviewed during regular LFPI staff and BoT meetings to ensure appropriate inputs into project activities. Its performance was further reviewed during a team workshop in Bohol in July 2011.

Activity 4: Organisation of farmer and LGU cross-visits

During the landcare stakeholder meetings and staff planning meetings, a program of targeted cross-visits was developed. The initial purpose of the cross-visits was to improve the farmer to farmer learning between the Ned and Lantapan sweet pepper clusters; to improve the technical knowledge on bananas of Bohol farmers by a visit to the banana cluster and the ICRAF banana propagation facility at Claveria; and to promote LGU use of landcare through cross-visits of LGU staff to innovative LGU-managed programs such as the PILAR DAM Program.

As needs were re-clarified, four major cross-visits were completed:

- Bohol San Isidro farmers and LGU to Northern Mindanao to study banana systems, rubber-based agroforestry systems, and vegetable clusters (May 2010);
- Southern Mindanao farmers and LGUs to Northern Mindanao to study vegetable clusters, rubber-based agroforestry systems, and vegetable research at NOMIARC (August 2010);
- Southern Mindanao farmers and LGUs to Leyte to study protected cropping systems (April 2011);
- Bohol Pilar farmers and LGU to Northern Mindanao to study rubber-based agroforestry and vegetable production systems (May 2011).

In addition, two other smaller cross-visits involved Lantapan farmers to Claveria to study rubber-based agroforestry systems; and Bohol farmers to Leyte to study protected cropping systems.

Outcomes of the cross-visits were documented in trip reports and reviewed during a team workshop in Bohol in July 2011.

Activity 5: Implementation of a landcare leadership development program

The project initially proposed researching and developing a leadership program for landcare groups. However as the project evolved, other project demands meant that this had to be re-evaluated and a decision was made to focus the activity on developing the leadership skills of the LCN. Accordingly, in August 2010, a senior Landcare Coordinator, Lyndon Arbes (Landcare Coordinator for Northern Mindanao), was nominated for the ACIAR John Dillon Fellowship Program. This nomination was successful and Lyndon Arbes undertook his Fellowship in February/March 2011. On his return, a training and mentoring program for other LFPI staff was developed.

Activity 6: Development of Philippines Landcare Network (PLN)

To enhance networking of landcare practitioners across the southern Philippines, the concept of a PLN, led by LFPI, was proposed. During staff planning meetings, the PLN was conceptualised including what services might be provided and a listing of the people and organisations likely to be interested. The PLN became operational in November 2010 and held its first meeting in Cagayan de Oro in January 2011. Agreement was reached on the purpose of the PLN and a preliminary action plan developed. One of the first functions of the PLN was to provide collective input into a landcare communications strategy including the project activity to produce a series of landcare videos.

Activity 7: Study and documentation of selected landcare scaling up sites

Due to other demands on project personnel, principally from the ACDI/VOCA CoCoPAL Project, the research and documentation activity for this output was permanently abandoned in January 2011. However, a program of support for new scaling-up sites was maintained. Significant outcomes included:

- Support to the Iligan Save a River Movement in Lanao del Norte in the scoping of a landcare program. This involved a presentation to partners and a multi-stakeholder study tour to Claveria of LGU, NGO, PO and academe personnel from Lanao del Norte;
- Support to developing agroenterprise clusters in the Bukidnon municipalities of Malaybalay and Impasugong and facilitation of their networking with the Lantapan vegetable clusters;
- Facilitation of the formation of Bantay Kalasan – an IP (Indigenous Peoples) group of forest guards – within Claveria forest margin communities. The project provided landcare training and agroenterprise capacity building, and facilitated the creation of four scholarships for IP students to MOSCAT with the support of funding from the Congressman;
- Development of a landcare information support package comprising the Landcare Facilitator guide book (landcare principles and processes), the new LFPI website and a series of brochures.

Activity 8: Development and implementation of a program to increase the effective institutionalisation of landcare

At the project planning meeting in February, a concept of effective institutionalisation of landcare was developed, and an action plan put in place. The concept primarily focused on getting landcare integrated into the Development Councils at the barangay, municipal and provincial levels. A particular priority established was to help incorporate landcare into the Medium-Term Plan of the South Cotabato Provincial Development Council following the major elections in May 2010. Longer term goals included membership of higher level advisory groups and a higher profile at the national government level. Significant outcomes and achievements included:

- Ned Landcare Association became a member of the Barangay Development Council;
- LFPI became a member (the only NGO member) of the Municipal Development Council of Pilar in Bohol;
- LFPI became one of only four members of the South Cotabato Provincial Disaster Risk Reduction and Management Council in early 2011, after advice from Rey Legaste of the Provincial LGU recommending the strategy of pursuing the Medium-Term Plan of the South Cotabato Provincial Development Council (PDC) be changed to a more targeted membership of sub-councils within the PDC;

- LFPI became the lead agency in the Claveria Technical Coordinating Committee on Sustainable Agriculture (CTCC) consisting of eight agencies including ICRAF, MOSCAT, DENR-MENRO, MAO, MAR, CRS-Jollibee, CLCA and LFPI. The purpose of the Committee was to develop a sustainable agriculture plan for Claveria;
- LFPI became Co-chairman of the Macro Development Committee of the PDC of Misamis Oriental with a focus on improving M&E of all programs, a more significant role for NGOs and a greater emphasis on impacts rather than outputs;
- Landcare was formally integrated into the watershed management plans of Bukidnon through collaboration between LFPI and BENRO;
- LFPI received pending accreditation with the Agricultural Training Institute (ATI) of the Department of Agriculture;
- LFPI became a member, and the only NGO member, of the Protected Area Management Council of Mindanao that will implement an action plan under the UN Convention to Combat Desertification, Land Degradation and Drought.

In addition, contact was established with two Manila-based personnel of the Departments of Agriculture and Environment & Natural Resources to commence a process of increasing the profile of landcare at the national government level.

Activity 9: Development of a program to facilitate exchange between Philippines and Australian landcare personnel

After input from the LFPI team, the Australian Project Leader submitted a proposal for a Philippines-Australia Landcare Mentoring Program to the Crawford Fund in early 2011. Funding was acquired and the first stage of the program (mentoring of five LFPI personnel in Australia) will be delivered in early 2012. Return mentoring from the Australian mentors is expected in late 2012.

Activity 10: Evaluation of institutional innovations

During staff planning meetings and the development of the above activities, performance criteria were discussed and noted. Performance against project objectives is reported above against each activity.

7.2 Australian component

7.2.1 Phase 1: 2004 to 2007: Evaluation of viability issues of peri-urban horticultural farmers in southeast Queensland

Because of a delay in operational commencement of the project, and the priority provided to rolling out the Philippines component of the project first, the Australian component was delayed until the end of the first year. Hence, the Australian project effectively became a two-year project rather than a three year project, with research components modified as a result.

Scoping and engagement with stakeholders

The project was first scoped by identifying major stakeholders, identifying current programs and policies relevant to peri-urban agriculture, and determining interest and involvement. This information was documented to form an information base, from which decisions could be made about the next phase.

Nineteen key stakeholders were identified across State Government (Department of Primary Industries, Department of Natural Resources, Department of Communities, Department of State Development, Office of Urban Management), Local Government (Maroochy Shire Council, Noosa Shire Council, Caloundra City Council, SUNROC),

community (SEQ Catchments, Regional Communities Forum, Canelands Project, Pomona Rural Futures Centre, Blackall Range Institute, Blackall Range Land Use Planning Association), industry (Queensland Farmers Federation, Growcom, Golden Circle) and education (University of the Sunshine Coast, Cooloola TAFE) sectors. Because of the convergence of the ACIAR project with a proposed project on peri-urban landholders under development by the Blackall Range Institute, a special partnership with this agency was commenced.

In the scoping of the project and engagement with stakeholders, 43 meetings were held to present the project, document issues and interests, and develop appropriate linkages. As a result, it was resolved that the main operational partners in the project would be the Department of Primary Industries, Blackall Range Institute, Maroochy Shire Council, Noosa Shire Council, Caloundra City Council and the University of the Sunshine Coast.

Project research objectives were refined in consultation with the project partners. Agreement was reached that the key objective was to produce a framework that identifies the most appropriate processes for improving livelihoods of peri-urban landholders in the Regional Landscape and Rural Production Area of the Sunshine Coast.

Throughout the subsequent research, regular consultation was maintained with the key stakeholders. This was used as part of the action research process to revise project activities and directions as required. The consultation involved participation in workshops and other forums related to peri-urban issues and continued monitoring of complementary initiatives such as Maroochy Shire Council's Rural Enterprise Project.

Characterisation of the Regional Landscape and Rural Production Area

A range of key biophysical, socio-economic and socio-political indicators were identified, and a preliminary interrogation of data was made to broaden the knowledge base. Key biophysical indicators included lot parcel sizes and landholdings, allowed or restricted uses and terrain characteristics. Key socio-economic and socio-political indicators included age distribution, household income and employment factors.

The research showed that much of the area was already highly fragmented with more than half of the lots within the Maroochy Shire component being less than 1 ha in size. Because of privacy access restrictions, the title status of these was not able to be completed to determine average owner holding size, but the data suggested that holdings in general would most likely fall well below generally-accepted acreage limits for viable horticultural crop production. Importantly, the data maps clearly showed significant alienation of larger lots through rather haphazard development of neighbouring smaller lots via subdivision and rural residential developments. In terms of the socio-economic and socio-political data, the research showed significant migration in and out of rural communities between census records, a general ageing of the rural population and a highly variable matrix of other factors. The results suggested that viable farm production in an environment of rapid change and economic uncertainty was difficult and the predisposing issues complex.

Research on rural landholder needs and aspirations

To identify study areas for the research on rural landholder needs and aspirations, a set of criteria for the selection of study areas was established. These were as follows:

- Within the Regional Landscape and Rural Production Area of the South East Regional Plan (that is, outside of the urban footprint);
- Reasonably representative of the hinterland region (that is, contains a mix of farms, other rural businesses, non-rural businesses, lifestyle/hobbyists etc. Also preferable that the site contains some full-time, commercial farmers – not just all lifestyle and hobbyists);
- Preferably of some strategic interest to the local authority;

- Where there is likely to be some interest from the landholders and the general community within the site;
- Up to 150 landholders within a continuous geographic area;
- Where there is a community group/local interest group or local landholder “champions” that would be interested and the project could effectively engage with to launch and conduct the research;
- Preferably in one catchment.

As a result, three study areas were identified – Hunchy Valley (Maroochy Shire), Cooroy/Lake MacDonald (Noosa Shire) and Cooran/Six Mile Creek (Noosa Shire).

Although preliminary scoping of each site was completed, the research proceeded on only one of the sites – Hunchy Valley, because of resources and the particular interest and input from the Blackall Range Institute.

Engagement was established with landholders in the Hunchy Valley and preliminary analysis with key influentials commenced. This involved an initial meeting with two key local influential landholders, a preliminary meeting with the Hunchy Community Association where the project was presented by the two influentials, and a social function meeting with Hunchy Community Association to introduce the project and outline the research processes.

A preliminary set of survey questions was developed around a theme of identifying individual economic, social, environmental and personal issues, needs, aspirations, and the processes for change including interest in change and capacity to change.

The survey was eventually completed under a collaborative partnership with the Centre for Rural and Regional Innovation of the University of Queensland and the Office of Urban Management. This enabled the surveys to be part of a broader research project analysing value frameworks of people living in peri-urban landscapes of south east Queensland. This enabled not only a more detailed survey of the study areas, but also the opportunity for valid comparison of the study areas with other communities in south east Queensland.

The survey was done in two concurrent components: a broad based telephone questionnaire conducted through a specialist call centre; and an intensive survey based on personal contact conducted in six to eight sub-catchments (including the Hunchy Valley). The survey determined property issues (characteristics, current uses, income generation, aspirations); how landholders developed a sense of place (attachment, identity, landscapes); what forms of knowledge they used in decision making and how useful that information was; what sorts of social capital sustained their institutions and relationships; and what the impacts were of government and other regulations.

The survey was completed in 2008 and analysed at both scales to show any differences in results. The results were then synthesised to show results and trends using both quantitative and qualitative analysis to triangulate results and provide social value details (Wardell-Johnson, 2008).

The research provided considerable detail on the range of social values but unfortunately failed to provide any significant information on how needs and aspirations could be best serviced. The research confirmed the importance of planning by-laws, land capability, environmental values, lifestyle issues and NGO information sources in the decision-making process of Hunchy landholders.

Research on farm development options for improving viability

Through links with the University of the Sunshine Coast, an opportunity arose in April 2006 with two planning specialists from the University of Wyoming in the USA undertaking a short sabbatical on the Sunshine Coast. The Wyoming specialists had special expertise in rural planning and agreed to apply this to help the project understand some of the

issues facing Hunchy rural landholders wishing to diversify their rural or non-rural businesses.

The biophysical and socio-economic datasets that had been gathered previously were first interrogated by overlaying data pertaining to State Government vegetation laws, local government special management areas (SMAs) and local government compliance codes for specific development activities. This was done to assess the overall impact of biophysical and socio-political parameters on landholder business and development options. The effect of the SMAs on landholders was evaluated by using GIS to build a multi-criteria analysis (MCA) model and using the spatial spreadsheet capabilities of CommunityViz to calculate model outputs. Model outputs allowed landholders to know how much of their land was impacted by each SMA and, in consultation with the local planning guidelines, the level of application required for a potential project.

To support the research and gauge the potential for specific economic opportunities, a series of three workshops was conducted with landholders to explore the development opportunities for farm forestry and cattle grazing. Similarly to the SMA model, local government codes for these activities were built in to an MCA model and outputs were processed on a parcel basis with Community Viz. For the farm forestry workshop, three farm forestry experts outlined development options for landholders and GIS layers were used to identify suitable available land (Lieske et al, 2008).

The research showed that although landholders saw farm forestry and cattle grazing as promising enterprises for increasing economic livelihoods, the fragmentation of potentially available land was a major constraint, particularly for farm forestry. Potential existed for a community-based farm forestry or cattle grazing enterprise across farms, but implementation would be difficult and potentially costly. There was general agreement that whatever the scenario, there was an important need to navigate the regulatory environment, particularly given that the constraints vary across features and properties. This regulatory environment within which landowners must work was complex, but it had to be clearly understood if landholders were to appreciate and effectively develop economic opportunities.

The research also showed that GIS and planning support technology was extremely useful in providing this understanding. Mapping the SMAs at a scale where landholders could clearly see their property was a key step in providing landholders with the knowledge they required. It was concluded that bringing high quality data to landholders in an environment where they feel comfortable, offers great potential to turn data into information useful for landholder decision making.

In a further scenario analysis, Community Viz was used to create and evaluate three scenarios: current conditions, build-out of vacant parcels, and build-out as cluster development. The build-out analysis revealed 360 hectares on 68 properties that could be developed as large lot residences or used for forestry or agriculture. The cluster scenario explored the option of using a transfer of development rights or similar legal mechanisms to allow the best of both worlds, full as-of-right residential development while maintaining the maximum amount of open lands for production-based rural economic development. Sitebuilder 3D was used to develop several 3D scenes. The 3D views generated considerable enthusiasm and discussion as landholders found the scenes to be an immediate, intuitive and understandable way to communicate planning and development ideas.

7.2.2 Phase 2: 2007 to 2009: Evaluation of processes for enhancing and sustaining economic benefits for peri-urban landholders

As a result of further analysis of data from the Phase 1 research in a workshop with Hunchy stakeholders, this new phase of the project elected to pursue an alternative approach to that proposed in the project document – aligning future activities with the evolving Sunshine Coast Regional Council (SCRC) Rural Futures Strategy. Note that the

SCRC had been formed from an amalgamation of the Maroochy, Noosa and Caloundra Shire Councils. This was largely in response to the realisation that development patterns in the region were not necessarily pre-determined, and by articulating and agreeing upon a vision, landholders may have some say in how development proceeds.

Because the project was further delayed because of the slower than expected evolution of the Rural Futures Strategy, it was proposed (and agreed by ACIAR) to continue the research to December 2009 under a no-cost extension of the project.

The main activity involved facilitation of input from the Hunchy Community Association and the Blackall Range Institute into the Rural Futures Strategy. This involved a series of meetings with SCRC staff, including specialised input into a position paper on the sustainable future of the Sunshine Coast canelands. In this particular instance, a range of innovative future scenarios and actions were proposed, reflecting the desire of landholders to see broader community-based innovations considered, particularly those which empowered landholders to be part of the solution.

The interaction further cemented the view amongst the project stakeholders that the project investment in clarifying and informing some of the macro-issues of the environment for peri-urban business development was more appropriate than investment in farm level or regional level issues.

The project ended with a process in place for ongoing input into the Rural Futures Strategy as it started to take shape and enter a phase of more serious debate on implementation.

Project personnel also provided input into a proposed new project developed by the University of the Sunshine Coast for an ARC grant on researching the effectiveness of extension and engagement processes in peri-urban regions of southeast Queensland.

8 Impacts

8.1 Scientific impacts – now and in 5 years

8.1.1 Philippines component

Over the seven years of the project, the research continued to confirm the potential of the landcare approach in improving livelihoods, sustainability of agriculture and extension systems in the Philippines. This has been documented in considerable detail. As a result, it has continued to attract the interest of both individuals and institutions with roles in rural community development. In fact, it appears to be perceived by a number of these individuals and institutions as the ‘tool of choice’ for achieving effective and relatively-rapid change in rural communities. Examples include:

- The EU-funded Upland Development Project recommended landcare as the community development process with most potential for the conflict-affected site of Malisbong in Sultan Kudarat. The early success at this site was then instrumental in the selection of landcare as the tool of choice by the UNDP Act for Peace Program for its pilot livelihood improvement projects in conflict communities within Koronadal City, South Cotabato.
- The Bohol Environment Management Office of the Provincial Government of Bohol selected landcare as its preferred model for upland development, representing a major shift in focus to a more grass-roots farmer level in achieving longer term sustainable changes in farming practices in the Bohol uplands.
- Landcare was used by the SANREM Program as the basis for implementation of a five-year policy incentive program on sustainable farming systems by the Lantapan Municipal Government.
- LFPI was selected by the international NGO, ACDI/VOCA, as a national partner in the US\$5.4m CoCoPAL Farming Systems Project to use its landcare approach in the planning and delivery of capacity building and improvement of food security for smallholder farmers in western Mindanao.
- Landcare was adopted as a key strategy by the Provincial Government of South Cotabato in its provincial-wide Development Alternative Framework (DAF) Program to better plan and deliver a broad suite of livelihood services to rural communities.

The book *‘Landcare in the Philippines - A practical guide to getting it started and keeping it going’*, launched in 2009, represented a major step forward in the documentation of the principles and processes of landcare. It was subsequently used by more than 300 staff of LGU, NGO and PO organisations as a guidebook in the formulation and delivery of programs related to livelihood improvement and development of sustainable farming systems. Important in the understanding of landcare in the book and in training events was the clearer definition and articulation of the landcare approach as *‘a facilitated, farmer-led, group-based program of research and extension, where possible in collaboration with local government and other partners, directed towards sustainable farming systems and rural livelihoods in marginal upland localities in the Philippines’*.

The development of research skills within LFPI through the M&E activities of the project significantly strengthened the organisation’s scientific capacity to the extent that in the CoCoPAL Project it was able to assign an M&E specialist and effectively implement M&E processes without outside specialist research assistance. This distinguishes LFPI as one of few NGOs in the Philippines with dedicated research personnel. The ongoing participatory research with farmers as an essential element of the landcare approach also

helps distinguish it from other group-based extension programs operating in the Philippines.

In five years time, it is anticipated that the above developments together with the success of the adaptation of the landcare approach in the CoCoPAL Project will see landcare adopted more widely by institutions as the tool of choice in community development.

8.1.2 Australian component

The process of taking high quality GIS and planning data at a property level in map form to landholders in their farm environment where they felt more comfortable, demonstrated great potential to turn data into information useful for landholder decision making. This technique has subsequently been used by other NRM project implementers to improve the engagement processors with farmers and ensure that planning and development concepts are being communicated in a more intuitive and understandable way.

It was disappointing that the social values research failed to deliver the data that the project required. There was a lesson learnt about the need for more careful analysis of collaboration with other agencies on larger-scale research before proceeding.

8.2 Capacity impacts – now and in 5 years

8.2.1 Philippines component

Through training, cross-visits, facilitation of new linkages with support personnel and an improvement in the knowledge of farmer technicians, the project has achieved a significant expansion of knowledge and skills for more than 10,000 farming households, and more than 1,000 service agents. The flow-on impact of this increase in knowledge and skills beyond the scope of the project was evidenced by the following examples:

- The establishment by the Municipal Government of Pilar in Bohol under the PILAR DAM Program of 189 Barangay Farmer Technicians (BAFTECHs) as landcare facilitators to service 189 barangay landcare groups covering 4,700 households across the municipality. Other capacity impacts include the continuing expansion of the Program from its vegetable base into fruit, livestock and agroforestry components, and the development of a special Municipal Livelihood Development Centre to demonstrate technologies for wider community sharing.
- The steady increase in the provision of dedicated resources to landcare by LGUs, including operational funding (from less than Php100,000 per year across the project sites in 2004 to more than Php2,000,000 per year across the project sites in 2011), and landcare personnel (from two in 2004 to more than 10 in 2011).
- The engagement in landcare by the Tinubdan sa Kalambuan Foundation Inc (TKFI) of the Bukidnon Cooperative Bank in infusing landcare into their process of engaging with smallholder farmers on microfinance initiatives.
- The increasing ownership of landcare at Municipal and Provincial Government levels as indicated by the gazettal of six landcare ordinances, integration of landcare into seven Development Plans, and increasing integration of landcare approaches into municipal and government delivery programs.
- The facilitation of village-level enterprises in indigenous communities as a strategy to both improve income in indigenous forest communities and help reduce urban unemployment. A significant example was the development of a pilot abaca-based handmade paper enterprise in Claveria in conjunction with the private sector business - CDO Handmade Paper, under funding from AusAID's Enterprise Challenge Fund. The pilot then became a template for additional enterprises in indigenous forest communities.

- The increasing capacity of LFPI to improve and expand the delivery of landcare services outside of the scope of the project, as evidenced by the acquisition of new projects such as the CoCoPAL project, an EU-funded Climate Change Project and an ACIAR-funded Watershed Management Project. The CoCoPAL Project is the largest ever project for LFPI and has the highest level of contracted funding of any of the four national partners. In addition, the purchase and development of the Claveria demonstration farm and training centre and LFPI's pending accreditation with the Agricultural Training Institute (ATI) of the Department of Agriculture demonstrated LFPI's growing determination to build a significant landcare training capacity for the future.
- The continued improvement in farmer knowledge and engagement with market chains through the evolution of the landcare market clusters. This led to greater sophistication of their operations and greater self-sufficiency, exemplified by the adoption of micro-financing schemes by the Lantapan and Ned clusters; the registration of the Katuaan cluster at Lantapan as a cooperative; and the innovation of the Ned cluster in fostering new technologies and developing new partnerships outside of the project despite extremely difficult conditions of isolation and transport access.

Regrettably, by the end of the project, there was still no significant impact in building landcare capacity at the national government level.

In five years time, it is anticipated that landcare knowledge and skills and capacity for their application in community development will have grown significantly as a result of LFPI's broader training and development role, its impact in western Mindanao under the CoCoPAL Project and the strength and value of the core landcare sites as models of landcare development. However, unless a stronger national government involvement can be achieved, much will depend on LFPI's continuing capacity to provide the basic mentoring support and leadership across an increasing geographic and institutional spread of landcare developers.

8.2.2 Australian component

By linking the extension skills of the Project Leader with the GIS and broader land use planning skills of Dr Ken Lyons (Spatial Information Services) and Drs Scott Lieske and Jeff Hammerlinck of the University of Wyoming, the project significantly enhanced the research skills of the commissioned agency and other involved government agencies. The project leaves a legacy of a direct ongoing interface between modelling specialists and policy making agencies on the development of land use planning models and community decision support tools.

While the social values research was less useful in the context of the outcomes for the target audience, it still provided a valuable learning experience for the Project Leader and project collaborators in the do's and don't's of community level research.

8.3 Community impacts – now and in 5 years

The previous landcare project (ASEM/1998/052), which was focused on enhancing the adoption of conservation farming systems, clearly established that the landcare practices, primarily contour-based farming systems such as NVS, had significant environmental and capacity building impacts. These included:

- Reduced soil erosion, improved moisture balance, and increased organic matter levels;
- Improved effectiveness of externally added inputs such as fertiliser;
- Increased awareness and knowledge of land degradation;

- Enhanced skills to mitigate soil erosion.

The project also clearly demonstrated the significant development of social capital around the landcare groups, landcare associations and farmer training groups.

The current project demonstrated that the farming systems developed through landcare create a stable platform from which a range of more commercially-oriented production systems can be built, providing significant economic and social benefits and impacts for participating farmers, the communities in which they live, and the upland landscapes on which their livelihoods are based. These changes included:

- Diversification of cropping systems to include higher-value crops such as vegetables, fruit, timber, and industrial crops such as rubber – both from enrichment of the NVS with fruit trees, banana, pineapple, timber trees and rubber; and enrichment of the alley crop with vegetables and specialty crops to supplement subsistence crops such as corn. In many cases, it has been shown that the revenue generated from the enrichment of the NVS exceeds that from the alley crop;
- Improved yields of both subsistence and commercial crops;
- Adoption of improved crop production techniques, including agroforestry;
- Enhanced social capital, particularly bridging social capital, linking farmers and their communities with 'outside' sources of assistance;
- Improved awareness of marketing arrangements and quality requirements as part of enhanced economic performance.

More detailed information on each of the economic, social and environmental impacts now follows.

8.3.1 Economic impacts

Philippines component

The project showed that the economic return from landcare interventions was generally positive. Although the income increases came from a small base and in absolute terms were small, the relative increases were large, and resulted in significant income enhancement and outcomes for farmers. Examples of income impact include:

- The major study of economic impacts of landcare in Bohol demonstrated clear evidence of a development progression through landcare from the initial adoption of NVS on degraded land to the establishment of a more diverse and commercially-oriented farming system. As a result, the gross and net cash income of adopters was two to three times higher than for non-adopters. Much of the benefit derived from the evening out of their annual incomes, and the reduction in risk associated with a more diversified cropping portfolio.
- The case study of a landcare farmer in South Cotabato demonstrated that net profit from a diversified vegetable farming system using similar labour and marketing inputs was 70% higher than the traditional corn based farming system.
- The case study of the initial 17 farmers in the Ned vegetable marketing cluster demonstrated that during their seven-month trial direct marketing of more than 40 tonnes of bell pepper, nett income was at least double that from previous experience in individual grower or trader marketing. Part of the impact was from better prices as a result of improved quality and market volume – for example, prices received for the trial shipments ranged from 16 to 39 pesos per kilogram, compared to a previous price range of 8 to 25 pesos per kilogram. The flow-on effects were clearly evident with farmers having the ability to purchase cell phones, send their children to high school, and purchase equipment for new enterprises such as a mini rice mill.

- The analysis of income trends for 293 landcare farmers in Agusan del Sur demonstrated that the margin increases in income as a result of the landcare process was 18 to 77% for 180 rice growers, 12 to 18% for 70 corn farmers (by adding vegetables into their farming system), and an average of 20% for 43 vegetable growers.

In addition to individual grower impacts, the market clusters resulted in the creation of additional employment opportunities and income enhancement for other sectors of the community – for example, farm labourers employed for the more intensive land preparation, planting, crop maintenance, harvesting and packaging of commercial vegetable crops; and produce and personnel transporters handling the increased traffic of produce to market and fare-paying farm labourers.

It was shown that the economic impacts of landcare were always greater in those communities already exposed to foundational research programs, although in all cases investment in landcare resulted in benefits greater than costs, even when applied in greenfield situations such as Agusan del Sur and Pilar (Bohol).

In terms of negative economic impacts, microfinance arranged for the Lantapan vegetable clusters through a partnership with Bukidnon Cooperative Bank to help cluster members consolidate their production volume, negatively impacted on some cluster members for a period of one to three years as a result of defaults on loans because of crop failure. The experiment identified a need for careful management of microfinance within the high risk vegetable production environment.

In five years time, it is anticipated that as market clusters and landcare groups further mature, there will be more significant economic benefit as a result of the groups' increased capacity, linkages, awareness and motivation. However, as they move into an era of required greater self-reliance as the project and LFPI support systems are gradually withdrawn, the achievement of the benefits will largely depend on continued strong leadership and good governance of the groups, as well as their ability to effectively maintain and expand their business partnerships and networks. In terms of farmers and groups outside of the existing landcare network, benefits to them from the landcare process will largely depend on the future success of LFPI as a lead agency for landcare and possibly the potential for the Philippines Landcare Network (PLN) to help facilitate effective cross-visit linkages and learnings.

Australian component

The research showed that while farm forestry and cattle grazing were promising enterprises for increasing economic livelihoods, the fragmentation of potentially available land was a major constraint. Potential existed for community-based farm forestry or cattle grazing enterprises across farms, but implementation would be difficult and potentially costly. A key finding was that there was an important need to navigate the regulatory environment, particularly given that the constraints vary across features and properties. This regulatory environment was complex, but had to be clearly understood if landholders were to appreciate and effectively develop economic opportunities.

8.3.2 Social impacts

Philippines component

The most significant social impact of the project was the impact on the development of bridging social capital, linking farmers with other farmers, communities, personnel and agencies normally beyond their reach at their village level. Examples of this included:

- The linkages between market clusters and buyers and others in the market supply chain. This noticeably strengthened the market advocacy capability of farmers, as well as noticeably shift farmer aspirations from small-scale to commercially-oriented farming and from an individual to a group orientation;

- The eye-opening impact on farmers and community officials from the Muslim-based Malisbong community in Sultan Kudarat through their exposure via cross-visits to a variety of options previously unknown to them. This resulted in a concomitant (and reciprocal) growth in tolerance and understanding. There was also anecdotal evidence of improved peace conditions within the community, presumably from the observation that farmers and their families see a close link between improved livelihoods and peace. In addition, the reputation and ethos of landcare, as a neutral entity with respect to politics, culture, religion and gender, proved an important factor in the rapid acceptance of the project, an observation confirmed by a European delegation which visited the site;
- The increasing reach of the municipal landcare associations in Ned, Lantapan, and Claveria, as they used their own initiative to engage increasingly with new agencies and personnel well beyond the scope of the individual groups;
- The increasing depth and sophistication of the linkages between farmers and support agencies, exemplified by the Masonoy Vegetable Growers Association landcare group in Bohol which regularly interacts with more than six support agencies including LFPI, the Bureau of Soil and Water Management, ICRAF, the Philippines Peoples Fair Trade Association, the Banana Industry Development Association, East West Seeds and United Families for Transformational Development.

Other significant social impacts included:

- The improvement in community nutrition in Pilar through the PILAR DAM Project, which originally targeted improved health and well-being by advocating the increased cultivation of fruit and vegetables in all home gardens. The impact was demonstrated through monitoring by the local staff of the Department for Social Works and Development, which identified a reduction in malnutrition levels amongst school children;
- The increasing numbers of farmers involved in the market clusters, exemplified by the Katuaan cluster which increased from an original base of 15 members to more than 60. This improved the bonding social capital within the communities through the common focus provided by the cluster marketing. Importantly, more women became actively involved in cluster activities such as consolidation, quality control, financial planning and record management;
- The finding that the development and long-term success of the market clusters was significantly enhanced by the bonding social capital developed through the landcare group process.

In five years time, it is anticipated that the bridging social capital developed within market clusters and landcare associations will be more broader and more diverse, provided the groups continue to invest time in maintaining effective linkages and building new ones. This will require leadership and attention to detail, and increased capacity to strategically identify appropriate new partnerships. Of particular interest will be the ongoing evaluation of landcare within conflict communities of western Mindanao, where if it can continue to replicate the positive impacts on both livelihoods development and peace and security as it has demonstrated at Malisbong, landcare can re-affirm itself as one of few effective models for community development in conflict zones.

Australian component

The project forged a close working relationship with the Hunchy Community Association landholders, and this helped facilitate good responsiveness to the project outputs. This was evidenced by the fact that landholders were able to quickly assess the viability difficulties of enterprises under existing planning constraints. The fact that landholders were able to quickly recommend a new course of action for the project – one that appeared to offer better potential for future opportunities – was clear evidence of

community impact. While the immediate outcome was to identify economic constraints, the project process fostered an improved social networking of the Hunchy Community Association as a group and a much more transparent understanding of environmental requirements and potential environmental impacts of major enterprises such as farm forestry and beef production.

There was also clear evidence that the project process enhanced the understanding of staff at the Sunshine Coast Regional Council (SCRC), regarding the impacts at the farm level of planning bylaws and other policy instruments. In addition, a more collaborative approach between landholders and SCRC staff resulted in useful input into the Rural Futures Strategy that will hopefully result in more practical and meaningful guidelines for future rural development in the Sunshine Coast area. These guidelines also have the potential to impact on higher level policy makers at the State Government level, for example on the Department of Infrastructure and Planning (which determines the agenda for issues of rural land use under the SEQ Regional Plan). The project research identified to these bodies that viable business development in the highly fragmented rural landscapes of southeast Queensland is not as simple or straightforward as first thought.

There remains potential for the process to be further studied and improved as a potential model for improved community engagement between landholder groups and policy making agencies.

8.3.3 Environmental impacts

Philippines component

Environmental impacts continued to accrue through the ongoing adoption and expansion of the sustainable farming systems technologies developed by the previous landcare project and promoted by the current project. These have been already referred to above. As these impacts have been well documented under the previous landcare project, no further reporting of these impacts is considered necessary.

Additional environmental impacts identified during the current phase of the project included:

- While the primary economic benefit of landcare came from its on-site impacts (such as improved farm productivity, reduced input costs, and increased diversification), rather than the negation of off-site impacts (such as siltation of waterways or water storage facilities), these off-site impacts were still positive as clearly identified in the Bohol economic impacts study;
- The landcare model of integrating livelihoods enhancement with conservation farming systems resulted in significant farmer, LGU and partner enthusiasm. This was not surprising given the significant and easily observable improvements in household income – an outcome which cannot be derived from a focus on conservation technologies alone;
- In the new scaling-up sites of Bohol and Agusan del Sur, where the initial focus was primarily on adoption of conservation farming technologies, almost 1000 farmers became adopters across the three years of Phase 1 – 460 in Bohol and 532 in Agusan del Sur. About 60% of adopters initially learned the technologies from project events, with the remainder learning from farmer-to-farmer contact with adopters;
- The study by a Philippines graduate student from the University of Queensland using the SCUAF simulation model to study the long-term physical and economic effects of different soil conservation technologies adopted in Ned and Claveria, confirmed previous studies that NVS technologies significantly minimised soil erosion and slowed the decline in soil fertility. The study also demonstrated that the economic benefits were long-term owing to the loss of productivity and additional costs in the early years;

- In the Ned site, profiling in 2007 identified more than 50 ha of new land across 33 farmers was protected with landcare technologies in the one year.

In five years time, it is anticipated that the adoption of landcare technologies will be more complete within existing landcare sites as the benefits of the integration of livelihood improvements with conservation farming technologies becomes more apparent. This is supported by the above fact about the continuing protection of new land at Ned, after almost ten years of landcare promotion at the site. The extent of expansion of landcare to new sites will depend to a large extent on two things – how well the institutionalisation of landcare at the provincial level impacts on program delivery; and how much capacity LFPI will have to provide orientation and facilitation services to new landcare developers.

Australian component

There were no significant environmental impacts within the Australian component.

8.4 Communication and dissemination activities

Significant communication and dissemination activities for the project included:

Books

- **Publishing of the book ‘Landcare in the Philippines – Stories of people and places’.** This was an output of the previous landcare project (ASEM/1998/052), but its publishing and implementation occurred during the current project. The book contained the personal landcare stories from over 50 people involved in Philippines landcare, including pioneers, farmers, government workers, facilitators, community representatives, private industry and project personnel. The book was used to promote landcare to interested potential landcare developers in LGUs, NGOs and POs. The book was officially launched during the project planning workshop in early 2005 in a ceremony attended by than 80 people from across Philippines landcare. A second launching of the book was held soon after at the Australian Embassy in Manila to promote landcare to Manila-based NGAs, consultants, project funders and the education sector.
- **Publishing of the book ‘Landcare in the Philippines – A practical guide to getting it started and keeping it going’.** A second book, to service the actual implementation needs of landcare developers, was published by ACIAR in conjunction with LFPI in 2009. The book was officially launched by the Australian Ambassador to the Philippines, HE Mr Rod Smith, at a special function in Manila attended by more than 50 representatives from NGAs, NGOs, funding agencies, academic institutions, partner agencies and media. The book was then featured in a special release at the 1st National Landcare Congress in Cagayan de Oro attended by more than 100 landcare personnel and landcare developers. The book played a prominent role in effectively servicing enquiries about landcare implementation, saving considerable time of LFPI staff on the task of landcare orientation. During the first year from publication, over 300 copies of the book were distributed to enquirers on request or following interactions with LFPI staff.
- **Publishing of a special book on soil health ‘Understanding and improving soils’ (‘Himsug nga Yuta’).** Through the expertise and interest of AYAD volunteer, Scott Graham, a special handbook on soil health was produced in conjunction with the project team, to service the growing interest and need of landcare facilitators and farmers for enhanced information on fertility management, particularly in relation to alternatives for chemical fertilisers. The publication of the book, in both English and Visayan versions, was accompanied by a series of training workshops for farmers and LGU/NGO personnel in Mindanao and the Visayas.

Web sites

- **Development of a project web site and portal (Project Phases 1 and 2).** A web site and portal (www.landcaremates.org), consisting of an external (public access) web site and internal (password protected) web portal was developed to provide public information on the project as well as project team access to project documents, reports, working papers, project newsletters, staff information and project events. The site was constructed in conjunction with University of Queensland using Content Management Systems (CMS) software, enabling team members to manage their own internal site content.
- **Development of a new landcare web site for LFPI (Project Phase 3).** To further build LFPI's profile and role as landcare lead agency for the Philippines, a new web site for LFPI (www.landcarephilippines.org) was developed and commissioned in 2010. The site was constructed using state of the art Joomla CMS software to facilitate ongoing management by LFPI at the conclusion of the project. The content from the project web site was migrated across to the new web site, and new features and content added. Training was provided to LFPI staff and full responsibility for hosting and management of the site transferred to LFPI in 2011.

External communication (beyond site outputs)

- **Promotion of project and landcare at national and international conferences.** Advantage was taken of all available national and international opportunities to promote the project and the landcare concept. Significant amongst these were: 1st National Agriculture Fisheries Forestry and Natural Resources Extension Forum in 2004 in Los Banos, Philippines (where the paper presented on behalf of the project was voted the best paper); International Symposium on Public Communication of Science and Technology in 2005 in Beijing, China; 2nd International Landcare Conference in Melbourne, Australia (where the project also manned a display booth); and 39th Anniversary and Annual Scientific Conference of the Pest Management Council of the Philippines in Palawan in 2008 (where the Project Leader presented a keynote address).
- **Display at AusAID Development Forum.** The project was selected as one of only two Philippines projects to be featured in displays for the AusAID Development Forum in Bohol in 2007, attended by the Australian Ambassador, Tony Hely. This followed participation by project staff in a complementary Bohol Water Summit, where the potential of the project in the province was recognised through a display and summit presentation.
- **Publication of results and outcomes.** The project placed significant importance on the regular documentation and publishing of research outcomes and landcare practice. As a result, the project over its seven years was directly responsible for the publication of four books, eight conference papers, three theses, five research papers in international journals, nine working papers, one book chapter, 12 reports, 10 newsletter and magazine articles, two web sites and a number of press and miscellaneous information items.
- **Australian media coverage.** The project encouraged and supported opportunities for promotion of the project within Australian media. Significant amongst these were: a visit to project sites in 2008 by Leanne Savage, Deputy Editor of the Australian *Land* newspaper, to collect material for a series of articles to be published in Rural Press newspapers in Australia on innovative Australian projects in the Philippines; media coverage facilitated by Jenni Metcalfe from Econnect Communication around the project's presence at the International Landcare Conference in Melbourne in 2006; and a visit to project sites in 2010 by ABC journalist, Tom Fayle, who reported on landcare activities through Radio Australia.

- **Development of project identity.** To promote the project in a more integrated and effective way, a project visual expression suite was developed involving a logo, report template, presentation template, web site template and brochure. These were used to present a professional profile at national and international events. During Phase 2, when the leadership of the project was transitioned to LFPI, a similar visual expression suite for LFPI was developed to replace the project version. This was designed to professionally position LFPI as the public 'face' of landcare for the future.
- **Production of landcare videos.** In 2011, the production of a series of high quality video stories of landcare was commenced, with completion expected in 2012. The series will feature a 10-minute overview of landcare, targeted at LGUs, NGAs, NGOs and funding agencies, to promote landcare at higher levels; and up to nine 5-minute site profiles to promote landcare potential at the local level for LGUs and other agencies. The videos will be featured for viewing on the new LFPI web site via an embedded YouTube player.

Internal communication

- **Communication partnership with Econnect Communication.** As a result of the involvement of Econnect Director, Jenni Metcalfe, in the production of the first landcare book, and her subsequent interest in providing support to the project, a communication partnership with Econnect was developed. This partnership involved Econnect providing a range of communication services to the project at no cost as part of the company's philanthropic services to the international community. The services included specialist communications training to the project team, opportunities for landcare to be featured at international communications conferences, a communications help line for project team members, and preparation of a monthly project email newsletter.
- **Development of project email newsletter.** During the first phase of the project, the project team consisted of over 20 personnel located within five partner agencies at nine locations. As a result, internal communication was recognised as a key challenge. One means of enhancing this was the production of a monthly project email newsletter, where team members provided short overviews of their activities and experiences, together with project happenings and other events. Production of the newsletter, titled *newsMATE*, was provided by Econnect at no cost to the project, as part of their collaborative partnership with the project. The newsletter was also distributed to 20 or so project 'associates' from partner and related agencies.
- **Learning interchange between Philippines and Australian landcare personnel.** The project facilitated as much interchange as possible between the Philippines and Australian landcare movements primarily to boost Filipino knowledge of Australian landcare structures and processes, but also to provide an opportunity for Australian landcare to learn from the developing Philippines experience. Over the seven years of the project, the interchanges included six individual visits to the Philippines by Australian landcare personnel (including personnel from Landcare Queensland and an Australian Women in Agriculture landcare study tour); one 10-day group study tour to Australia by 20 Philippines personnel; and the placement of an Australian landcare volunteer in the Philippines under the auspices of the Australian Youth Ambassadors for Development (AYAD) program. The concept of an ongoing enhanced interchange program based on Australian landcare mentoring (the Philippines Australia Landcare Training and Mentoring Program) was developed and a pilot Stage 1 of the program will be implemented in early 2012 with funding support from the Crawford Fund.

- **Involvement of Australian businesses.** Several Australian businesses involved with the landcare project and LFPI obtained economic and social benefits from opportunities provided through the project. Examples include Econnect Communication (mentioned above); See-saw Illustration and Design (who provided services in book publishing); Land Connect Australia (who provided facilitation training and hosting services for the tour group); and Design Solutions (who provided logo and publication design as well as web site development services).

9 Conclusions and recommendations

9.1 Conclusions

The key learnings from the project are as follows:

Philippines component

- Besides its proven credentials as a successful approach for achieving rapid adoption of contour-based farming systems and improved farmer capacity for understanding and taking action on the issues of land degradation, the project demonstrated the effectiveness of landcare in improving farmer incomes, creating more socially-resilient farming communities and providing local government and other agencies with an effective alternative extension system for the rural uplands.
- An increasing number of individuals and institutions started to see landcare as the 'tool of choice' for effective and rapid change in rural communities.
- LGUs and other agencies took greater ownership of landcare as demonstrated by their commitment to its ideals, the provision of funding, and its use as a basis for municipal ordinances and farmer incentive programs.
- Through the market cluster groups, farmers and farmer groups showed significant willingness to become involved in new livelihood development strategies, and once equipped with the skills and knowledge, showed good ability to develop new farm and market opportunities with minimal outside support. However, the problems with the microfinance defaults for the Lantapan vegetable clusters showed a need for careful management of inputs within high risk production environments.
- The key to the success of the landcare approach was that the farming systems it promotes result in a stable platform from which a wide range of more commercially-oriented production systems can be built.
- Economic return from landcare interventions was generally positive. Although the income increases came from a small base and in absolute terms were small, the relative increases were large, and resulted in significant income enhancement and outcomes for farmers.
- The development of bridging social capital, which links farmers with other farmers, communities, personnel and agencies normally beyond their reach at the village level, is a very significant factor in livelihood improvement. However, the presence of bonding social capital within the groups is an important pre-requisite for effective cluster development, particularly in the longer term.
- It appears that landcare can play a valuable potential role in improving human and regional security in conflict zones. The combination of exposure to new ideas via cross-visits and on-the-ground technical support resulted in noticeable livelihood improvements as well as a concomitant and reciprocal growth in tolerance and understanding. Evidence of improved peace conditions within conflict communities, although somewhat anecdotal, offers considerable promise for the development of landcare as a community development model in conflict communities.
- The institutional research with LFPI showed that organisational change is slow and at times difficult, but can be achieved with persistence and a multi-faceted approach to institutional development. While the future of LFPI is still not completely secure, the organisation is moving ahead with promise, as demonstrated by its improved governance, more targeted landcare scaling-up and institutionalisation processes, pursuit of a more effective training provider role and a broader resource base.

- A key measure of LFPI's success will be how well it performs in delivering outcomes as a national partner in the large ACDI/VOCA-funded CoCoPAL Farming Systems Project, where it is using its landcare approach in the planning and delivery of services for a third party.
- The lack of success in the development of landcare at the national government level was disappointing.
- The importance placed by the project on collective ownership of and contribution to the research process was rewarded with a rich documentation of outputs and outcomes including four books, eight conference papers, three theses, five research papers in international journals, nine working papers, one book chapter, 12 reports, two web sites and 10 newsletter and magazine articles.

Australian component

- The process of taking high quality GIS and planning data at a property level in map form to landholders in their own farm environment demonstrated great potential to turn data into information useful for landholder decision making.
- The regulatory environment for rural landholders is complex but has to be clearly understood if landholders are to appreciate and effectively develop economic opportunities.
- The project process enhanced the understanding of government agencies regarding the impacts at the farm level of planning bylaws and other policy instruments. The research identified to these agencies that viable business development in the highly fragmented rural landscapes of southeast Queensland is not as simple or straightforward as first thought.
- There remains potential for the process to be further studied and improved as a potential model for improved community engagement between landholder groups and policy making agencies.

9.2 Recommendations

1. While LFPI has emerged from the project as a more robust and effective organisation, its resource base is still not secure enough to ensure its long-term survival as the Philippines landcare lead agency. For this reason, it is recommended that the organisation be assisted in researching and developing a broader and more secure long-term resource base. The first component of this will be the mentoring visits of LFPI staff to Australia to study Australian programs of corporate sponsorship, commercial enterprise services and engagement of landcare with local government institutions. This will proceed in early 2012 under funding from the Crawford Fund. From this point, it is recommended that support be provided to enable continued mentoring of LFPI management in the Philippines to bed down the learnings from the Australian mentoring visit, research local resource mobilisation strategies and develop a business plan and strategy to systematically improve the long-term resource security of the organisation.
2. The lack of traction of landcare at the national government level in the Philippines is cause for concern. Because Australia has had a long history of national government support, it is likely that a good stimulus for Philippines national government involvement may be to expose one or two key personnel from key NGAs to the systems of Australian government involvement in landcare. As a result, it is recommended that support be provided to facilitate the travel to Australia of two high-level 'career' officials (one from DA and one from DENR) for a targeted brief study tour of Australian landcare, particularly the role that the Australian Government plays in supporting landcare at the national level. The tour could be conducted in

conjunction with the Crawford-funded mentoring program (above) to synergise with LFPI mentoring assignments in Australia. It is important that the officials be accompanied by at least one senior LFPI staff, preferably the Executive Director.

3. It is clear that landcare offers ACIAR research projects a potentially valuable role in community engagement and extension. For this reason, it is recommended that in new ACIAR projects in the Philippines, consideration be given to including LFPI as a funded partner in planning and delivering the implementation of research, as well as researching appropriate extension processes. As LFPI grows the landcare footprint across the southern Philippines, its knowledge of farmer needs, local institutional partners and appropriate processes for extension delivery will become extremely valuable. The value is enhanced by LFPI's experience in research processes, both from the legacy of the ACIAR landcare project and the M&E skills being built around the CoCoPAL Project.

10 References

10.1 References cited in report

Cramb, R., Catacutan, D., Dano, N., and Vock, N. (2006). *Landcare in the Southern Philippines: Past, present and future*, Philippines-Australia Landcare Project Working Paper Number 8.

Dano, N. (2006). *Learning from institutions and designing a landcare support agency*, Philippines-Australia Landcare Project Working Paper Number 9.

Lieske, S.N., Lyons, K., Hamerlinck, J.D., and Vock, N., 2008, *GIS-based evaluation of rural economic opportunity in Hunchy, Queensland*, Paper submitted to Queensland Spatial Conference 2008.

Newby, J. C., and Cramb, R. A. (2011). *Economic impacts of conservation farming in a marginal environment: the case of "Landcare" in the Philippines*. International Journal of Agricultural Sustainability, 9 (3), 456-470.

Wardell-Johnson, Angela. (2008). *Rural social values survey report*, Uniquet Pty Ltd (report produced for Department of Infrastructure and Planning, SEQ Catchments and Department of Primary Industries and Fisheries for Landcare Project), 104pp.

10.2 List of publications produced by project

10.2.1 Books

Cresencio-Catacutan, Delia. (2007). *Scaling up Landcare in the Philippines: Issues, Methods and Strategies*, World Agroforestry Centre. (Doctoral thesis from John Allwright Scholarship completed under the project - published by World Agroforestry Centre as book), 230pp.

Graham, Scott. (2008). *Understanding and improving soils (Himsug nga Yuta)*. World Agroforestry Centre and Landcare Foundation of the Philippines, Inc. (Training book produced under AYAD assignment with project in Bohol; versions in English and Visayan). 45pp.

Landcare Foundation of the Philippines, Inc. (2009). *Landcare in the Philippines: a practical guide to getting it started and keeping it going*. ACIAR Monograph No. 138. Australian Centre for International Agricultural Research, Canberra. 144pp.

Metcalfe, J. (ed). (2004). *Landcare in the Philippines – Stories of people and places*. Australian Centre for International Agricultural Research, Canberra, 170pp, ACIAR Monograph No. 112, ISBN 1 86320 452 0 (print), 1 86320 398 2 (electronic).

10.2.2 Conference papers and posters

Boy, G., Garcia, E., Laotoco, Ma. A., Ruiz, E., Vock, N. (2005). *Meeting the communication challenges of Philippines Landcare*. Paper presented at the International Symposium of the International Network on Public Communication of Science and Technology, Beijing, China, June 2005.

Catacutan, D., Cramb, R., and Culaseo-Arellano, Z. (2006). *The dynamics of landcare groups in the Philippines: a social capital perspective*. Paper presented to the International Landcare Conference, Melbourne, October 2006.

Cramb, R.A., Catacutan, D., Culaseo-Arellano, Z., and Mariano, K. (2006). *Farm-level impacts of landcare in Lantapan*, Poster presented at 26th Conference of the International Association of Agricultural Economists, Gold Coast, 12-18 August 2006.

Dano, M. N., Bertomeu, M., Catacutan, D., and Mercado, A. Jr. (2006). *Building extension systems for decentralised natural resource management: lessons from the landcare experience*. Paper presented to ISSAS National Conference on Natural Resource Management in Agriculture, UPLB, Laguna, October 2006.

Lieske, S.N., Lyons, K., Hamerlinck, J.D., and Vock, N., 2008, *GIS-based evaluation of rural economic opportunity in Hunchy, Queensland*, Paper submitted to Queensland Spatial Conference 2008.

Mercado, A., Bertomeu, M., Laotoco, Ma. A., Lasco, R., Banaticla, R. (2004). *Landcare partnerships for sustainable NRM and upland development*. Paper presented to the 1st National Agriculture, Fisheries and Natural Resources Extension Forum, Los Banos, Laguna, December 2004. (Note: this paper was voted the best paper out of the 15 papers presented at the Forum).

Newby, J.C., and Cramb, R.A. (2009). *Living on the margin: assessing the economic impacts of Landcare in the Philippine uplands*. Paper presented to the 53rd Annual Conference of the Australian Agricultural and Resource Economics Society, Cairns, February, 2009.

Vock, Noel, and Justo, Valeriana. (2008). *Sustaining and growing Landcare in the Philippines - A farmer-centred approach to improving environmental sustainability and livelihoods in the rural uplands*. Paper presented to the 39th Anniversary and Annual Scientific Conference of the Pest Management Council of the Philippines, Puerto Princesa City, May 2008 (published in Conference Proceedings).

10.2.3 Theses

Arbes, Lyndon Japay. (2008). *Social costs and benefits of farmers' participation in the Landcare Program in Lantapan, Bukidnon*, Master of Science thesis submitted to Central Mindanao University by project staff member, 120pp.

Catacutan, D.C. (2004). *Scaling up Landcare in the Philippines: issues, methods and strategies*. Thesis submitted to University of Queensland for the Degree of Doctor of Philosophy, December 2004.

Newby, Jonathan Craig. (2009). *Livelihoods, landscapes and landcare: Assessing the economic impacts of a conservation farming program in the Philippines uplands*. University of Queensland Thesis for Doctor of Philosophy, July 2009, 387 pp.

10.2.4 Research papers

Cramb, R.A. (2005). Rewarding upland farmers for environmental services: the role of Landcare in the Philippines. Draft paper, May 2005.

Cramb, R. A. (2006). The role of social capital in the promotion of conservation farming: the case of 'Landcare' in the Southern Philippines, Land Degradation and Development, 17, 23–30.

Cramb, R. A. (2007). Participation in community landcare groups in the Philippines: a social capital perspective, Australasian Journal of Environmental Management, 14 (2), 93–102.

Cramb, R. A., Catacutan, D., Culasero-Arellano, Z., and Mariano, K. (2007). The 'Landcare' approach to soil conservation in the Philippines: an assessment of farm-level impacts, Australian Journal of Experimental Agriculture, 47, 721–726.

Newby, J. C., and Cramb, R. A. (2011). *Economic impacts of conservation farming in a marginal environment: the case of "Landcare" in the Philippines*. International Journal of Agricultural Sustainability, 9 (3), 456-470.

10.2.5 Project working paper series

Cramb, R., Catacutan, D., Dano, N., and Vock, N. (2006). *Landcare in the Southern Philippines: Past, present and future*, Philippines-Australia Landcare Project Working Paper Number 8.

Dano, N. (2006). *Learning from institutions and designing a landcare support agency*, Philippines-Australia Landcare Project Working Paper Number 9.

Newby, J.C., and Cramb, R. A. (2007). *Economic impacts of landcare in the central Philippines: A preliminary report*, Philippines-Australia Landcare Project Working Paper Number 10.

Newby, J.C., and Cramb, R.A. (2009). *Living on the margin: assessing the economic impacts of Landcare in Bohol*. Philippines-Australia Landcare Project, Working Paper No. 12 (draft).

Newby, J.C., Avila, V., and Cramb, R.A. (2009). *Landcare and agro-enterprise development in Claveria*. Philippines-Australia Landcare Project, Working Paper No. 13 (draft).

Newby, J.C., Avila, V., and Cramb, R.A. (2009). *Agro-enterprise development and microfinance in Lantapan*. Philippines-Australia Landcare Project, Working Paper No. 14 (draft).

Newby, J.C., Avila, V., and Cramb, R.A. (2009). *Agro-enterprise development and microfinance: linking Landcare farmers to regional markets in Barangay Ned*. Philippines-Australia Landcare Project, Working Paper No. 15 (draft).

Tabbada, A., Avila, V., and Cramb, R.A. (2009). *Introducing and implementing Landcare in a conflict area: experiences and learnings in Malisbong, Sultan Kudarat*. Philippines-Australia Landcare Project, Working Paper No. 16 (draft).

Tabbada, A., Avila, V., and Cramb, R.A. (2009), *Bringing landcare into a protected area: experiences in overcoming institutional barriers in Kapatagan*. Philippines-Australia Landcare Project, Working Paper No. 17 (draft).

10.2.6 Book chapters

Boy, G. (2006). Landcare in the Philippines: recognising the importance of effective communication. Chapter in book: *At the human scale – International practices in science communication*, Cheng Donghong et al (eds), Science Press, Beijing.

10.2.7 Reports

Avila, V., Badino, D., and Fueconillo, B. (2007). *Landcare end of project evaluation: presentation to partners*. Presentation to project partners, Prosperidad, June 28 2007.

Lieske, S. (2007). *Evaluating rural opportunity, Hunchy, Queensland, Australia*. Report to University of Wyoming.

Philippines-Australia Landcare Project. (2005) *1st Project Team Review Workshop Proceedings*, Tagbilaran, Bohol, November 15-18, 2005.

Vock, N. (2005), Final report: Project ASEM/1998/052: Enhancing farmer adoption of simple conservation practices – Landcare in the Philippines and Australia, Department of Primary Industries, Nambour.

Vock, Noel. (2005). *Annual Report 2004-2005 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 60pp.

Vock, Noel. (2006). *Annual Report 2005-2006 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 55pp.

Vock, Noel, and Dano, Noelyn. (2007). *Annual Report 2006-2007 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 61pp.

Vock, Noel, and Laotoco, Aurora. (2008). *Annual Report 2007-2008 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 25pp.

Vock, Noel, and Laotoco, Aurora. (2009). *Annual Report 2008-2009 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 23pp.

Vock, N, and Oakeshott, J. (2009). *Draft outline of proposal to build the sustainability of landcare in the Philippines*. Internal report for ACIAR, October 2009.

Vock, Noel. (2010). *Annual Report 2009-2010 for Project ASEM/2002/051 Sustaining Landcare Systems in the Philippines and Australia*, Department of Primary Industries and Fisheries, 24pp.

Wardell-Johnson, Angela. (2008). *Rural social values survey report*, Uniquet Pty Ltd (report produced for Department of Infrastructure and Planning, SEQ Catchments and Department of Primary Industries and Fisheries for Landcare Project), 104pp.

10.2.8 Newsletter and magazine articles

Anonymous. Landcare book launched in the Philippines. Article published in Q-Links Bulletin, Landcare Queensland.

Decano, B (2005). Making Sitio Kibulay a paradise (excerpt from Landcare in the Philippines book, Agroforestry News, Issue 50.

Graham, S. 2008. Caring for land, people and culture. Exchange Magazine, Australian Youth Ambassadors for Development, October-December 2008, 20-21.

Metcalf, J. (2005). Landcare spreads in the Philippines. ACIAR Partners Magazine.

Metcalf, Jenni, and O'Callaghan, Mary, 2008, Communities make a stand on shared care for the land, Article in Partners in Research for Development magazine, Australian Centre for International Agricultural Research, pps 4-7.

Reid, Rowan. (2005). Landcare in the Philippines – book review, Agroforestry News, Issue 50.

Vock, N. (2005). The Philippines-Australia Landcare Project, ACIAR Philippines (ACIAR Country Newsletter), April-July 2005:2-3.

Vock, N. (2005). Effective communication – a key focus of the Philippine-Australia Landcare Project, ACIAR Philippines (ACIAR Country Newsletter), July-September 2005:9-11.

Vock, N. (2005). New phase of Philippines-Australia Landcare Project now underway. Article in ACIAR Philippines Newsletter by N.Vock, June 2005.

Vock, N. (2005). Landcare in the Philippines – update, Barung News, June 2005.

Vock, N. 2009. Landcare in the Philippines: a decade on and still prospering. Australian Landcare International Newsletter, February 2009, 3-4.

10.2.9 Miscellaneous

Dano, N. (2007). Promoting agroforestry and conservation farming using the landcare approach, Philippines, Submission to international NRM database.

newsMATE - Philippines-Australia Landcare Project update. Project ezine published regularly during 2005-06.

Harnessing Resources for Conservation and Sustainable Development through Landcare. PowerPoint presentation by Samuel Abrogar to the Foundation for the Philippine Environment – National Partners Meeting, July 16-17, 2004, Bacolod City.

Vock, N. (2006). Philippines-Australia Landcare Project, Project brochure.

Vock, N. (2006). The Sunshine Coast Hinterland Rural Livelihoods Project, Project brochure.

10.2.10 Press items

Two press items published on launch of Landcare book at Australian Embassy on February 22 – *Manila Bulletin* on 3.03.05 and *Business World* on 4.03.05.

Australian-led farm project wraps up in Philippines, Rural Weekly, 25 September 2009.

Australian-led farm project wraps up in Philippines, Toowoomba Chronicle, 25 September 2009.

New book guides grassroots landcare approach, Australian Landcare Online, Spring 2009.

How Australian aid money helps farmers in the Philippines south, ABC Radio Australia, May 17 2009, story by Tom Fayle.

11 Appendixes

11.1 Appendix 1: Phase 1 baseline information set for assessing later impacts

Overall project goal	Baseline information
Standard of living	<ul style="list-style-type: none"> • income and expenditure • educational attainment • dwelling (materials used, appliances etc) • farm implements • farming systems • access to potable water (water and sanitation) • access to social services (health, farm to market roads, market, communications)
Social capital	<ul style="list-style-type: none"> • existence of social structures (nature, status, strength etc) • relationship and dynamics among partner communities and these social structures • Landcare groups, especially for the 'old sites' (no of members, active/inactive, activities initiated, dormant/defunct, frequency and quality of meetings etc) • Other support mechanisms (national and local policies, market systems)
Environmental stewardship	<ul style="list-style-type: none"> • property rights regime/land ownership • Inventory of soil and agroforestry practices (no of adopters, of which practices, to what extent) • Problems perceived or encountered, preferred solutions and priorities • Support systems of the farmers (POs, NGOs, LGUs, MAOs, other programs, and how effective they are perceived) • Adoption (adoption of what precisely, to what extent, how well implemented, farmers who adopt then discontinue)
Gender	<ul style="list-style-type: none"> • Attendance at activities (men and women) • Composition in the organisation and different decision-making bodies, etc • Participation of men and women in project activities (on-farm and off-farm activities, organisational level etc)

11.2 Appendix 2: Research topics proposed by project team

11.2.1 Individual topics

Site	Possible research topics	Process documentation focus
Misamis Oriental	<p>Coconut-based farming systems</p> <p>Revisiting the first 25 adopters of NVS and agroforestry practices in Claveria</p> <p>How is Landcare sustained when the groups are already at their peak – after having been saturated with farming technologies?</p>	<p>Engaging LGUs in Landcare (focus sites at both municipal level (Claveria, Malitbog, Sugbongcogon, Kinoguitan, Alubijid); and provincial level</p> <p>Integration of livelihoods (through the LCFI-UNDP project in Madaguig) to a Landcare initiative (effect to group social capital/institutional building)</p> <p>The formation of farmers trainers teams in two satellite learning sites and its influence in the technology adoption rate</p>
Bukidnon	<p>Economic impact of soil and water conservation adoption: the case of 10 selected Landcare farmers in Lantapan</p> <p>The interface of ATSAL development with Landcare</p> <p>Marketing of extension services of the FTGs</p> <p>Comparative analysis of the evolution of Landcare (involving 3 sites: Lantapan, Claveria, and Ned; using timelines, etc)</p>	<p>Engaging corporate sector in Landcare: the case of DOLE/Del Monte/MKAVI</p> <p>Evaluation of Landcare group maturity stage</p>
South Cotabato	<p>Comparative study on income level from shifting cropping systems from corn to high value vegetable crops</p> <p>Farmer Facilitators' involvement in Landcare and its effect on adoption of conservation farming systems and diversified livelihoods</p> <p>Landcare in the Church</p>	<p>Income comparison of farmers that shifted from corn and upland rice production to vegetable production</p> <p>Factors affecting the adoption of conservation practices (based on the annual survey)</p> <p>Organisational development of Landcare groups in Ned</p> <p>Engagement with LGUs</p>
Bohol	<p>LGU structures and dynamics in the implementation of the Landcare program</p> <p>Facilitating factors for</p>	<p>Effectiveness of farm modelling approach in scaling up Landcare</p> <p>Integration of Landcare into LGU plans and programs</p>

Site	Possible research topics	Process documentation focus
	technology adoption Soil fertility status of contour farms	Development of Landcare groups in Bohol
Agusan del Sur	Impact of Landcare approach in the Agri-NRM Program of CRS Landcare in the Church	Engagement with LGU (PPDO, MAOs, MAROs) Engagement/partnership with the Church, NGOs, POs, academia Mainstreaming of Landcare into CRS's Agri/NRM Program Impact of project on areas with no previous intervention vs. PACAP & PATSARRD areas

11.2.2 Site topics

Site	Research topic	Objectives	Methodology	Data sources
Misamis Oriental	Working with LGUs to advance Landcare: strategies and the art of dealing with Government officials	Document the processes involved in dealing with LGUs Identify effective approaches Identify the factors enhancing effectiveness	Multiple case studies of best practices/strategies in working with LGUs	Document review, K.I., and participant observation
Bukidnon	Corporate partnership in Landcare	Understand the process of engaging corporations in Landcare activities Ascertain the benefits of such 'engagement' to different actors involved Determine the broader impact of corporate Landcare partnership on NRM or watershed management	Simple case study	Document review, K.I., participant observation, qualitative data
South Cotabato	Comparative study on income level from shifting cropping systems from corn to high value vegetable crops	Compare income level between the traditional corn crop and the adoption of commercial vegetable production, which is perceived as high value	Recall data from farmers on income and expenditure on a certain farming system like NVS+corn; Gather present data on the	

Site	Research topic	Objectives	Methodology	Data sources
			same farming system; Gather present data from vegetable crops with almost the same farming system (NVS+vegetables)	
Bohol	The effectiveness of different modes of scaling-up Landcare in Bohol: a comparative study	Document the processes involved in implementing or integrating Landcare under different modes of scaling up Determine the enhancing or constraining factors of success under the different modes Distil the workable practices and strategies under each mode for wider application	Comparative case study	Document review, participant observation, FTG, K.I., qualitative data

11.3 Appendix 3: Site characterisation data collected

- Population
- Land area
- Soil type
- Topography
- Farming systems
- Major agricultural products
- Road and transport systems
- Market access
- Land use
- Settlement history
- History of project interventions
- Development institutions
- Role of LGUs
- NRM issues and local NRM-related policies.

Features affecting choice of site:

- Biophysical condition and environmental issues encountered

- Farming communities and their livelihood activities
- Political environment and LGU dynamics
- Development initiatives/key actors/NRM players in the area and the different institutional relationships established
- Extension services available.

11.4 Appendix 4: Regional Landcare Program components

11.4.1 Northern Mindanao

- Enhancing Landcare NRM-based livelihood activities through both agroenterprise development (marketing clusters at Claveria and Lantapan) and farming systems improvement (primarily rubber-based agroforestry systems)
- Strengthening of local landcare institutions such as Landcare associations, FTGs and Landcare Groups
- Institutional strengthening of landcare approaches within LGUs and other agencies.

11.4.2 Southern Mindanao

- Enhancing economic outcomes for Barangay Ned farmers through agroenterprise development – development and testing of a marketing cluster at Ned (vegetables)
- Improving livelihoods through the development of vegetable and rubber-based agroforestry systems in conflict areas of Mindanao
 - Trial of a landcare approach in Malisbong, Sultan Kudarat
 - Trial of a landcare approach in selected municipalities of Korondala City, South Cotabato
- Institutional strengthening of Landcare at the provincial level in South Cotabato – collaboration with the Provincial DAF (Development Alternative Framework) Program
- Development of more sustainable farming systems in the protected area of Kapatagan, Digos City, Davao del Sur (trial of a Landcare approach in protected area environments).

11.4.3 Visayas (Bohol)

- Farming and marketing systems improvement for landcare farmers in the municipality of San Isidro (trial of agroenterprise development for selected landcare groups)
- Securing vegetable gardens and other livelihood benefits for households in Pilar (PILAR DAM Project)
- Advancing sustainable agriculture in Alicia through improving the capacity and skills of Barangay Extension Workers.

11.5 Appendix 5: Acronyms used commonly throughout report

Acronym	What it stands for
ACIAR	Australian Centre for International Agricultural Research
AECI	Agencia Espanola Cooperacion Internacional
ARC	Australian Research Council
AT	Agricultural Technician
ATSAL	Agroforestry Tree Seed Association of Lantapan
AusAID	Australian Agency for International Development
BAFTECH	Barangay Farmer Technician
BAW	Barangay Agricultural Worker
BEW	Barangay Extension Worker
BFMI	Balay Mindanaw Foundation Inc
BoT	Board of Trustees
BSWM	Bureau of Soil and Water Management
CBRMP	Community Based Resource Management Program
CLCA	Claveria Land Care Association
CRS	Catholic Relief Services
DA	Department of Agriculture
DAF	Development Alternative Framework
DENR	Department of Environment and Natural Resources
DLR	Department of Land Reform
DOLE	Department of Labor and Employment
DTI	Department of Trade and Industry
EU	European Union
FTG	Farmer Trainers Group
FTT	Farmer Trainers Team
ICRAF	International Centre for Research in Agroforestry

Acronym	What it stands for
IEC	Information Extension Communication
IP	Indigenous Peoples
LCN	Landcare Coordinators Network
LFPI	Landcare Foundation of the Philippines Inc
LGU	Local Government Unit
LLCA	Lantapan Land Care Association
MAO	Municipal Agricultural Office(r)
MARO	Municipal Agrarian Reform Office(r)
M&E	Monitoring & Evaluation
MFI	Mag-uugmad Foundation Inc
MLCA	Malitbog Land Care Association
MLGU	Municipal Local Government Unit
MOU	Memorandum of Understanding
MOSCAT	Misamis Oriental State College of Agriculture and Technology
MPDO	Municipal Planning and Development Office(r)
NFTS	Natural Farming Technology Systems
NGA	National Government Agency
NGO	Non Government Organisation
NLCA	Ned Land Care Association
NRM	Natural Resource Management
NVS	Natural Vegetative Strips
OPA or OPAG	Office of Provincial Agriculturist
PACAP	Philippines Australia Community Assistance Program
PAO	Provincial Agricultural Office(r)
PENRO	Provincial Environment and Natural Resources Office(r)
PILAR DAM	Productivity Improvement through Landcare and Agricultural Research Development and Management

Acronym	What it stands for
PLGU	Provincial Local Government Unit
PLN	Philippines Landcare Network
PO	Peoples' Organisation
PPDO	Provincial Planning and Development Office(r)
SEARCA	South East Asian Center for Graduate Study and Research in Agriculture
SEC	Securities and Exchange Commission
TNA	Training Needs Analysis
TWG	Technical Working Group
UDP	Upland Development Program
UNDP	United Nations Development Program
UP	University of the Philippines
UQ	University of Queensland