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Australian Government

Australian Centre for
International Agricultural Research

Landcare in the Philippines

STORIES OF PEOPLE AND PLACES

Edited by Jenni Metcalfe



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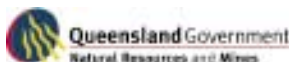
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TRANSFORMING LIVES AND LANDSCAPES



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- University of Queensland
- Barung Landcare Association
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FOREWORD



Research agencies, including ACIAR, have been involved in developing farming technologies in the Philippines for many years. Much of the work has focused on overcoming problems such as soil erosion and soil acidity and is designed to help farmers maintain their livelihoods.

However, as some of the authors in this book explain, the research findings were not always widely adopted. Often the technologies were too expensive or too labour-intensive for poor farmers. Research agencies began to explore new avenues which built on a history of good research and strong relationships previously developed. Landcare was one of these approaches.

Farmers were also looking for new initiatives to tackle erosion and develop systems that would be sustainable into the future.

Landcare in the Philippines evolved quite separately from landcare in Australia but the ACIAR project has helped the movement to grow in Mindanao. More than 400 groups have been established with up to 60 per cent of farmers in each of the three locations (Claveria, Lantapan and Ned) adopting some form of conservation farming.

This book tells their stories and the stories of some of the many other people who have been involved with the growth of landcare in the Philippines. We hope that readers will be inspired by the experiences as those involved in the project have been.

Future work will build on the outcomes of this project, expanding the impact to new sites and ensuring it is sustainable into the future. Farmers and researchers are working together to increase sustainable farming practices in Mindanao, the Visayas and beyond these areas. Dissemination of this approach to NGOs and development agencies could have widespread applications beyond the Mindanao/Visayas area and perhaps the Philippines themselves.

A handwritten signature in black ink that reads "Peter Core". The signature is written in a cursive style with a large initial 'P'.

Peter Core
Director
Australian Centre for International Agricultural Research

PREFACE



In 1986, I did not join any of the projects related to tree-planting or putting trees on my farm. I was probably one of the most hard-headed farmers the landcare facilitators had ever encountered. I was approached seven times by the facilitators, but I always hid my face and instead sent my wife along to meetings.

Why? Well, I thought the Landcare program was the same as the government's reforestation/watershed project, where farmers were encouraged to plant their farms with trees. Farmers were given P1200 (A\$30) for every hectare that they planted for the project. Many of my neighbouring farmers were enticed by the money, but then had problems because they could not plant anything else on that land or harvest the trees for their own use.

However, in 1999 when I went on a field trip to Claveria in Misamis Oriental, I saw there was hope for farmers who are poor. After that momentous trip, the first thing I did with two other farmers was to construct a simple nursery and spend a lot of time in managing it. Many of our neighbours laughed and teased us, but we didn't mind their comments and just persevered.

Now, we are laughing ourselves — not to insult these people, but from knowing that we have won the first battle. Through patience, perseverance and sharing, we have expanded from three farmers to include the entire *sitio*¹ as members of Kibulay Landcare Group.

With Landcare, ideas are heard, perspectives are respected and decisions are made. The farmers get to be the leaders, in the driver's seat, and are not just mere beneficiaries of programs. We are partners with the landcare facilitators and with the World Agroforestry Centre (ICRAF) and that is something that we cherish.

Before landcare, we were fairly contented with the way we did our farming. We ate a little, sold a little and that's about it. But with landcare, I was able to dream bigger than before. It opened my eyes to a future that could be better and more stable. I know now that I have a legacy to give to my children that will not be stolen or burnt down. I feel more secure as a result. My grandchildren have something to look forward to and depend upon when they grow up. Landcare means sustainability in terms of food, income and natural endowments.

With landcare, I have learnt to become more creative in the way I do my farming, not relying on just one crop but having a number of crops to provide continuous food for my family, with a small income every now and then.

¹ Each province in the Philippines is divided up into municipalities, which are again divided into local government units called barangay. Within a *barangay* are smaller villages or hamlets called *sitios*.

Landcare brought some sense of truth and faith to us farmers. I saw the sincerity of the people who have shared with me the skills and knowledge that have made me a better farmer. With facilitators coming here two to three times a month, who would not believe that they are serious about truly helping us?

I used to be a *barangay* official before landcare, but I was always a shy type of person who seldom spoke or interacted. With landcare the shyness and the inhibition were lost! I am pleased about the way I can now face visitors to my farm, both locals and foreigners. The facilitators and the variety of training I have attended with landcare have really prepared me well for the 'job' that I least expected to perform — to facilitate visits to my farm. I guess the fear in me is gone.

And I noticed with this change in me, a change in the way my neighbours and other community members saw me. I felt a lot more respect coming my way. Many people are impressed with what I have accomplished on my farm — the contours, the trees, the livestock, and so on. Many of the more educated community members keep telling me that I have done better than them in terms of sustainable farming, tree propagation, and soil and water conservation.

I want to see landcare becoming an integral part of everyone's life, especially resource-poor farmers like me who rely on this most priceless possession, the land. I hope that landcare will be able to reach out to more people across the Philippines and to people beyond who live in similar conditions. I also hope that the national government will take notice of landcare and provide the necessary support mechanisms to sustain this project and help farmers to become partners and not just beneficiaries of development projects.

With landcare, I did not expect any funds to support our activities. The facilitators were honest about this. Farmers should not wait for any rewards or funds to come their way to do something that is beneficial for them. All they have to do is look, listen and decide if what they are seeing is appropriate for their situation. I am poor, and have no capital for any big projects on my farm. However, I changed completely once I realised that landcare was something that I could simply 'do', which didn't require any expense, and was beneficial to me, my family and my community.

Love your farm, even if you have a small one. Be creative and imaginative on how you would want your life to become in the future. Last but not least, dream and hope for the better. I long to make *Sitio* Kibulay a paradise where trees flourish and farms are productive and protected from the elements, with people working together.

Basilio Decano

Sitio Kibulay, *Barangay* Cawayan, Lantapan, Bukidnon, Mindanao

22 April 2004



Basilio and Willie Decano in an agroforestry plot on their farm.

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Production of *Landcare in the Philippines: Stories of People and Places* was undertaken by the Australian Centre for International Agricultural Research (ACIAR). The book's compilation and production were overseen by Noel Vock, of the Department of Primary Industries and Fisheries Queensland, and project leader of the ACIAR Philippines-Australia Landcare Project, and Robin Taylor (ACIAR publications manager).

Throughout the process, Jenni Metcalfe from Econnect Communication acted as editor and guide to the landcare facilitators in the Philippines who did the bulk of the interviews. Colleen Foelz assisted Jenni with editing near-final chapters and Noel Vock provided continual editorial comments and corrections.

The book could not have been written without the hard work and enthusiasm of the Philippines landcare facilitators: Aurora (Au-Au) Laotoco, World Agroforestry Centre (ICRAF) in Claveria; Gerardo (Gigi) Boy, World Agroforestry Centre (ICRAF) in Lantapan; and Eldon Ruiz, SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA) in Ned. These facilitators carried out numerous interviews, took many photographs and organised checking of draft chapters.

Before the interviews, Jenni Metcalfe and Toss Gascoigne conducted a communication skills workshop with the facilitators to help them develop their skills in interviewing and story-telling.

Emily (Bebot) Garcia, the SEARCA project assistant in Los Baños, Laguna, was tireless in transcribing taped interviews accurately and quickly and sending these to Jenni Metcalfe for editing. Gayle Vock and Helen Itzstein helped in transcribing several Australian-based interviews.

Loraine Chapman from the Department of Primary Industries and Fisheries Queensland scanned most of the slides and photographs, and produced draft maps and figures.

In particular, all of the people who were interviewed for the chapters in this book gave freely of their time for interviews, revision of drafts and photographs. This book is about their landcare stories.

The project has truly been a team effort, with staff from the partner agencies working in collaboration with a wide range of people from landcare groups, landcare associations, and participating service agencies.

Everyone involved — whether farmers, facilitators or the drivers of the landcare jeepney — have wonderful stories to tell about their experiences in Philippines landcare. Sadly we could not include them all in this book, so we selected the stories that give the best overview of the landcare experience. However, we acknowledge the great efforts and involvement of all people and agencies in the exciting and continuing landcare journey.

PARTNER AGENCIES

Australian Centre for International Agricultural Research (ACIAR)

World Agroforestry Centre (ICRAF)

SEAMEO Regional Center for Graduate Study and Research in Agriculture (SEARCA)

Agencia Española de Cooperación Internacional (AECI)

Department of Primary Industries & Fisheries Queensland (DPIF)

University of Queensland

Barung Landcare Association Inc

Department of Natural Resources and Mines Queensland (DNRM)

Project Associates

PHOTOGRAPHS

The photographs in the book were taken by Jenni Metcalfe, Toss Gascoigne, Gerardo Boy, Eldon Ruiz, Aurora Laotoco, Noel Vock, John Muir, David Swete-Kelly and Emily Garcia.

GLOSSARY OF KEY ACRONYMS AND TERMS

ACIAR	Australian Centre for International Agricultural Research
AECI	Spanish aid agency — Agencia Española de Cooperación Internacional
<i>Barangay</i>	Each province in the Philippines is divided up into municipalities, which are again divided into local government units called <i>barangay</i>
CEPF	Critical Ecosystem Partnership Fund
CRS	Catholic Relief Services
CBFM	Community-Based Forest Management
CBRMP	Community-Based Resource Management Project
DA	Department of Agriculture (Philippines)
DAR	Department of Agrarian Reform (Philippines)
DENR	Department of Environment and Natural Resources (Philippines)
DPIF	Department of Primary Industries and Fisheries (Queensland Government, Australia)
ICRAF	International Centre for Research in Agroforestry (World Agroforestry Centre)
IFAD	International Foundation for Agricultural Development
IRRI	International Rice Research Institute
LGU	Local Government Unit
MBRLC	Mindanao Baptist Rural Life Centre
NGO	Non Government Organisation
NGA	National Government Agency
NRM	Natural Resource Management
NVS	Natural vegetative strips
P	Pesos
PROCESS	Participatory Research, Organisation of Communities, and Education towards Struggle for Self-Reliance
Purok	Within a <i>barangay</i> are a number of smaller villages or hamlets called <i>sitios</i> , and within <i>sitios</i> are even smaller villages called puroks
SALT	Sloping Agricultural Land Technology
SEARCA	SEAMEO Regional Center for Graduate Study and Research in Agriculture
<i>Sitio</i>	Within a <i>barangay</i> are a number of smaller villages or hamlets called <i>sitios</i>
UDP	Upland Development Program/Project

section 1



LANDCARE PIONEERS



1. INTRODUCTION

Farming issues

This book tells the story of landcare and its development in the Philippines, particularly within the southern island of Mindanao. The Philippines consists of more than 7000 islands, with a population of about 76 million people and an inhabitable area of about 30 million hectares. Five million of these hectares are unproductive due to environmental degradation. The upland watershed areas, where about one-third of the population lives, are those that are the most affected by the adverse affects of agricultural development.

Philippines landcare had its beginnings in the municipality of Claveria in the northern province of Misamis Oriental. (See the map below.) It developed further in the central Bukidnon municipality of Lantapan, and the southern remote *barangay* of Ned in South Cotabato. Later it took root in the Visayan islands of Bohol and Leyte.



The Philippines. The southern island of Mindanao contains the municipality of Claveria where Philippines landcare began. Lantapan and Ned are also located on Mindanao.



Serious soil erosion at Ned in South Cotabota. The photos show how quickly serious soil erosion can develop. The first, on the left, shows a small gully. Just a few months later (right) there is now a major gully in the same spot.



Asia has the worst soil erosion rates in the world

Population pressure has now forced many families in Asia to farm extremely steep slopes, and this causes rapid soil erosion and land degradation. It is estimated that about 65% of Asia's 1.6 billion rural population lives and earns their livelihoods in areas with a slope greater than eight percent. As a result, Asia is suffering the worst soil erosion rate in the world, which poses a grave threat to regional livelihoods and economies. For example, more than 60 percent of children living in the uplands of Mindanao are malnourished. The income levels of farm households in the area are less than half the poverty threshold level.

In addition, Asian rivers on average now carry ten times more sediment than other river systems, affecting the quality of water supplies as well as marine resources and biodiversity. As these sediments decompose, they increase emissions of the greenhouse gas methane.

For many years international research agencies such as the International Rice Research Institute (IRRI), the World Agroforestry Centre (ICRAF) and the Australian Centre for International Agricultural Research (ACIAR) have been active in developing farming technologies in the Philippines and other Asian countries. Their research is aimed at overcoming problems like soil erosion and soil acidity, and is designed to help farmers to maintain their livelihoods into the future.

However, as some of the initial stories in this book detail, the research findings were not always widely adopted. They were often limited to areas where researchers had direct contact with individual farmers. This was due in part to the technologies being too costly or labour-intensive for poor farmers. It was also sometimes because the researchers had a limited ability to work directly with the many farmers in the remote upland areas.

Responsible research organisations began to realise the limitations of some of their approaches and decided to explore new avenues, one of which was landcare. Their activities built on a history of good research and strong relationships previously developed in countries like the Philippines.

Demand from farmers

Local farmers also wanted new initiatives. They were concerned about soil erosion problems and realised they needed to shift away from slash-and-burn systems of farming to something that would be sustainable into the future.



Slash-and-burn agriculture — existing vegetation is cut down and burnt before cultivation begins.

Some of these farmers had already had direct contact with researchers from ICRAF and other organisations, but many more were in isolated areas with very little contact or access to technical expertise.

It was one of the farmers who had worked with ICRAF researchers who accidentally discovered the cheap contour technology that became known as natural

vegetative strips or NVS. It was this technology, further tested and developed by ICRAF, which was to form the base of future landcare activities.



A ploughed field in Claveria, showing the use of natural vegetative strips.

Natural Vegetative Strips (NVS)

NVS are narrow strips of unploughed land left with grasses and herbs intact (or with other plants deliberately grown). They lie along the contours of sloping farms. The strips are about 50 centimetres wide and are spaced five to ten metres apart. They are left to grow as buffers to control soil erosion, and help filter pesticides from water runoff. Given that the grasses used are naturally growing on the farm, NVS are relatively cheap and easy to establish and maintain, and do not compete much with crops.

NVS were initially laid out using a simple home-made A-frame device that helped to indicate where the contours should be ploughed.

Farmers in Claveria adapted the A-frame method to their own needs and developed the 'cow's-back method'. This method relies on looking at a cow's back as it is ploughing along the contour to make sure its back remains straight as it walks along the contours. When the animal is headed upslope, its head is higher than its back; when it is off course downslope, the rear end of the animal is elevated above the front.

As part of ICRAF's new direction in Claveria, teams were formed to help farmers implement conservation technologies such as NVS. These teams consisted of an ICRAF researcher, a municipal agricultural extension officer and leading farmers who had already implemented conservation technologies on their farms.

The high level of demand from farmers for this team's involvement started landcare's evolution in Claveria in the mid-1990s. Landcare started from a combination of farmer demand and a new research and extension direction from technical agencies.

It evolved quite separately from landcare in Australia, which had been operating since the late 1980s. And according to those who pioneered the first Landcare Association in Claveria, the name also arose independently during one of their first meetings.

However, as Australian landcare, through ACIAR, got more involved in supporting the spread and evaluation of landcare through Mindanao, it became obvious that sharing knowledge and skills was beneficial to the landcare movements in both countries.

Spread of landcare

Claveria is one of 24 municipalities and the only land-locked one in the province of Misamis Oriental in northern Mindanao. The municipality lies on a volcanic plateau, with an elevation ranging between 350 metres to 1200 metres above sea level. An agricultural municipality, it is located 42 kilometres northeast of the province's capital, Cagayan de Oro City. The municipality is divided into 24 villages or *barangay* located across the rugged landscape. Claveria is a region with high population growth.

After the initial formation of the Claveria Landcare Association in 1996, landcare groups rapidly formed throughout the municipality's *barangays* and *sitios*. It wasn't long before nearby municipalities, like Malitbog, were also calling for help from ICRAF to set up their own groups.

In 1997, local government officials from Lantapan in Bukidnon province (central Mindanao) visited to look at landcare. This prompted further visits from Lantapan farmers to farms in Claveria. With help from ICRAF, landcare groups rapidly formed in the steep hills around Lantapan.

About the same time, ACIAR and SEARCA wanted to build on research and extension activities in the remote *barangay* of Ned in the Lake Sebu municipality of South Cotabato province (southern Mindanao). By linking with ICRAF, ACIAR formulated an international project to support the appointment and training of landcare facilitators whose job would be to develop, promote and evaluate landcare at the Claveria, Lantapan and Ned sites. The project also provided the first link with the Australian landcare movement, with provision for group facilitation, training and landcare resource materials from Australia.

ICRAF and the Spanish aid agency AECI later developed a similar project, which further strengthened landcare at the Claveria and Lantapan sites and enabled its spread to the Visayan islands of Bohol and Leyte. This mix of collaborating organisations and projects became known as the Mindanao Landcare Partnership.

Organisational structure of Landcare in Claveria

The specific activities of Landcare members varied according to their needs and interests as well as their local social, economic and environmental situations.

Conservation farming and community development activities undertaken by landcare members

- Establishing NVS along contours to reduce soil erosion
- Planting perennial crops such as fruit and timber trees on or just above the NVS to increase the farmers' cash income, enhance soil and water conservation and, in the case of fruit trees, improve family nutrition
- Planting forest plots to increase family income by producing timber, fuelwood, and other products
- Adopting minimum or ridge tilling farming systems
- Establishing nurseries for fruit and timber tree seedlings
- Promoting and adopting backyard gardening to help overcome child malnutrition
- Planting herbal medicines
- Managing solid wastes by separating biodegradable wastes for compost
- Setting up local competitions such as composing landcare songs to promote awareness and adoption
- Exchanging labour for conservation activities
- Helping each other in times of sickness, death and other community problems

Today, there are more than 600 landcare groups across Mindanao and the Visayan Islands, involving more than 8000 farmers.

The movement is now working with ICRAF, AECL, ACIAR and others to establish a Landcare Foundation to sustain and spread the concept throughout the Philippines.

As three of the pioneers of landcare in the Philippines put it, the landcare approach provides:

- a way for interested farmers to learn, adopt and share new technologies that can earn more money and conserve natural resources;
- a forum in which the community can respond to issues that it sees as important;
- a mechanism that local government can support; and
- a network for ensuring ideas and initiatives are shared and disseminated.

This book tells the stories of how people developed and adapted the landcare approach to suit their own environments and needs, thereby enhancing their own lives and their communities.

2. SHARING IDEAS, TECHNOLOGIES AND EXPERIENCES

By Agustin (Jun) Mercado Jr.

Current location: Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: ICRAF researcher

Role in Landcare: ICRAF researcher developing and testing conservation farming technologies

Experience: Currently completing his PhD on nutrient cycling in agroforestry systems with the Imperial College of London; has worked for ICRAF for 13 years, researching conservation technologies



Jun Mercado on his farm in Claveria.

Landcare — the password for a municipality

The landcare process is exciting because it touches everyone. It is about sharing — sharing knowledge, ideas, experiences and technologies. Here in Claveria it has spread so widely that if you are farming or ploughing up and down the slope, someone will tell you: “What you are doing is wrong — when the rain comes all your soil will wash away.” That person could be a neighbouring farmer, an extension worker, a parish priest, a *barangay* council member or even a school child.

The greatest success of landcare is changing the attitudes of farmers, policy makers, local government units and landowners about how to use the land and protect the environment. It is not simply about the conservation measures that have been implemented or the number of landcare members. It’s about changing attitudes to the land and changing the way we use the land so that we can meet our current needs while conserving the land for future generations.

Five types of landcare groups facilitated in Claveria

- On farms — with farmers and landowners.
- In schools — with elementary and high school students; integrated into the curriculum (Technology on Home Economics).
- In forest margins — with indigenous people and migrants.
- In church — part of church activities caring for both spiritual and physical needs of members.
- For out-of-school youth — who need some focus to their activities.

We have many different types of landcare here in Claveria. One is for farmers looking to stop soil erosion on their land, and a second is for schools where we integrate landcare into the curriculum.

A third type of landcare involves young people between the ages of 15 and 30, who have left school. Some of these have formed a landcare group to promote conservation farming in preference to less productive ways of spending their time!

There is one landcare group where all the members are women, and they have regular meetings and a program of activities.

Landcare has even become part of the church and we have invited pastors to include landcare ideas during Mass. It's become a local joke that church members who don't adopt the landcare program will not go to heaven!

Our politicians also know that landcare support is an important factor in winning elections. Most of the members of the municipal council as well as *barangay* officials strongly support the landcare program. 'Landcare' is the password for the whole Claveria municipality.

Tackling environmental, social and economic problems of the uplands

Originally, we didn't think specifically about landcare. As researchers, our challenge was to help tackle the major soil erosion problem of farmers. Soil losses in the area were a staggering 200 to 300 tonnes per hectare every year. This loss caused an annual decline in crop yields of about 500 kilograms per hectare. Clearly, this wasn't sustainable. After three years of continuous cropping on sloping land, farmers had to abandon their fields. When they moved to another location, this meant cutting down more forests. Our challenge was to sustain the areas already under cultivation and to protect the forests.



Claveria is the upper watershed for nine eastern municipalities in Misamis Oriental. Therefore the actions of the farmers here will affect many other municipalities. Besides

A farm in Claveria showing contour hedgerows.

soil erosion, there are issues related to soil acidity, soil fertility, land clearing, biodiversity loss, weeds and the destruction of our marine environments.

The good news is that landcare has promoted a technique that can reduce soil erosion almost a hundredfold, to about two to four tonnes of soil per hectare per year. The idea is to plant strips of natural vegetation, known as NVS. The trees in these vegetation strips also improve biodiversity around the farms and, of course, are important in taking up carbon dioxide and so helping to reduce greenhouse gases. The reduced soil erosion as a result of these vegetation strips improves the water quality downstream and even benefits marine and coastal environments because now there is less sediment running off.

There are 20 million Filipinos living in the uplands, most of them below the poverty level of P12 000 a month for a family of six. The people here in Claveria are very poor and most have moved here from other places. Their income is very low with most families living on less than P6000 a month. Nearly 70% of our children are malnourished and the population is growing by 4.2% every year.

Until landcare, these people were working independently and weren't tackling problems like soil erosion through a combined effort. But landcare has drawn these people together to discuss common issues. This went beyond conservation farming to things like village cleanliness and hygiene, malnutrition and solid waste management. For example, before landcare, only 30% of households had toilets. Now almost all households have a toilet.

Jun's definition of landcare: Landcare is an extension tool to promote rapid and inexpensive dissemination of technology.

It has three elements. One is looking for appropriate technologies that are either existing in the community or copied from someone else. Such technologies need to be simple, low cost, adaptable to the local environment and understandable to farmers. The second element of landcare relies on developing the knowledge, skills and appreciation of the community so that people can make decisions and participate in landcare. The third relies on developing partnerships with groups such as local governments, natural resources or extension agencies, and non-government organisations (NGOs).

Finding the right technology

We initially tried a technique called Sloping Agricultural Land Technology (SALT), which used a double hedgerow of legumes to stop soil erosion. The SALT program was started in the mid-1970s by Reverend Harold Watson from the Mindanao Baptist Rural Life Center (MBRLC). The technology involved planting two rows of legumes like *Sepium* or *Desmodium* along the contours, which would lead to a terracing effect.

We worked hard to develop the system for the acid soils typical of Claveria. However, the ideas were not being adopted by our farmers. The technology is labour-intensive, taking 58 days to plough and sow one hectare. It takes another 158 days a year to prune and maintain the hedgerows. Moreover, buying legume seeds or seedlings was too expensive for our farmers. We also found that the hedgerows were directly competing with crops by taking up water and nutrients from the same layer of the soil profile. SALT was not a suitable technology for our area.

Then one of the local farmers accidentally left a strip of natural grass on their fields, where they had pegged out an area to put in a legume hedgerow system and then abandoned it. At first, we thought they were just being lazy, but when we looked at it carefully we found that leaving a strip of native grass is effective in reducing soil erosion by allowing rainfall to filter through the grasses without washing the soil away. Eventually terraces naturally formed in the areas where there were grass strips.

This is how the idea of natural vegetative strips was born. NVS has been adopted because it is cheap and relatively easy for farmers to do. The time needed to maintain NVS is related to how far apart the strips are placed but is much less than for a legume hedgerow. For example, NVS spaced six metres apart takes 30 days a year to maintain, less than one quarter of the time needed to maintain a legume hedgerow.



Farmers training each other in the use of the A-frame to locate contours for NVS.



A farmer demonstrating the cow's-back method for locating contours.

While NVS is good at controlling soil erosion, it does reduce the potential crop area by 10-20%. This means an immediate reduction in total yields and farm income, although it does lead to greater sustainability in the long run with farmers being able to remain on their land and produce regular crops. We are researching the use of other plants in the NVS so that farm income can be retained and diversified. The use of fruit crops (bananas, durians) or planting timber trees can make NVS more productive. Indeed, some farmers are already planting fruit or timber trees in their strips.

We are conducting a study on the different species of timber trees that would best suit the NVS technology. Acacia seems to be one of the most promising species, and I am currently investigating the effect of this plant on crops.

Claveria has a Landcare Research Committee that meets once a month to share information and do research. The committee includes ICRAF researchers as well as a member from each *barangay*, who is chosen according to his or her research interest and activity. For example, there is one farmer who was having a problem with wild eggplant being a weed. He tried grafting edible eggplant together with a wild variety and found that it bore fruit. He turned a weed into a crop and became eligible to become a member of the committee.



Jun Mercado's farm with fruit trees growing in the natural vegetative strips (NVS).

Tips for promoting conservation farming technologies

- Dissemination of simple technologies one step at a time is more effective than complex technology packages.
- Technologies must fit local social, economic and physical conditions.
- Technologies should be simple and easily tested and adapted by farmers to their own individual situations.
- Technologies must be profitable and low risk.
- Technologies should have immediate short term benefits as well as long term impacts.
- Technologies must be low cost and culturally acceptable.
- Farmers need to be involved in developing, testing and adapting technologies.
- Farmers should be involved in helping to disseminate technologies to other farmers, acting as role models.
- Encourage visits to farms that have adopted technologies, but avoid funding model farms that would not be sustainable without such funding.

Farmer-to-farmer extension

In the mid-1990s we set up a Contour Hedgerow Extension Team to promote the NVS technology. The team consisted of a technical expert, a farmer experienced with NVS and a local government representative.

However, while such a team process was very effective, it was not very rapid. These three people could only reach two to three farmers a day. But the need was enormous, so we split the team up to work individually with farmers. This was still not enough.

The team had meetings every Monday morning, and we discussed how to tackle this problem. We decided to train farmers who were interested. We initially identified 30 farmers from six *barangays* to train, which was all we could do at the time due to financial limitations. Half of these farmers were already adopters of NVS. We had a day of training, consisting of two hours in the classroom and the rest of the time visiting the farms of those who had already adopted NVS. The farmers who were new to NVS were very impressed.

In one of the villages we visited, it started to rain very hard and while the visitors were waiting for it to stop, they decided to organise themselves into a group so they could share progress on activities and find ways of encouraging other farmers to adopt the new idea of NVS.

In the beginning there was one group across the six *barangays*. This evolved into each *barangay* having its own Landcare group. During a meeting with the local government in 1996, it was decided to call these groups the Claveria Landcare Association. That was the beginning of the name 'landcare' in the Philippines.

We encouraged each Landcare group to have regular discussions on how to improve their productivity — to share not only the good things, but also the bad things so other farmers would not repeat the same mistakes. We encouraged a lot of farmer-to-farmer field visits because there are many farmers with positive experiences and productive farms.

Tips for supporting landcare to increase adoption

1. Emphasise sharing of ideas and experiences.
2. Involve the whole community — schools, community programs, church, businesses.
3. Promote technologies that are simple, low cost and easy to do.
4. Bring people together to discuss common issues of concern.
5. Help develop the skills and knowledge of the wider community so it can participate.
6. Involve farmers in research — they have great ideas.
7. Involve farmers in teaching each other.
8. Use real farms where landcare has been adopted, to show other farmers.
9. Listen to what the farmers and community have to say before sharing your own ideas.
10. Involve local government leaders.

Maintaining the momentum

The Claveria Landcare Association needed to be seen as working in cooperation with local government, rather than having its own political agenda. We needed the support of *barangay* officials. In exploring this issue, we looked at government programs and discovered that each *barangay* had to provide 20% of its development funds to the Human and Ecological Security Program. Landcare fitted into this Program very well, given that 95% of farmers identified soil erosion as their major problem.

After presenting landcare to the *barangay* councils, they in turn decided to promote it to each sitio. Each *Barangay* Captain would call all the *sitio* leaders together to promote NVS. This led to rapid expansion of landcare and uptake of NVS technology.

It was taking up a lot of our time. We were spending many hours working with groups to improve their knowledge, appreciation and skills. Almost every night we were out at villages doing slide shows and talking to them, sometimes until 2 a.m.! We discussed this with ICRAF's Dr Dennis Garrity who told us to continue

with our activities. Landcare continued to benefit from ICRAF's resources and later from the support of ACIAR and AECI.

Taking landcare beyond Claveria

When we took landcare to Malitbog, another municipality in Misamis Oriental, we found that the groups quickly became very active. This was because they were away from electricity and television. This meant they would put on a bonfire and sit around and talk about soil erosion and related issues. Every night they would gather around the bonfire and talk about landcare. Within two months, the 60 farmers in the village had adopted NVS.

With new volunteers and facilitators, I advised them to listen to the farmers. These farmers can have brilliant ideas. I urged them to listen first before sharing their own ideas and getting involved in discussions.

I would like landcare to spread throughout the whole country. But the process needs to be driven by the farmers themselves. Knowledge sharing needs to be encouraged. So far, it is going well. The big challenge now is to bring the message to government leaders.

3. BUILDING ON PAST EFFORTS TO IMPROVE AGRICULTURAL SUSTAINABILITY

By Dr Dennis Garrity

Current location: Nairobi, Kenya, East Africa

Occupation: Director-General of ICRAF

Role in Landcare: Involved with initial mentoring of ICRAF staff (especially Jun Mercado and Delia Catacutan) involved in Landcare in the Philippines; continues to promote Landcare internationally as a useful method for sustainable agriculture

Experience: Researcher at International Rice Research Institute (IRRI) from 1984 to 1992; then Regional Coordinator of ICRAF's South East Asia Program until 2001, when he became Director-General of ICRAF, based in Africa



Dennis Garrity, right of centre, talking to landcare facilitators in the Philippines.

Landcare builds on a history of conservation farming

The story goes back to 1984 when the International Rice Research Institute (IRRI) started working on upland rice farming systems and rice varieties. We did a lot of work on conservation farming for the acid soil uplands of South East Asia, and Claveria was a major site. We focused on testing crop rotations and agroforestry systems for these ecosystems. As we investigated these, we identified a number of important methods that could improve upland farming, increasing income and protecting the sloping lands from soil degradation.

In 1992, I transferred to ICRAF as Regional Coordinator of the South East Asia Program. This was at a time when IRRI was reducing its research work in the uplands. We asked Jun Mercado to join us and he became the ICRAF site coordinator in Claveria, where the research on agroforestry-based farming systems and soil conservation continued. By 1995, we realised there were some great opportunities to scale up the systems of agroforestry that we had been testing with farmers for a number of years.

Many farmers were using and adapting these conservation systems. But the agricultural extension services did not have adequate personnel or resources to scale up these activities. In response, we developed a program involving a 'conservation team', comprised of representatives from the various government agencies in Claveria, ICRAF staff, and farmer-practitioners from the local community. We began with the principle of



The slash-and-burn system of agriculture that existed in Claveria before landcare.

making available the services of this team to any farmer who was interested in contour farming and establishing natural vegetative strips or other types of contour hedgerow systems.

That team began operating in 1995. It gave advice to about 100 farmers very quickly. By early 1996, we noticed that farmers were organising themselves into groups and farmers were talking to each other about rapidly extending the technologies. They were interested in organising themselves so that there were farmer leaders responsible for working to develop the practices for their particular sub-villages. So ICRAF helped facilitate that.

Landcare expands rapidly

During 1996, things snowballed. At the end of this year there were 24 groups in Claveria. They decided to come together as the Claveria Landcare Association. They met monthly to exchange information and ideas between the 24 farmer groups who were members. The monthly meetings created a lot of excitement and generated a lot of enthusiasm about landcare throughout Claveria. Membership rose rapidly with the groups implementing many projects on agroforestry and conservation farming that rapidly spread from one group to the next. This was a farmer-led movement with farmers taking the lead through community effort. ICRAF provided technical facilitation for farmer groups.

We had field workers in the conservation teams. They became facilitators for each of the 24 landcare groups. The facilitators helped with evaluation, group work, improved seed for trees, and contour ploughing techniques.

ICRAF is a scientific research organisation that believes that experimenting and catalysing action on the ground are crucial to having real impacts from our research. We were keen to scale up any innovations. It is not our mission to be a development agency *per se*, but this work was particularly important when dealing with small-scale, cash-strapped farmers. There was an urgent need to find out what would be effective ways of presenting disadvantaged rural households with agricultural innovations tailored to suit their needs and limited resources.

Within two years about 200 groups had been formed in Claveria and in adjacent municipalities. We became more and more involved in farmer-to-farmer group interactions, and in scaling up landcare through farmers' visits.

While this was going on, we were intensifying our research, and identifying new questions that needed answering. Seed supplies were important to the landcare movement as people wanted new and high-yielding fruit and timber tree seeds so they could grow them on their farms. Our research focused on seed production and conservation technologies.

The program next developed in the municipality of Lantapan in central Mindanao. ICRAF was working there with a project taking a landscape approach to sustainability. We developed holistic approaches to improve the conditions of thousands of poor farmers living in the buffer zone of the Mt Kitanglad Range National Park.

We encouraged these farmers to interact with Claveria farmers. In 1999, farmer groups started forming in the Lantapan area through the facilitation of ICRAF staff based at Lantapan. Delia Catacutan and her colleagues spearheaded this work. By this time, through our experiences in Claveria, we had realised the fundamental importance of farmers taking the initiative and leadership. This, combined with support from local government and technical agencies, like ICRAF and the agricultural extension institutions of the Philippines, is what made Landcare work. We saw this important triangle as the foundation for Landcare.

Triangle of landcare

Before landcare, the Mt Kitanglad Range National Park was under tremendous pressure from encroachment by harvesters and farmers. This is one of the most important national parks in the Philippines, with great diversity of endemic plant and animal species.

About 60 landcare groups formed around the edge of the park starting in late 1999. Through the landcare program, and an associated environmental education program, there was a 97% reduction in the number of incidents of encroachment into the park within just a few years. The director of the park told me that landcare had transformed its management. This success is largely due to the leadership of dedicated selfless farmers who are concerned about their communities and were willing to share and teach their neighbours.

Landcare transforms landscapes and lives

In Claveria over the last 10 year-period we have seen a dramatic transformation of the landscape. When I went there first in 1984, it was open grassland with shifting cultivation. Farmers were growing maize by slash-and-burn techniques, moving from one plot to another within their own farms. A map then showed these villages as clusters of farms in a grassland environment with shifting cultivation. Today, there has been a complete transformation of the landscape. It is more intensively farmed, and the tree cover, including farm forests, fruit tree gardens and homestead gardens, dominates the landscape. There are trees everywhere. This has stabilised the landscape and reduced erosion by conservation practices.

There has also been a transformation of how farmers think about the land and the effort of caring for it. A new farming culture is now quite ubiquitous in landcare areas. It is a culture of nurturing the land and looking for long-term sustainability to care for the family. This has been strengthened by the landcare ethic of sharing, and the community spirit of landcare that adds a social dimension that is highly respected.

There are many dimensions to how landcare has evolved. The landcare groups have become involved in many other aspects of community development, such as improving hygiene, toilet facilities, vegetable growing, marketing of farm products and livestock production. Landcare facilitators have promoted participatory monitoring to landcare groups, which involves returning to their objectives on an annual basis and working out new objectives for the next year. This gives direction to the groups so they do not lose focus over time.

Landcare groups have also led the development of community awareness about ecology and environmental issues. This has helped protect nearby national parks and watersheds, the latter through planting trees to protect rivers from domestic and agricultural pollution. For example, the Claveria Landcare Association has proposed to the Philippine Congress the formation of a new national park next to their watershed area. This is very unusual, as local communities are usually better known for fighting environmentalists to keep them from closing off such areas. But the landcare groups have realised the precious



*The home garden is one of the features of landcare.
Rosita Lobiano in her Claveria garden.*

This was the most exciting experience of my career — to be involved in a program that took science and moved it into practice with thousands of farmers.

value of protected watersheds to their area, and have become the allies of the ‘tree-huggers’, which is something to be proud of.

In essence, landcare has changed the culture from one of frontier mining of the environment, to one focused on the sustainability of land resources.

This was the most exciting experience of my career — to be involved in a program that took science and moved it into practice with thousands of farmers. And it continues to grow and grow, now extending to other parts of Mindanao and to several islands in the central Philippines. It was a very moving experience for all of us, and it certainly changed my life and philosophy. It helped all of us understand how farmers could move from a situation of abject poverty to one of greater hope and improvement in their livelihoods.

Supporting and promoting landcare

The key challenge for the future of landcare is scaling up the networks of landcare groups from the village to the municipal level, and on to provincial, regional and national levels.

The Landcare Foundation has been created to sustain the technical support of facilitators. This has received support from the Spanish government to help with training and capacity-building. ICRAF has helped obtain funds for the Foundation and set up governance mechanisms. We will continue to help the initial activities of the Foundation with grants to farmer groups, but we will gradually reduce our involvement as the leaders of the Foundation achieve success and confidence in managing their own affairs. Management training, however, will remain important to ensure the sustainability of landcare.



Farmers Alejandro Lobiano (right) and Samuel Abrogar (centre) discuss landcare with an ICRAF landcare facilitator.

There needs to be a constant stream of innovation to maintain the interest of farmers in the local groups, and in the movement as a whole. We at ICRAF, and our partner organizations, need to ensure there is a constant supply of new ideas and technologies to support the future of the movement.

The Landcare Foundation of the Philippines Inc

The Foundation was formed in late 2003 to provide an independent institutional entity to build landcare throughout the region. It builds from the Landcare Trust Fund, developed in 2000 with Spanish funding from AECL, which was commissioned to manage the distribution of Trust funds to landcare groups. The new Foundation will continue to manage this process as well as develop other programs to improve institutional capacity, support sustainable livelihoods, generate and mobilise resources and promote landcare to mainstream government and non-government agencies. The Foundation has established a corporate structure with a board of trustees and executive, which include some of the people who have provided stories for this book.

The Lantapan landscape with Mt Kitanglad Range National Park in the background.



Dennis's definition of landcare: We have argued and debated the question for years. It's not one thing but many things that contribute to an overall whole. It is an organisational approach to support sustainable land management. It is a body of knowledge about caring for the land in an economic and productive way. It's an ethic; and it is a philosophy that enables individuals and communities to approach agriculture in a mature and nurturing way.

When I came to ICRAF's headquarters in Africa to assume new duties as Director-General, many of my colleagues here had already been exposed to landcare efforts through exchanges over the years with people from the Philippines and Australia. We have now successfully initiated landcare in Uganda and Kenya. Our first national landcare workshop was convened in Uganda in December of last year (2003).

The African Grassroots Innovation in Livelihoods and Environment (AGILE) approach to landcare

Landcare in East Africa is based around autonomous farmers' organisations that are concerned about the long-term health of the land.

AGILE uses a bottom-up methodology to find what ideas local farmers and other concerned people have for natural resource management in their region. AGILE integrates landcare experiences from other regions (such as the Philippines and Australia) into the east African setting. It draws on knowledge of African institutions, technologies and enabling policies. The aim is to 'scale up' African grassroots innovations in technology, natural resource management, policy reform and livelihood, while not losing their relevance to local needs.

AGILE operates locally, nationally and regionally. Particular importance is given to developing farmer institutions, linkages and networks, and the capacity of facilitators. The experiences from Australia and the Philippines are proving invaluable in this respect. Other areas of interest include the interaction of farmer groups with government and their ability to reach out and influence policy through lobbying and advocacy.

I see ICRAF as instrumental in continuing to champion landcare internationally. We are working with many national and international organisations to bolster or initiate landcare movements in particular countries. A major goal of ICRAF's association with landcare in the future is to explore appropriate ways in which landcare can be a basis for sustainable agriculture in other developing nations around the world.



Joseph Tanui, AGILE landcare facilitator, discusses landcare with farmer leaders on a landcare member's farm in Kenya.

4. FARMER INNOVATION DRIVES LANDCARE

By Marcelino Patindol

Current location: Santa Cruz, Claveria, Northern Mindanao, Philippines

Occupation: Farmer, Pastor of Philippine Advent Christian Church, Chairman of the Committee on Agriculture for Santa Cruz Barangay Council

Role in Landcare: Vice-president of Claveria Landcare Association; previous president (both voluntary positions)

Experience: Involved in all landcare activities, including nursery establishment, tree planting, contour farming, training and group planning



Marcelino Patindol.

Conserving the soil and creating a spirit of unity

Farmers benefited from using natural vegetative strips (NVS) to protect their soil from erosion. Soil fertility has been restored, increasing farmers' yields and income. I will give my own case as an example, as I am not a person who is easily convinced without proof. I ploughed one side of my farm with NVS and the other side I left as it was without contours. After two years, I compared the two areas at harvest-time, and I found that NVS improved my production of corn by 20-30%.

In the landcare groups, there is a strong partnership among the people and there is a spirit of unity, which we call *bayanihan*. This means people work together more. For example, it might take one person a week to plough a field, whereas when other farmers are invited to help it can be done in a day. The groups work together to construct nurseries or meeting places or to beautify a *sitio*. People work voluntarily, as there is joy and happiness within the group.

There are now 6000 farming households involved in landcare in Claveria. Half of these people have been very active in landcare, while the other half are new. This represents about 30% of the farming community in Claveria.

Marcelino's definition of landcare: I have a very simple definition. Landcare means to protect and care for the land. It is about protecting the land from erosion.



View across Alejandro Lobiano's farm in Claveria. Alejandro is one of 6000 farmers involved in Claveria landcare.

Accidental beginnings

Before ICRAF, the International Rice Research Institute (IRRI) came here and was trying to introduce conservation farming along the contours. However, the technology they were talking about was too expensive for farmers, who refused to adopt it. It required them to buy seeds and other materials to grow the hedgerows and they couldn't afford to do this.

The IRRI technicians had previously taken sticks out to the farmers and asked them to place them in the contours ready for planting the hedgerows. When the farmers were unable to buy the planting materials, they just left the sticks in the ground and ploughed around them. As grass was left around the sticks, terraces started to form within a year.

ICRAF researchers came in and studied the grassy strips and found that they were stopping soil erosion. Our farmers had accidentally discovered the NVS technology that landcare is now promoting throughout Mindanao and elsewhere.

Forming the Claveria Landcare Association

I am a pioneer member of the Claveria Landcare Association, which we started on March 26, 1996. It was at this meeting that we decided to call our group 'landcare'. Landcare is not difficult to explain to people in the mountains. We understand the meaning of the English word 'land'. We also understand the word 'care' because we have plenty of government programs that use the word, like day care centres.

NVS fields in Claveria

We only found out about the gigantic landcare organisation in Australia in 1998 when we were asked by ICRAF's Dr Dennis Garrity about how our landcare related to Australian Landcare. I said I didn't even know about landcare in Australia and asked if we could find out more. Since that time, many people have come here from Australia to look at what we are doing, and we have visited Australia to see what they are doing. I was happy to find out that we were not alone in caring for the land.

Taking landcare further

The farmers in the initial landcare group came from upper and lower Claveria. The upper area gets lots of the rain, while the lower area gets much less. We had to find a common denominator between these two to be able to take landcare further. Lack of suitable technologies or knowledge to deal with specific problems seemed to be the common thing that united all farmers. We worked with farmers to identify problems and solutions and in this way landcare ignited and spread throughout Claveria.

In working with farmers in different villages, we ran slide shows that demonstrated what was happening to farms when erosion gullies were produced after heavy rains. We also showed what happened with silt run-off into rivers and the ocean. The interest was so high that Jun Mercado and I were very busy in the evenings running slide shows. I think we did more than a thousand slide shows in a year. And I am still going out doing three to four presentations a week.

As a *Barangay Captain*, I introduced an ordinance where people in my villages had to contour their sloping lands using NVS technology. Other *barangays* had similar ordinances. The Claveria municipal government also created an ordinance where they provided each *barangay* with P50 000 for landcare management. This still exists with the money only being used for landcare activities such as training, buying seedlings or constructing nurseries.

Personal vision

My personal vision is for all farmers to adopt and get fully involved in landcare. It is the moral responsibility of all human beings and is expressed in the Bible: "The Lord God took the man and put him in the Garden of Eden to till it and keep it" (Genesis Chapter 2, verse 17). We must care for our land because we only have one planet.

We're expecting a rural radio station to be set up in Claveria soon, and we're planning a regular landcare program on this. This will help the spread of landcare.

It would also be good to get more support to help the very poor farmers with things like working animals to help them plough their farms.



Marcelino looking at the conservation farming techniques that he has helped to promote.

One of the barriers to overcome in achieving widespread adoption of landcare is the attitudes of the rich landholders who do not live in the area and don't understand conservation farming. Some of these landholders have ordered their tenant farmers to destroy contours. About 20% of farmers in the region are tenant farmers. We need to bring absentee landholders into landcare. However, we continue despite the problems. I am still energetic and very committed to making landcare happen.

5. BUILDING LOCAL PARTICIPATION IN LANDCARE

By Delia Catacutan

Current location: University of Queensland, Brisbane, Australia

Occupation: Completing a PhD on 'Scaling up Landcare', supported by an ACIAR John Allwright Fellowship.

Role in Landcare: Delia led the ICRAF team implementing landcare in Lantapan, Bukidnon, Central Mindanao, Philippines.

Experience: Delia has a Master of Science in Development Management. Before joining landcare, she worked as a trade and industry development specialist, focusing her efforts on agrarian reform areas where she worked with farmers doing farm and business plans.



Delia Catacutan speaking at the Australian Landcare Conference in Darwin, 2003.

Lantapan's landcare impacts

Landcare has done so much for the landscape of Lantapan, especially in the more critical areas. The groups we worked with are concentrated in the higher areas of the watershed where up to half the farmers have adopted conservation technologies.

When looking at the social impact of landcare, I noticed that farmers have become more expressive and independent. They built their own office, nursery and demonstration farm, using their own resources. The local farmers negotiated with the education department to build these on school property. They entered into an agreement so the teachers and students in this school could take advantage of the demonstration farm and its learning opportunities. I believe this is a very strong indication of the social balance between farmers and the community.

There have not been any studies of the long-term economic benefits or impacts of landcare. However, there are many stories that farmers tell. One farmer monitored his yield and income from his own experiment in the field. He put cabbages into areas with natural vegetative strips, and then he put cabbages into another parcel of land without NVS to compare the results. He only got three sacks of cabbages in the area without conservation farming, but after a year of conservation farming he was getting 20 sacks of cabbages from the area with NVS.

He only got three sacks of cabbages in the area without conservation farming, but after a year of conservation farming he was getting 20 sacks of cabbages from the area with NVS.



A farmer working the fields in Lantapan.

This was a tremendous income benefit for the farmer, even without including the potential value of the trees he planted. Another farmer I interviewed said he had doubled his production of corn through using NVS.

City beginnings

I am a city girl and grew up, studied and worked in Ozamiz City, Misamis Occidental until my family moved to Lantapan in 1995. I got a job with the local government developing a watershed management plan to input into the overall management plan for the municipality. I really enjoyed it. I wasn't trained in environmental management before taking on this project, but I learned so much from it that it was like taking a whole degree program. There were 16 research institutions involved and my role was to consolidate all the natural resource information.

While I was involved in this project, ICRAF encouraged me to look at the model of landcare happening in Claveria. I organised a trip of local government officials to go to Claveria to see what was happening. They were very impressed and went home wanting to set up a similar program in Lantapan. After this visit, we started incorporating the landcare concept into our watershed management plan, as I thought this was the best way to institutionalise landcare into local government processes.

Delia's definition of landcare: Landcare is an approach, rather than something with a hard and fast definition. It depends on the perspectives of the different participating groups. I see landcare as an approach that builds on farmers' knowledge and results in collective action for natural resource management. Farmers should look at landcare as their own, as their organisation, represented by them.

Implementing the landcare approach

In the early days the political situation was not conducive for landcare. But ICRAF was committed to making it work and pushing the partnership with local government. I negotiated with the local government to get its support. It took a lot of perseverance and time! Initially, government officials were unappreciative of our work, but we continued working with farmers, schools, and NGOs. In time, the local government realised our sincerity and demonstrated their appreciation for our work by occasionally supporting some of our activities.

The other thing I wanted to do was bring the landcare project into a new place without losing its grassroots drive. My philosophy about responding to farmers' demands rather than pushing an outside concept made this difficult for me. I decided we should go out first to farmers with an open information and dissemination campaign without saying a word about landcare. And that was how we did it.

We developed a broad slide show for the farmers to raise awareness and get farmer participation. There were 14 villages in the area. We looked up their schedules of regular public meetings and asked the village leaders if we could participate in these meetings and present our slide show. We always got a big welcome. The next challenge was to consider prioritising our activities. How do we select the villages to concentrate our efforts?

I wanted to be faithful to the character of landcare, which is driven by the demands of farmers. During the slide presentations we developed a small questionnaire that we distributed publicly. We asked those present to answer very simple questions such as:

- would you be interested in learning more about conservation farming?

- what technologies are you using on your farm?
- would you be willing to do some training?
- would you be willing to invest in conservation activities?

Based on the farmers' responses, we were able to choose seven villages to focus on. The chosen villages were on the steep slopes in the higher regions where erosion was taking place. These people were the most interested in seeking technologies that would have some value to them by saving their top soil. I was relieved to find there was a demand for landcare — it was not a case of us coming in and trying to push it from our perspective.



Delia speaking to a group of farmers during a training workshop in Lantapan.



Slide show for local farmers and government leaders in Lantapan.

The village leaders asked us to come back and talk to the interested farmers. Again, we looked up the schedules for each village, but this time focusing on the sub-villages or hamlets. We then attended their meetings and presented our slide show. This was very tough because often we had to walk to the hamlets carrying all our materials, including slide projector, screen and even a generator where there was no electricity. Sometimes we had to rent a water buffalo to carry our materials because our vehicles couldn't get to such remote areas! Many of the people in these small hamlets had never seen a slide show before. They were so excited, and we used the slide show to get their interest in training. They told us what they wanted to know and asked us if we could do training for them. That's how the landcare training schedule started.

This brought about a rapid formation of landcare groups in the seven villages, especially in the poorer villages higher up in the catchment. Their priority for water drove the need for

conservation technology and there was an explosion of activity. At one point, the three or four facilitators available were so busy that they were hardly able to attend to all the needs of the groups that had formed.

Sometimes governments were very active in supporting landcare while others had a sort of 'wait and see' attitude. We learnt a lot about how to get local government participation and support.

First, it is important to explain to local government representatives that landcare actually helps them achieve some of their own aims. It's a program in which they can invest their limited resources to get greater returns. Some local officials easily get this point, but others don't, so there is a need for consistent follow-up and building of friendships and personal relationships. It is important to show that you are interested in their programs in the villages. Casual and informal conversation is often more effective than official formal meetings in helping to develop relationships and partnerships.

Key success factors in gaining local farmer participation

1. Build on existing relationships of credibility and trust.
2. Find out the demand for local information and training.
3. Let the farmers drive their own involvement and participation.
4. Focus on the landcare approach rather than set terminology or structures.
5. Go to the farmers in their local environment at their regular meetings.



The Lantapan landscape.

Dealing with change

Towards the end of 2000, two major national banana plantation companies started operations in two villages in the upper elevation areas where the landcare groups had spread. These big companies took over a lot of the farming land and many of the farmers that used to be active in landcare exchanged their land for a job in the company. This had a tremendous effect. In one area, for example, up to 70% of the farming community was employed by the company.

This meant there was labour competition between the company and the smallholder farmers. And since the company was paying more than the organised farmer could afford to pay, there was no labour available to the farmers. Some of the vegetable farmers had to relocate their farms to other areas where labour was available.

Participation in landcare by the hill communities decreased and, as a result, we turned our attention to the villages in the lower elevation areas. However, in these areas a strong livestock industry focusing on swine and poultry production was emerging. Sugarcane was also expanding in the area because there was a sugar processing company nearby. Once again, land use was changing; many farmers were choosing to become labourers on sugarcane plantations.

Soon the watershed's land use had become quite diverse. There were vegetable growers in the uppermost portions of the catchment, high-volume crop production (banana plantations) on the middle slopes and sugar and livestock production on the lower slopes. With such land use changes, about 20–30% of landcare groups remained intact while other groups declined, disbanded or disintegrated.

However, landcare was able to influence the companies' activities. I interacted with them and acted as a spokesperson for the farmers. This was articulated through ICRAF and my good relationship with the operations managers of the banana plantations. I would make requests on behalf of the farmers for a little financial support or assistance with training and the company never said no.

Another company, Mount Kitangland Agri-Ventures Inc. (MKAVI), worked with landcare facilitators to develop a proposal to implement a watershed management project. The company planted trees within their banana plantations in the valleys and on steeper sloping areas. They bought the tree seedlings from the farmers, which was a nice benefit for the farmers involved.

We also tried to influence the Lantapan local government who wanted these companies to be there. This resulted in two bits of legislation being passed. One banned use of aerial sprays by the companies and the other encouraged farmers to adopt soil and water conservation.

Given the grassroots culture of landcare, we were very opportunistic in our initial activities. The lesson we learnt is that while it is important to respond to community demands for landcare, it is also important to think ahead about potential changes. Sustainability evolves as the conditions evolve and we needed to combine our responses to local demands with aspects of marketing.

Spreading landcare

Local governments are in the frontline for the future of landcare as they are the only permanent local institutions that could deliver services and support to landcare. The challenge is to get their support and involvement.

We need the larger system of government to cooperate with local farmers. While I support farmers being self-reliant, I still see a great need for governments to participate and provide the foundation for farmers' activities. I think it is great that farmers value independence and knowledge rather than external finance and resources. This creates the culture of pride, independence and esteem for themselves and what they do. But they should not be left alone. This doesn't mean it's the sole responsibility of government or a particular agency. It's more about complete participation that includes government and NGOs. It's about

developing farmers' ability to be independent while working with government and non-government partners for large-scale change.

Local governments can better help landcare and improve their own extension programs by:

- employing more qualified technicians and extension personnel who are supported by relevant training programs and travel opportunities
- producing quality extension materials
- applying the landcare concept to both agricultural and environmental extension programs
- supporting agri-livelihood activities in landcare as a form of incentive, rather than aid
- gaining private support and investment for landcare, for example from the agribusiness industry.

NGOs can support landcare by:

- building social and community skills for achieving development rather than focusing on projects that lead to dependence and the need for a 'dole-out system' to support development
- being flexible in their project targets to allow for experimentation, which means achieving a balance between process and outputs
- supporting landcare projects rather than creating new institutions.

I am optimistic that the essence of landcare will be embedded in the Filipino culture. I chose the topic 'Scaling up landcare' for my PhD research to look at the issues and consider the measures needed for further developing the landcare project in the Philippines. I was inspired to do this because of what has happened in Lantapan where I worked. I saw a tremendous opportunity to study this from an academic sense and to step away from my own backyard to gain a different perspective.

After finishing my PhD, I want to go back to the Philippines and continue my work, but with more of a focus on government issues and the environment. My passion is to really make an impact at the policy level, particularly on budgeting issues for natural resource management.

Eight tips for making landcare work

1. Analyse current and potential future trends to determine likely events that could affect landcare activities.
2. Respond to grass roots demands as well as being strategic about likely future events.
3. Integrate livelihood aspects into natural resource management activities.
4. Provide ongoing training and education at all levels.
5. Build leadership within communities.
6. Provide effective technologies for conservation farming.
7. Build the capacity of the farmers to operate independently.
8. Support complete community participation in landcare — which includes both government and NGO support and involvement.

A typical farmhouse – landcare is driven by the demands of farmers.



6. LANDCARE GOES BEYOND TECHNICAL RESEARCH

By David Swete-Kelly

Current location: Canberra, Australian Capital Territory, Australia

Occupation: Regional manager for Southeast Asia, Hassall & Associates International

Role in Landcare: Led the establishment of the ACIAR project to evaluate landcare as a model for Filipino farmers on steep lands of Mindanao and for selected Australian horticultural industries

Experience: Over the last five years he has worked on a range of agricultural and rural development projects in the Philippines, PNG, Vietnam, and Laos; David worked for 22 years as a horticultural extension officer with the Queensland Department of Primary Industries.



David Swete-Kelly.

Benefits of landcare

The fundamental benefit of the ACIAR landcare project to target communities in the Philippines is that it provides people with the resources, the technical assistance, and the hope that they would not have gained by themselves. The landcare process has three impacts: firstly, farms are sustainably managed; secondly, farmers' thinking and traditional practices are challenged; and thirdly, they have a vision for the future. This generates a pride that they wouldn't normally have in what they're doing.

If you go to places where landcare hasn't started, you see that most farmers just depend on one crop like corn. This is often grown along slopes and farms show very little change (apart from erosion) over time. But in places where landcare has taken hold, you can see that people are building up their farms with hedgerows, terraces and alternative crops, such as trees (for timber, fuel or fruit), vegetables, and ornamental crops. Through this they generate a lot more permanence, a pride in what they have achieved, and a legacy for their children. It also provides the foundation for a stronger cash economy. The farmers have an intellectual grasp of where they are, where they're going, and what the future steps will be — all these are characteristics you don't tend to see in the more underprivileged communities that are following traditional practices. In the Philippines you see people joining rank with landcare because of a sense of rightness about doing something for the future.

Moving forward from technical research and extension

I have been involved in extension in one way or another since the late 1970s when I was with the Queensland Department of Primary Industries. In those days, the way you valued yourself was according to the amount of technical information that you could cram into your head. It worked extremely well because



A well-managed farm in Claveria showing a diversity of crops.

many farmers valued the information you could provide. But it became increasingly clear that some problems didn't have a technical answer. Progress was more about how farmers managed their business, or how they modified their production practices to have less impact on the community. It was about joining together with other farmers to increase marketing influence, and it was about reducing environmental degradation on a catchment level.

It became clear to me that the really difficult issues faced by farmers were not technical, but related to complex interactions and relationships. I saw that people are the deciding force. Technology is simply a tool.

In the late 1980s, ACIAR was a strongly research-focused organisation. Its mandate did not allow for work to identify farmers' real needs or to help fit the technical research into target farming systems. ACIAR was aware of the need for relevance in what it was doing, and realised that change was necessary. However its culture was focused on the technical soundness of its work, the research methodology used, and the production of research papers. It placed insufficient emphasis on how anyone was going to use the research afterwards. As such, it was caught in the paradigm that technology would save the day.

ACIAR had sunk considerable funds into a series of very technical soil conservation projects based on small plot research sites in the Philippines and Australia. By 1990 it was trying to make decisions about the implications of this work on catchment

management, soil/water/nutrient interactions, and land use issues. ACIAR was particularly concerned to ensure that its substantial investment did finally result in tangible benefits.

In 1992 the DPI developed a project proposal for ACIAR that tried to take this suite of fairly technical projects to the next stage — to draw out the relevance of the projects for farming systems. We put together a multi-disciplinary team of people in Australia and, with ACIAR's assistance, linked with a group from SEARCA in the Philippines.

The project worked in both the Philippines and Australia, despite the different situations of the farmers. We worked with farmers in both countries to identify options that could be packaged into a tailored farming system for the different landscapes involved. We tried to integrate issues such as pest management, nutritional practices, operational needs, soil organic matter management, farmer training, market access, and erosion control into one farming system. We wanted to present farmers with a simple package of information and technology that met all their needs and that demonstrated benefits well beyond the simple sum of its parts.

The final project ran from 1994 until 1997. It had significant success, including the development of effective tools to evaluate sustainability. However, I had a sense of dissatisfaction. In Australia, we found ourselves being somewhat marginalised within industries. We worked extremely well with those growers

who embraced the issue of conservation, while others farmers kept a watch on what was happening but were not motivated to become involved unless they could see more immediate benefits. In the Philippines, we found ourselves working in isolated areas where communities responded very well to anyone helping them because they were living in a service vacuum — but it begged the question of how to sustain the effort after we left. In both cases, while we were doing very good things with the beneficiaries we were working with, the process was not replicable on a larger scale because it depended too much on our technical inputs and support. To put it simply, the resources to continue this level of input were not available.

We faced two different issues. In the Philippines any assistance was hugely appreciated, but we couldn't scale up our efforts due to lack of technical support. In Australia, we had good impact but the industry was reluctant to scale up as conservation was only one of the risks they were dealing with and not necessarily their primary concern. We needed to change our approach, to motivate the farmers to take control of their own situation.

This is when we first looked at landcare. ICRAF was already piloting landcare at Claveria and had shown that it fitted well with Filipino culture and could have dramatic impacts. It was also clear to us that landcare as an approach had been quite successful in many farming and rural communities in Australia. We noted that landcare's success was directly proportional to the sense of community and common purpose that people felt. When people in rural areas get together, especially when they are under threat, this sense of common purpose can and does create momentum for change.

Landcare provided the social mobilisation necessary for farming communities to come together and address common problems — in many cases this was initially related to conservation issues but as landcare groups matured they evolved, and the issues confronted expanded to include a myriad of often complex social, business, technical, and conservation concerns. Landcare provided the social framework for people to get together to try and address common issues in a concerted way, and in a way that the already existing avenues for community interaction were not able to match.

The Filipinos have an ideal culture for landcare. They are very gregarious, family oriented and socially active. Filipinos welcome

opportunities that bring them together to talk about issues. I am always inspired by them as a nation as they naturally get together to solve concerns. So when you are living in a remote upland village without government services, you are not getting any richer, and your kids aren't getting to school, you are looking for ways to change — inspired by the Claveria experience we felt that landcare offered some hope.

Australia's horticultural industries, on the other hand, do not show the same sense of community. Horticultural industries are often intensively competitive by nature and this leads to a sense of fragmentation. Also, horticultural industries are often only a small part of a local community. As such, we needed to find other ways to mobilise the community spirit of such industries. Possibly a landcare approach tailored to their needs would also help.

It became quite clear that the only way to scale up conservation efforts was for communities and farmers themselves to find methods of success that could be replicated in other areas at fairly low cost. It was about farmers doing it themselves and landcare seemed to be a key.

ACIAR evaluates landcare

In 1997 we started designing a new ACIAR project to evaluate the usefulness of landcare as a model for both the Australian horticultural industry and the uplands of the Philippines.

We chose three communities to work with in the Philippines. One was in *barangay* Ned (South Cotabato), where we had been working on farming systems development under the previous project but where the landcare approach had never been used. The second was in Claveria (Misamis Oriental), where the landcare approach was well established. The third was in Lantapan (Bukidnon), where there were a number of conservation interventions but nothing as coordinated as at Claveria. In all cases we tried to support and facilitate the landcare process and evaluate its outcomes with the view of making sure we had a viable model that we could promote.

In 1999 I left DPI and Noel Vock took over the project. I went over on the first visit with Noel and have been over there regularly since, but Noel has been responsible for maintaining the momentum and intellectual rigour of the project. Dennis



A Lantapan landcare meeting where the handling and sowing of seeds is demonstrated to members.

Garrity from ICRAF was also part of the initial team and he deserves a lot of credit for maintaining the vision and passion of landcare.

I was concerned at times that there were so many exciting things to do and so many different opportunities to support, that the focus of the project was getting a little dissipated. We ran the risk of losing our aim, which was to answer the question about whether landcare worked and whether it was worthwhile pursuing.

Another problem was that there were no particularly good tools at the time to evaluate a social movement like landcare. How do you evaluate someone's vision? It is difficult to measure this by quantifiable indicators. However, working with Rob Cramb, at the University of Queensland, was helpful. His approach was that evaluation in such situations has to tell the story so that it provides a mechanism for others to listen, learn, and respond based on their own circumstances and world views. We still collected the hard data on production, resource protection, and poverty but we also shared the less tangible lessons on social cohesion, personal accomplishment and pride.

One of the good outcomes of the project is that there has been a lot of sharing between the Australian and Philippines landcare groups. I think it has also been an immense boost for the Filipino landcare movement to appreciate the uniqueness of what they have been able to achieve with such few resources.

Tips for evaluating a new social movement like landcare

- Work through the process and let evaluation evolve.
- Don't get stuck on trying to find clear obvious outcomes.
- Evaluate the process through stories rather than trying to quantify outcomes.
- Evaluate the process jointly with those directly involved in it — use it as a shared learning process.
- Don't lose track of the need to continuously monitor and evaluate amidst the excitement of doing things differently.

Future of landcare in the Philippines

I think landcare in the Philippines has got a great future. However there are three challenges which it needs to confront.

The first is to engage more with local government. Most of the support services required for rural communities have now been devolved to local governments that do not have many resources. However, there is no need for large resources if local governments use an approach like landcare to work with and motivate rural communities. Unfortunately, local government has so far not embraced landcare in the Philippines to any great extent. Landcare is a community approach, but government can play an important role in facilitating and supporting the process.

The second challenge is to maintain the integrity and viability of the landcare groups. A critical success factor for the future of landcare in the Philippines is maintaining its integrity as a community-based approach. I think that the Australian government's billion dollar "Decade of Landcare" (released in the late 1980s) almost killed the movement in Australia by turning it into a process for gaining money, and adding a whole layer of bureaucracy. The Philippines must look at sustainable and low cost mechanisms to provide the institutional support for the landcare movement without perverting it.

Thirdly I think the NGO movement has a large role to play in the Philippines with landcare, to learn from it, exchange ideas, and support communities where government services fail.

David's definition of landcare: Landcare is about community mobilisation that builds the two important issues of social and resource capital.

Landcare works best in situations where rural communities are totally dependent on the land for their livelihood. It provides a vehicle for people who are disempowered to stabilise their farms, join together to advocate for better support, and develop a vision for their future.



Children take the family vegetables to market in Claveria.

Dr Ken Menz, ACIAR Research Program Manager

My first involvement with landcare came about some years ago, when I had some meetings with the Australian Government's Department of Agriculture Fisheries and Forestry about trying to promote the landcare concept overseas. The Australian government felt that landcare might have something to offer developing countries.

ACIAR took on the landcare project in the Philippines due to this interest as well as a meeting I had with Dr Dennis Garrity from ICRAF, who was already involved in landcare activities in the Philippines.

The project that resulted is a high quality and exciting one. The main issue seems to me to be about definitions — everyone seems to have a different idea of what landcare is and this can lead to misunderstandings.

Ken's definition of landcare: I have my own simple concept. I see landcare as a triangle. In one corner is the community, in another the farmer and in the third sits technology. They are all in the triangle working together.

The future of landcare in the Philippines has not been fully tested. The Philippines has a long history of groups and organisations often moving in different directions. Some people think one of the major benefits of landcare is its title. The word landcare provides a unifying banner under which many organisations with relatively similar aims can join together to form a more comprehensive force.

The opportunity for landcare expanding in the Philippines is the gap between researcher and farmer, which is not being filled very well by anyone. The local governments have that responsibility, but we need to convince them of the benefits of the landcare approach.

For landcare to be successful on a wider scale either requires new resources or a realignment of existing local government resources under the landcare umbrella. The latter would be the most effective way, but local government units need to embrace the concept.



Ken Menz (second from left) visits a landcare site in the Philippines with project team members.

Noel Vock, ACIAR Philippines–Australia Landcare Project Leader

I've been involved on the periphery of landcare in Australia for many years and was the Queensland Government representative on the inaugural executive committee of Barung Landcare, one of the Australian partners in the ACIAR project. I became involved in Philippines landcare at the start of the ACIAR project when I was invited to take over leadership of the project from David Swete-Kelly.

I saw this as a wonderful opportunity to develop a new interest in landcare. I have always been interested in landcare as an extension process and was excited when the opportunity came up to work in the Philippines where the movement was relatively new.

It has been a tremendous opportunity to learn how other cultures and people in a very different setting from Australia grapple with similar farming and land management issues.

I have learnt that landcare needs to adapt to local conditions if it is to work. In other words, we are not there to try to tell the Filipinos how to do landcare. Although we have had a lot of experience in landcare in Australia, the Philippines is a different setting with different farming conditions. Instead, we tried to help Filipinos develop their own local version of landcare, using our experience in Australia where appropriate. What we found was that the training and sharing of experiences is very much two-way, with Australian project staff learning as much from the Filipinos as they learnt from us.

Looking back over the last four years of the project as project leader, I would do two things differently. First, I think I would have tried to establish everyone's responsibilities a little more clearly from the beginning. I believe that some of the burnout we have experienced as a project team has been due to unclear roles and responsibilities for team members. Second, I think we also needed a better system for supporting landcare facilitators and rewarding them for their good work. They have done a fantastic job but perhaps have not really been given the full support and recognition for their work and efforts.

Now that I have become involved in Philippines landcare, I would like to continue to support the process in some way. We have a wonderful team of people who are very committed about



Noel Vock (centre) discusses landcare with a farmer during a visit to the Philippines.

what they are doing. I am very confident that our project team is ready and able to take the next step forward in expanding landcare in the Philippines. It is exciting that Australia can continue to be part of this process.

Noel's definition of landcare: It's a special approach that helps develop the skills and capacities of farmers and rural communities to address land degradation and other issues of concern. It is about building partnerships between farmers and others involved in rural communities so they can develop their own solutions with some support.

Over the past year or so, new partnerships have evolved in the Philippines to take landcare to a wider range of people. Examples are CRS (Catholic Relief Services) and other involved NGOs.

My vision is for the project to develop a process that will sustain landcare in the longer term without external support. I don't think ACIAR, SEARCA, ICRAF or AECI can keep on supporting landcare indefinitely, nor is this desirable. We have to build sustainable processes with governments and NGOs to take landcare to the next level.

In the meantime, we would like to continue to work with Philippines landcare in helping build this sustainability in any ways that are appropriate. This could involve providing support from Australia in technical areas, training, skills development and leadership.

7. LANDCARE SPREADS TO NED

By Dr Arturo Gomez

Current location: SEARCA Headquarters, Los Baños, Laguna, Philippines

Occupation: SEARCA project leader for the ACIAR Philippines-Australia landcare project

Role in Landcare: Involved with ACIAR and SEARCA in taking landcare to Ned in southern Mindanao

Experience: A PhD in genetics and statistics from North Carolina State University, USA; studied agronomy and botany at the University of the Philippines and has worked as a project leader for ACIAR-SEARCA collaborating projects for 10 years.



Dr Arturo Gomez.



Ned farmers learn about vegetable production as part of their landcare training.

Landcare and productivity

Landcare is now established in several areas of Ned, and its conservation technology is improving farmers' productivity. Much land was productive before, but it was also being rapidly degraded. Landcare technologies have resulted in more fertile land that gives farmers a higher profit.

The type of crops being sown have also changed, with higher income crops such as onions, cabbage, capsicum, potato, and carrots being sown, bringing farmers even greater profits. Farmers are just beginning to see this increase in productivity and they will see even more over time.

Arturo's definition of landcare: Landcare is organising people to conserve the land and increase productivity by using their own initiatives.

Building on past work

Before landcare came to Ned, I was the Philippines project leader of a SEARCA-ACIAR project. In this project, we introduced conservation farming practices such as contour hedgerows, perennial crops (fruit and forest trees) and we had trials on high value annuals like temperate vegetables, which were suited to Ned's conditions.

During this time, we were already thinking about landcare and developing a project to apply the concept in this region. Landcare seemed to be an excellent way of getting adoption of technologies that could reduce erosion and degradation.

SEARCA got involved with the landcare project because of our previous collaboration with ACIAR. Landcare started in 1999 in Ned as a joint project between SEARCA, ACIAR and ICRAF. It began as teamwork between the three organisations. By this time, landcare was already established in Claveria and we knew landcare had been operating in Australia for a long time, although I didn't know much about it.

When the landcare project started, our staff in Ned met with the barangay officials, sitio leaders, interested farmers and government representatives from organisations such as the



Farmers in Ned establishing contours with an A-frame.

Department of Agrarian Reform. After this, sitio officials requested presentations in their sitios, where they then organised landcare groups.

Initially the farmers became interested in the landcare project because of the introduction of high value annual production, which they had seen as being promising during the previous SEARCA-ACIAR steepland project. Later on, training was conducted so farmers could understand the real essence of landcare. From that point on, the farmers conducted different kinds of activities based on the needs of their landcare groups. Landcare has now proven to be a good approach in Ned. The challenge is to expand it to other regions, and this requires resources and financial support.

Looking back, perhaps we needed to focus more on farmers adopting the technology and less on organising the groups. It was slow and expensive initially to get farmers involved in conserving the land. We needed to speed up farmers' adoption of the conservation technology.

Taking landcare beyond Ned

My hope is that the Philippines Government will adopt the landcare process and fund its spread more widely throughout the country. The key to achieving this is to make policy-makers more aware of the successes of landcare so they become enthusiastic about its potential and use our national resources to help its spread. We need to use our own government and institutions to support landcare rather than relying on outside sources.

This is a difficult task given the costs of landcare. We need to find ways to reduce the costs so that governments can afford it. We must also persuade those government officials who are currently not interested in conserving our natural resources that it is an important part of their role.

We need local governments volunteering their assistance to establish landcare in their areas. In this way, landcare will spread quickly throughout the country.

Emily Garcia (Bebot), SEARCA Project Assistant, Los Baños, Laguna

My role is to help with administrative work as well as provide some technical support for the landcare facilitator at the Ned project site in Lake Sebu, southern Mindanao.

I've been working with ACIAR since 1994 when we started with the steepland project at Ned. I did not know much about landcare at that time, other than the fact that it was about forming the farmers into groups. We learnt more when the project team visited Claveria and Lantapan in July 1999 and met with Dr. Dennis Garrity and Jun Mercado. We also had field visits and interaction with the landcare groups in Claveria.



Emily Garcia (Bebot).

I think most farmers want to improve their standard of living, and at the very least secure food on their tables. They would also like to improve their farms, because this in turn can improve their lives. How best can we help them? How will we know what their needs are? In the initial year of the landcare project in Ned, we did a participatory rural appraisal and adoption survey. This gave us information about what training and crops farmers needed. We organised training in soil and water conservation, high-value annuals, potato production, durian production, asexual propagation and other topics. We made linkages with the Department of Agriculture and they conducted training for the farmers as well.

Being part of the landcare team, I learnt a lot and had many different experiences. As someone doing administrative work, it was not easy at first to understand the technical aspects of the project. But through reading, help from my project leaders and going out into the fields, I can now fully support the technical aspects of the project.

I can also see the benefits that farmers have gained over the years. The landcare groups in Ned are still very interested and their enthusiasm can be seen and felt as they work together. Strong unity exists among the groups. They are helping each other and you can now see a big difference in Ned in terms of adoption of conservation technologies. We have run an adoption survey every year since 2000, and the latest results indicate a much higher adoption rate than the previous years.

The 2003 results showed that the adoption of conservation technologies by people who were not landcare members had increased. The reason is that some farmers are living a long way from the sitio centre, and they do not know about landcare meetings or activities. They have heard about landcare processes but don't have time to attend and join a group. Accessibility is a big issue in this region. When the landcare facilitator visited farms and met and interacted with farmers living in more remote areas, they took on some of the conservation ideas. They also copied the ideas they saw on other farms, which have been contoured and planted with crops and fruit trees.

The landcare facilitator and the farmer facilitators played a big role in this success. We hired five farmer facilitators for two years and their main role was to monitor the groups, interact with them, and share ideas and experiences. The farmer facilitators all had their own productive farms to serve as a model to other farmers. The landcare facilitator oversaw the groups and met and coordinated with the farmer facilitators as well as providing technical support and helping to make linkages.

There is a need to continue the concept of farmer facilitators who can visit and interact with the farmers, as Ned is a big *barangay*, and accessibility is a major problem. Our landcare facilitator cannot cover all the 32 *sitios* in the *barangay* and also address the needs of all the farmers. Farmers in Ned still cannot stand alone, they are looking for other people to guide and give technical support — hence the usefulness of the 'model' farms.

8. LANDCARE SPREADS FURTHER WITH SPANISH SUPPORT

By Manuel (Manolo) Bertomeu

Current location: Based in Cebu but works from project offices in Claveria, Lantapan, Bohol and Leyte

Occupation: Coordinator, ICRAF-AECI Landcare Project

Role in Landcare: Helping to manage the ICRAF-AECI Landcare Project in Claveria and Lantapan and now in the Visayas — Bohol and Leyte

Experience: Is expected to be awarded a PhD in Agroforestry (by June 2004); worked for three years in Camiguin, an island on the northern coast of Mindanao, with an NGO, the Philippine Rural Reconstruction Movement on a community-based forest management project in the uplands of Camiguin



Manolo Bertomeu (right) with a landcare farmer who has planted mahogany trees.

AECI gets involved with landcare

The first time I heard about landcare was in early 1997 when I was starting to develop the initial ideas for my PhD thesis. I came to Claveria from Camiguin Island, where I was working with a community-based forest management project. In Claveria, I got involved in a series of training exercises with farmers and I discussed with them topics such as tree growing, nursery management and tree management. It was here that I first heard about a group of farmers who had organised themselves into a group that they called landcare. I never imagined that landcare would develop into so many interested groups that had formed by themselves or with minimal support.

AECI became involved when I worked with Dennis Garrity (ICRAF) to submit a proposal for funding. In that proposal, we described the Claveria Landcare Association and its activities. We were successful in obtaining funding from AECI for a two-year project, based in Claveria, where we provided training, helped establish nurseries and provided farmers with seeds to start their own nurseries.

This was different to AECI's previous involvement in the Philippines where we worked with large community groups to rehabilitate, develop and manage state forest lands. In Claveria, we worked with small farmers on their private land. In some respects, this work was easier because farmers had tenure of their land, which meant they were more interested in learning about long-term sustainability and adopting new practices.

After the initial two years, AECI decided to continue with their landcare work with smallholder farmers on private land and also with farmers on areas of government-owned land in Claveria.

I was one of the project leaders in the landcare project at the same time as being a PhD student. I was able to combine some of my research activities with farmers to do trials and conduct interviews or farm surveys. This meant I was able to see first-hand



Nursery establishment and training have been a feature of the AECL project. Here landcare members tend a group nursery.

how research and development activities could complement each other and how research feeds into development and development feeds back to research.

Landcare evolves with farmer leaders and community development

At the beginning of landcare in Claveria, we provided training to farmers who wanted to know how to grow trees and how to conserve the soil. We did not want to disappoint them and we would go out into their fields and tell them what we thought they should do and how to put in NVS. But, if I look at what landcare is now, I realise that I don't have to do that anymore. I'm now a participant in landcare and when I go out into the field or onto a farm, I listen to how they explain their experiences to other farmers. I am very satisfied to see farmers achieve an understanding that they can really do it themselves with just some support or facilitation from us.

Landcare started with a small group of farmers wanting to learn about specific technologies such as soil and water conservation and NVS. And they wanted to grow some trees that they hadn't experienced before, like *Eucalyptus deglupta*.

Over the years, Landcare evolved to become a more comprehensive way of looking at natural resource management and rural development. We started to add activities that were not directly related to agriculture, such as *barangay* development projects that built *purok* houses and promoted clean and green *barangays*. Landcare began to include things like leadership training, which was very important. In the end, you grow from seeing things at the farm level up to seeing things at the village and regional level and then the global levels.

For me, landcare has meant living with the local people, learning from them, and working with them. This was not just focused on what my interests were or what my specific objectives were, but on understanding the wider and interrelated needs of the people.

When I was showing Claveria to a visitor recently, I was telling him that 10 years ago this was a war zone. These are people who still have memories of the war and the hard times. Now they are creating new communities, and landcare is just part of the process.

We know that landcare has environmental benefits. We more or less understand the benefits at the farm level (such as erosion control and improved fertility), but now we are also beginning to understand the larger-scale benefits to the watershed and the region.

In my PhD study within the landcare project, I looked at how farmers spontaneously plant and nurture various trees on their small farms, the benefits that tree-farming systems provide to farmers, as well as the benefits from timber production by smallholders to the regional and national economies. I found out that by adopting the landcare practices of tree-farming, farmers produced economic benefits (income, raw materials) as well as environmental benefits (erosion control, improved soil fertility, shade and shelter). They were also generating jobs and providing wood to the timber industry. Many smallholder farmers were producing timber for a larger market, producing benefits to the farmers themselves as well as the local, regional and national economies.

AECI supports the spread of landcare to the Visayas

In 2000, we were successful in getting additional AECI funding to support the development of landcare in the Visayas. This was quite a challenge, as the soils, farming systems and socio-economic conditions in areas of the Visayas are quite different to those at Claveria in Mindanao. For example, the soils are very shallow and derived from limestone, unlike the deeper volcanic soils of Claveria. The soils were also more degraded and the upland areas more closely settled. We were particularly interested in whether NVS technologies and agroforestry systems developed at Claveria would work in these very different physical and socio-economic conditions. We were also interested in testing the efficiency of the landcare approach away from its home base in Claveria.

We set up a landcare program in the islands of Bohol and Leyte — in Bohol targeting the municipalities of San Isidro and Inabanga, and in Leyte, the municipalities of Tabango, Inopacan, Hindang and Matalom.

In learning from the early experiences in Mindanao, we focused more strongly here on building partnerships and networks with existing government agencies and NGOs straightaway. This was to make more efficient use of our limited resources. Another difference was that we studied and started to document local indigenous ecological knowledge on conservation practices in shallow limestone-based soils. In other words, we started with the farmers, not with preconceived technologies from another world.

It has been interesting to compare the outcomes from the two islands over the three years of the project. In general, the program has been more successful in Bohol. We put this down to three main issues:

1. The existence of the Bohol Environmental Code, which requires all municipalities to adopt strategies for natural resource management. As a result, there is much more awareness of environmental issues and a willingness to participate in initiatives like landcare. In Leyte, there is no such code, and municipal governments have little external support and limited human and financial resources.
2. The Bohol partners — CBRMP (Community Based Resource Management Project) in Inabanga and the NGO PROCESS (Participatory Research, Organisation of Communities, and Education towards Struggle for Self-reliance) in San Isidro — have complemented our skills very well. We contribute the technical skills on conservation farming and they contribute their community organising and social skills.
3. Farmers in Bohol largely rely on their sloping lands for their livelihoods. Only a few own or cultivate lowland rice fields or rely on off-farm income sources. By contrast, in Leyte, many farmers consider their sloping lands as less important from a livelihood perspective than their lowland rice areas, coconut plantations and off-farm income activities.



A landcare group display at a public fair in Bakidnon.

AECI supports Landcare Foundation

In the Philippines, AECI is now supporting the establishment of the Landcare Foundation. One of the objectives of this support is to establish truly local groups involving local people from many different sectors within the community. AECI will provide support for a time, with the philosophy of leaving in place institutions and human capital that can continue to pursue the original objectives and vision with relevant activities. We want to help build an organisation that is strong and active in natural resource management.

The biggest challenge for the success of such a Foundation is keeping people with the commitment and with the capacity to continue landcare activities. In my experience, organisations go through stages. They have their ups and downs and good leadership is important for helping to move things forward. We are still struggling with scaling up landcare. We don't know yet how best we can expand our successful experiences to more remote communities. I think that we are on the right track but

scaling up is not easy. It is important to continue investing in human and social capital.

Landcare has opportunities to show government policy makers how some of their restrictions may constrain landcare activities and management of natural resources. For example, government regulations preventing harvesting of planted trees are designed to protect trees but fail to provide incentives for farmers to plant trees. This is an example of where there may need to be a change in policy. One of the opportunities for landcare is to reach policy makers and government officials and show them how positive things can be done with the right incentives.

Every time AECI officials visited the landcare project, they were impressed because they saw people actively participating. AECI is considering applying the Philippines experience in Latin America, where they have a large involvement with farmers.



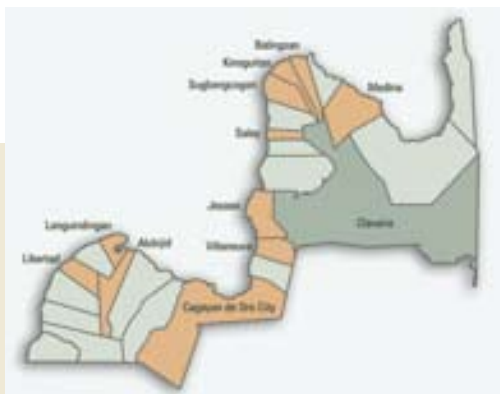
NVS technology being applied in the Visayas.

section 2



FARMERS DRIVE LANDCARE

1. FARMERS SPREAD LANDCARE IN CLAVERIA



Claveria's location in Misamis Oriental and its 24 barangays, with locations for the farmers and other storytellers in this book.

Claveria is an agricultural region with high population growth, located on steep lands. The municipality is a volcanic plateau, with an elevation from 350 to 1200 metres.

In the early 1900s Claveria was dominated by grasslands, with forest cover in areas above 600 metres. Most of the large landholdings were used for cattle-ranching, while abaca was grown on the more gentle, sloping land. Between 1949 and 1967, the region experienced a steady growth of new settlers and the cultivated area doubled. The grassland area decreased and perennial cropping, mainly of coffee, became a significant land use.

Claveria's land use continued to change as even more grassland disappeared under increasing annual crop production of maize, upland rice, cassava and tomatoes. Other perennial crops, like coconuts, cashew, marang, jackfruit and banana, became increasingly important. Today, relatively little grassland remains and most of the area is sown to crops or covered with forest. Farm sizes range from a quarter of a hectare to five hectares, with an average size of about three hectares.

Claveria is an upland agricultural watershed. This means that, as well as providing food for nearby towns, the land is important because of its effects on areas downstream. The soils are acidic and the region receives an annual rainfall of about 2500 mm.

The rapid population growth of 4.36% a year forces farm families to produce mostly annual crops to meet their family's basic needs. It is estimated that soil loss from farms in the region can reach 50–300 tonnes of soil per hectare per year. This leads to declining agricultural productivity, which in turn further aggravates poverty and local economic conditions. However, as the following farmers' stories tell, landcare and conservation practices are starting to change this story.



Claveria — a typical landscape.

FARMERS SPREAD LANDCARE IN CLAVERIA

Implementing Landcare in a *barangay*

By Angelita Cabrera

Current location: Poblacion, Claveria, Misamis Oriental, northern Mindanao, Philippines

Occupation: Farmer and craftswoman (makes slippers)

Role in landcare: Sub-chapter president of Poblacion Landcare Group

Experience: Leader, Poblacion Women's Organisation, Member of Claveria Higao-onon Tribal Association



Angelita Cabrera.

The start of a new landcare group in Claveria

I became involved in landcare because I was interested in the technologies and I thought that if we didn't care for our resources the next generation would suffer.

I joined one of the meetings of the Purok 6 Landcare group, whose leader was Raul Raganot. When I went home to my *barangay*, I started to share what I'd heard. The others in my *barangay* suggested that we plan a meeting so I went to the ICRAF facilitator, Ruby Monera and we organised it.

During this meeting, ICRAF facilitators told us about landcare and its importance, and the role of ICRAF. This made people eager to organise a landcare group. About 20 farmers, both men and women, made up our first group.

The group members donated bamboo, scheduled group work (*pahina*) and provided funds so that the group could build its own meeting place.

We invited our local district councillor, Orlando Pimentel, to our next meeting to tell him about our activities and issues. He provided support for our activities and linked us to the Poblacion *Barangay* Council. They provided pigs to interested farmers through the swine dispersal project. I did not benefit from this as I am not interested in raising pigs. When I was made president of our group after several meetings, I did not feel it was right to benefit from the trust funds before our members.

Sustaining the landcare group

My vision of landcare in three to 10 years' time is that the children will know and understand the landcare technologies introduced by ICRAF. They will understand how to work in the community voluntarily and will want to take care of the natural resources for the following generation. The Landcare Association



A Claveria landcare group meeting.

*Just as a sack
cannot stand
without rice inside,
so landcare cannot
stand without
financial support.*

will provide linkages with the local government to help make this happen.

We have already identified activities to help us achieve this vision. The first is the Waterwatch project in the Janopolitan Creek pilot area. We want to protect the water so that it will be fresh and clean. We would like people living around the creek not to dump their waste into the water.

There are many threats to this vision. The first comes from the family. We are working without a salary and if someone in the family does not understand why we want to take care of the environment they will not understand our voluntary involvement.

It is important that children understand why we are conserving natural resources. When we do nursery activities here, we involve the children. They are the ones putting the soil into the plastic bags and then sowing the seeds. We teach and involve them.

But we also need financial support, especially from the local government. It is hard for us to sustain activities such as waterwatch and landcare without financial assistance. For example, one of our members from *Sitio* Tuguiban will spend P60 for her transport to go to the waterwatch pilot area. The honorarium we get from the *Barangay* council is only P100 and that is strictly for attending monthly meetings.

We have submitted our project proposal and action plan to let them know that we need financial assistance. Just as a sack cannot stand without rice inside, so landcare cannot stand without financial support.

The people involved in landcare here in Poblacion do not get bogged down in party politics. We maintain the unity of the group despite the political affiliations of the members. We give respect to anyone and share with them and their leaders the need for landcare.

FARMERS SPREAD LANDCARE IN CLAVERIA

Landcare at the *sitio* level

By Eduardo Llausas

Current location: Madaguing, Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: Farmer, who owns three hectares of sloping farmland

Role in landcare: President of Purok 3 Landcare Group, Madaguing, Claveria, Misamis Oriental

Experience: Has always been a farmer



Eduardo Llausas.

Landcare helps farming

I first heard about landcare in 1997 when it was promoted in *Barangay* Madaguing by visiting landcare staff. They taught us about new technologies, like how to propagate and grow seedlings of 'bagras' (*Eucalyptus deglupta*).

I became involved as soon as I heard about landcare. I started as an ordinary member of the landcare group and in 1998 was elected as president of our *sitio* landcare group. I have remained in this position since then.

When I first heard the word 'landcare', I had a hard time understanding what it meant. Later on, after participating in field trips and visiting others farmers' fields, I saw much more clearly what it was.

I witnessed the results of landcare on my own farm after doing the same things that others were doing on the farms I visited. My farm used to be very hilly and difficult to plough, but now it is terraced and the fields are flat and easier to manage.

I established the NVS along contours to prevent soil from eroding. I also planted fruit and timber trees along the contours, as I had observed on other farms.

Eduardo's definition of landcare: Planting and growing trees and taking care of the land.

We in our group agreed that everyone who is tilling hilly or sloping farms should establish contours and put NVS along the contours.

On my own farm, there is a very big difference between before and after landcare. My land is now well developed. My parents' and neighbours' farms have also improved. There are now more trees in our village.



A farm scene in Claveria.

The need for financial support

With a few exceptions, lack of capital is a common problem for most farmers here in Madaguig. We have a hard time looking for people, institutions or banks that can finance our farming activities. If we do not have any capital to buy the fertilisers, we cannot harvest anything from our crops. For example, on my farm I need fertiliser and commercial seeds of yellow corn. Yellow corn will give me a better yield, especially if applied with fertiliser.

Landcare told us we could make organic fertiliser from composting organic wastes. But we still need to buy the 'trichoderma' needed to rapidly decompose the wastes and it is not available here in Claveria. We have not discussed it yet as a group, and I don't know how others will react to this problem, but I want to be able to make organic fertiliser from compost. However, I lack the experience to know how to do it.

We have plans for future activities, but we rely most on our barangay president. We the members and other officers will help him implement these plans. For one, we want to further promote the use of NVS in addressing soil erosion. There are still many here who have not established NVS on their sloping farms. And there are many of us who are interested in planting native trees like 'Mangulingao', which is fast-growing and attracts birds to its fruits. It is commonly used for furniture because of its fine texture. If we plant this tree and other native trees, we would like to be supported in our other farming activities which require corn seed and fertilisers.



A planting of timber trees on Eduardo's farm.

FARMERS SPREAD LANDCARE IN CLAVERIA

Landcare to help the environment

By Adelina Emano

Current location: Poblacion, Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: Farmer

Role in landcare: Sub-chapter President of Janopolitan landcare, Poblacion, Claveria, Misamis Oriental

Experience: A long-time vegetable farmer focusing on high-value vegetables. Also has experience in *barangay* development planning and participation in community initiatives.



Adelina Emano on her farm.

Stopping soil erosion and caring for the environment

Before I was involved in landcare, I had been tilling my small farm. I saw that soil erosion was occurring and soil from my farm was being carried into the river. At that time I was thinking of planting bamboo to prevent soil erosion. Then I was invited to attend a landcare meeting, and they elected me as a sub-chapter president.

I wanted to be involved so I could help the environment. I could see that the river was getting dry, especially during the dry season. Through landcare we can protect our river.

The benefit I get from being involved is seeing the community participating and improving their farms with landcare technologies. Landcare helps us have more community involvement, rather than staying at home.

Getting poor farmers involved in landcare

The number one problem we face is getting people involved in attending meetings. Members want to get a direct benefit from attending, so if they can't see that benefit they won't attend. Of the 35 members of our group, only nine remain interested and active. This is because most of our farmers are very poor and need to work as labourers on nearby farms to get additional income.

We cannot force farmers to be active. Most farmers have a very low income, so if they devote their time to meetings, it has a great effect on their lives. There should be financial support for the project. But we will not let people take money as a dole-out from the project, instead they can borrow from the project, then repay it to the organisation with interest so that landcare becomes sustainable and the members are responsible for themselves.



NVS on a farm in Claveria.

People should know the importance of conserving soil and water. Otherwise, it may be too late when the rivers are already dry.

We have developed a micro-lending program to help poor farmers. We have savings in our account worth P3540. The members approved lending this money to farmer to be repaid with 10% interest.

The most important benefit to farmers is the cash to buy fertiliser for their crops. They also have funds for their emergency needs or for school tuition fees for their children.

Future involvement in landcare

I want to rest from being president of the group and just be an ordinary member. As a member I have many ideas to suggest, but as president I cannot express these ideas as it may appear as one-person rule.

However, I can only participate in landcare activities when my farm income is healthy. If it gets too low, then I will be less active.

"I can only participate in landcare activities when my farm income is healthy."

FARMERS SPREAD LANDCARE IN CLAVERIA

Benefits of landcare

By *Alejandro Lobiano*

Current location: Sitio Tunggol, Barangay Patrocenio, Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: Farmer, growing corn, fruit and timber trees; also raises some cattle and goats

Role in landcare: Leader of Sitio Tunggol Landcare Group

Experience: Has been a sitio leader



Alejandro Lobiano.

Landcare improves livelihoods

I became a member of our landcare group in 1997. All the farmers in our *sitio* are beneficiaries of the Agrarian Reform Program's land redistribution scheme. Before landcare, we had a problem with building our houses because there were only grasses around and no trees. ICRAF facilitators gave us some tree seeds and showed us ways to establish contour lines and prevent soil erosion. They also taught us how to propagate seeds from fruit and timber trees. This area was 'desert' and pasture land before this time. Now we can use the trees to make houses and get wood for fuel.

Making landcare work in a small *sitio*

Initially it was very difficult for the members of landcare to come together as a group for meetings and activities. The members are always busy working to meet their families' daily needs. We used to have monthly meetings but attendance was a problem, so now we have meetings every three months.

There are many benefits from being involved in landcare. We know now how to prevent soil erosion and how to plant trees. I think fruit trees are very useful because if we plant annual crops all the time, we face the ongoing problems of preparing and working for the next crop. Fruit trees can provide us with a 'pension' when we grow old and we can harvest the fruit from the trees that we have planted.

After five years of landcare, we have remained as a group. We have a very small amount of group money that we raised through our group savings scheme, where each member contributes every meeting. We loan this out at 10% interest when any of our members have emergency needs for money. We started with less than 100 pesos and now we already have more than 3000 pesos. Our group plans to purchase goats and pigs. The offspring from these animals will be distributed to

all the members so that they will have animals to raise and an additional source of income.

I hope that the landcare program will continue so that there will always be groups to find solutions to our problems in our environment. ICRAF and all the other agencies concerned in agricultural development need to be involved in landcare. All government agencies need to be working together to provide more benefits for farmers.



Alejandro on his farm.

Billy Casiño, landholder farmer in Claveria

I used to be an engineer involved in the maintenance of highway equipment. I decided to become a farmer in 1992 because engineering was not a very profitable profession in the Philippines. I think farming is much easier. When I am farming, my mind is relaxed. My parents were farmers so I have a background in farming. And I found some of my engineering experience to be very useful for contouring and soil conservation.

When I started farming, I joined the landcare farmers and I learned much about soil conservation. I used the natural vegetative strips to contour the land and grow corn and I used the cow's back method to establish the contours. I planted fruit trees, including durian and lanzones.

When I got sick, I couldn't work much anymore so I sold some of my land and I have one farmer renting some land. I also get people to work for me. I get all these people, including the tenant farmer, to adopt conservation farming, because you need to teach them to preserve the soil.

Billy's definition of landcare: It means care of the land so it will not be barren and it will be used forever.



Billy Casiño with Claveria landcare facilitator, Au-Au Laotoco.

2. LANDCARE TAKES HOLD IN LANTAPAN

Lantapan — landcare on the forest margins

Lantapan is a landlocked plateau in the heart of the Bukidnon province in central Mindanao. The municipality has 14 *barangays*, 68 *sitios* and 89 *puroks*.

The population of Lantapan is about 40 000 and growing at about 1.8% a year. Many of the indigenous inhabitants, the Talaandigs, live in the more remote areas of the region while migrants from the Visayas and Northern Luzon have also settled in the municipality.

Lantapan ranges in elevation from 600 to almost 3000 metres above sea level. It is characterised by slight to moderately rolling terrain and hills, where about 70% percent of the land has slopes greater than 18%.

Lantapan covers nearly 33 000 hectares with six rivers and 40 creeks crossing the landscape. The climate is relatively cool and humid. Farming is the dominant activity in the municipality with extensive planting of corn, coffee and sugarcane. Cabbages and potatoes are expansively cultivated in the upper areas. Export quality bananas are an important commercial crop in the lower regions where two major companies have banana farms.



Bukidnon province (left) showing the municipality of Lantapan. Municipality of Lantapan (above) with locations marked of the farmers and other storytellers featured in this book.



Typical landscape at Songco in Lantapan.

About 40% of the region is forested, largely on the high steep slopes above 1800 metres elevation. Nearby Mt Kitanglad Range National Park is important for its wealth of flora and fauna. Although this park is only about 50 000 hectares, it has one of the highest conservation values of any national park in the Philippines because of its considerable biodiversity.

The following stories are about indigenous and non-indigenous farmers in the region embracing landcare and spreading it to their neighbours and visitors to the region.

LANDCARE TAKES HOLD IN LANTAPAN

Spreading landcare in Lantapan

By Henry Binahon

Current location: Sitio Bul-ogan, Barangay Songco, Lantapan, Central Mindanao, Philippines

Occupation: Farmer and trainer; farm has a lot of trees, a tree domestication project and a nursery for propagating seedlings; most of the produce is sold outside the farm

Role in landcare: Member of Kaamulan Landcare Association

Experience: Has been a farmer for two years, previously worked for the Department of Environment and Natural Resources in conservation projects, especially tree planting and domestication



Henry Binahon checks the seed boxes in his nursery.

Trees create a legacy

There is a saying that if you plant a tree you can create a legacy. Aside from a lot of environmental benefits, trees will provide a long-term income for my family. I'm looking forward to my children and the succeeding generations benefiting from the trees we have planted. The trees are also a bit of a pension plan for me.

The personal benefit we gain from being involved in landcare is through the training activities we run here. These are unique because they are about a sharing of information among different farmers about their experiences with landcare and conservation. They are also about the exchange of information between farmers and the researchers.

Henry's definition of landcare: It's about caring for the soil, soil fertility and also the resources within the land. Landcare involves a wide involvement of perspectives about conservation, sustainable agriculture and environmental management. Landcare is not only about directly conserving the soil and its fertility, but involves a wider scale of activities, including the values of the individual.

About 90% of the community members here now have their own agroforestry projects on their farm lots. These projects involve planting trees, bamboo, abaca and coffee. The Department of Agriculture is providing some training and giving seedlings to the community. I also started an activity, called 'cooperative planting'. This helps those farmers who want to plant trees, but have no seedlings. I provide them with planting materials in exchange for a share of profits from their future harvests. This means farmers can plant their own trees and benefit.

Landcare has enriched my own experience through training and a chance to go and visit other sites. But the most important thing about landcare is that it is about reaching people,



Henry and Pearla Binahons' farm showing their extensive tree plantings.



Nursery activities on the Binahon farm.

reaching farmers in the entire community or the entire island of Mindanao, so that farmers will be involved in caring for the land. Landcare is not only for a few farmers or the local government unit or other concerned agencies, but it's an activity for everybody.

Landcare involvement

I was informed about landcare during the late 1990s when there were programs about conservation and natural resource management at ICRAF. At the same time I helped organise a professional landcare group in the province. I am also a member of our Kaamulan Landcare Association.

The Kaamulan Landcare Association was established in 2000 by committed individuals from local governments, national government agencies, academia, private corporations and businesses. The group's objective is to promote landcare in an individual capacity at the professional level within the members' respective regions or areas of influence.



Farmers come to the Binahons' farm to learn landcare techniques.

My family is directly involved in landcare and they are my main partners and supporters. In most cases we have involved community members in our locality, many of whom get some form of income for assisting me. We generate employment in the local community through our activities.

I also share my experiences and learning with other farmers, particularly about the propagation of seedlings and designing demonstration farms.

In our training programs, I always share with farmers that my inspiration has come from training and from cross-visits to other farms. But that inspiration needs to be put into practice if learning is to happen. I think that the most important thing is to share what we have learned with other people. This is called 'walking the talk', which can only take place if learning is put into practice.

Landcare here in Lantapan is doing good things, having linked with the local government unit and other partner groups. But there is still much more to do, particularly concerning linkages with other NGOs, agencies, local government units, and even tribal communities.

Spreading landcare

I am hoping the new Landcare Foundation will do its best to share and spread information about landcare. The Foundation is currently focused on strengthening the organisation — the structure as well as the landcare groups. The Foundation's strength comes from its core group — farmer leaders, local government representatives, legislative representatives, agricultural sector representatives, and NGO members.

As landcare is not yet popular across the countryside in general, I think the most important thing is to sustain the program. This means finding funding to help local groups.

There are already structures in local government units as well as concerned communities who are involved in conservation, environmental protection and sustainable agriculture. There is a need to link these efforts and put the landcare program on a national scale. There is also a need to disseminate more information to politicians and administrators in local government units, and to get more involvement from them.

In Bukidnon, I think most of the local governments are already aware of landcare because they have included it in their municipal watershed management plans. However, the nature of Philippine politics makes wide dissemination of landcare difficult. The problem lies in the fact that the program of the former local chief executive will not necessarily be the program of the next elected local chief executive.

The landcare movement in the Philippines has started in small community groups at the farmer level, and is not as appreciated by higher level government agencies as it is in Australia. When I visited Australia, I found that the people in the bureaucracy and the top officials in the government consider landcare a priority program in their governance.

However, I think that the Philippines will someday be more like Australia in its attitude to landcare. We just need an initiative to align the local activities with the national priorities.

Currently, the Department of Environment and Natural Resources has major programs on conservation, like the Watershed Management in Protected Areas program. I believe these are part of the 'landcare' philosophy. The Department of Agriculture is also becoming more concerned about the conservation of land resources which has a direct effect on their production initiatives. The activities of these two major departments should make it easier for the Philippines government to understand landcare.

There are also other partnerships that can help landcare. For example, the Philippine Agroforestry Education and Extension Network shares information about scientific research and could be a good group for helping to sustain landcare efforts.

Vision for landcare

One of my biggest dreams is for landcare to become a national movement, with all sectors of Philippine society involved. Many professional people in the province already help disseminate information or influence others about landcare. They are useful catalysts for landcare and other conservation initiatives.

I would like to encourage people to plant trees, because trees are a major contributor to caring for the land. Trees will conserve the soil. There are big economic benefits from trees, which can also provide alternative livelihood opportunities, even for small farmers.

As a landcare practitioner, I think that trees are the main factor in landcare activities. Landcare involves two major aspects: conservation of the land and conservation of the economic resources of an individual.

Based on my experiences, the most important thing as a farmer or a practitioner is planning. I spend almost half my time in planning. 'Plan your work and work your plan', is a motto I live by!

A view across the Binahon farm.



Pearla Binahon

My husband and I have some division of labour. My role on the farm is supervising and managing. My husband is responsible for linkages and marketing. But I do the dirtiest jobs on the farm.

When we first arrived here, the land looked abandoned, denuded and degraded. It was not considered useful anymore. I planted it with vegetables, then applied organic fertilisers. Then the vegetables were intercropped with trees. I used my previous knowledge as a forester. We now have an average of 12 persons doing labour per day for us, depending on the harvest time. We started here in 1992 with less than three hectares and have now expanded to eight hectares.

We also have a farm plan. On one area, we have the short-term cash crops, on another area a medium crop like coffee and in another area we put camping sites. On the upper side of our property we have planted pine trees.

We use the NVS landcare technology, but have improved the contour lines with taro, pomelo, rambutan and jackfruit. As a result, we have been able to stop almost 90% of the soil erosion.

The taro is very in-demand and commands a high price on occasions like All Saint's Day or Holy Week when people do not eat meat. This helps if other crops fail. Taro is the best way to deal with the market fluctuation of other crops. I have five varieties of taro planted.

Others in the community are able to learn from the systems that we are applying here. They are trying to copy or replicate what is being done here. It's really a domino effect. It's a good thing — one farmer being influenced by another and so on.

We bring other farmers here for training. It's a sharing process. I have a multi-purpose centre for sharing ideas with other farmers. They have shared some of their technologies with me and I applied them on my farm. So it's a two way process, learning from each other.

Gigi Boy (Lantapan Landcare's facilitator) has been very useful in bringing people here for training. In our record book for 2002, we had more than 1000 visitors from all over the world — Africans, Nepalese, Cambodians, and other nationalities.

Pearla Binahon on her farm.



LANDCARE TAKES HOLD IN LANTAPAN

Landcare reaps benefits for indigenous farmers

By Basilio Decano

Current location: Sitio Kibulay, Barangay Cawayan, Lantapan, Central Mindanao, Philippines

Occupation: Farmer with six hectares planted to eucalypt, mosizi, durian, jackfruit and banana trees; one hectare is agroforestry with forage grasses, root crops and coffee

Role in landcare: President of Kibulay Landcare Group; member of Farmer Training Group of Lantapan; member of the Board of Trustees of the Lantapan Landcare Association Inc

Experience: Has been a farmer for 42 years and involved in landcare for five years



Basilio Decano.

Before landcare, my farm used to be a big pathway for rushing flood waters from above.

Better soil and income from landcare

Basilio's definition of landcare: Landcare is a project that enhances my livelihood and increases the benefits for my children in the future.

With landcare I have seen an improvement in my maize harvest. When I first put in NVS on my sloping farm, I only harvested 14 cans (totalling 224 kg) of shelled corn from my seven alleys. After three cropping cycles, the harvest went up to 100 cans (totalling 1600 kg) from the seven alleys. This was using the same seeds (a native variety) and the same fertiliser and other inputs. I also gained an added benefit from planting taro along the contours. One contour line gave me a harvest of three sacks of taro. Even if taro is only priced at P2 per kilo, this benefits my family. I earned P300 for one contour line of taro, which is a lot higher than the money I earned from maize.

Before landcare, my farm used to be a big pathway for rushing flood waters from above. The flood path was almost as big as our road and it washed away a lot of my newly planted crops as well as some of the established crops. But now I can't see even a bit of that happening. The soil has remained on my land and I see my soil going back to its conditioned state even without the application of inputs. I use goat and cow manure to augment the fertiliser requirements for my crops.

Other benefits I have gained from landcare have been through the sale of seeds and seedlings, which have been worth around P5000 already. The promise of producing income from trees in as little as three to four years is also becoming a reality — it's really true! And I have received other benefits, or small 'presents' as I like to call them, like a hybrid bull, a pig and some ducks. I also received facilitation fees and small tokens of appreciation from being involved in training events and having allowed my farm to be a learning site for visiting agencies and groups.



Basilio showing visiting farmers and government officials around his farm.

Before landcare, I was a very shy type of farmer. I could hardly speak with others at all, but I have transformed into a new person over the past five years. I can proudly tell my children, who have attained a higher education than me, that I have gained more practical skills and knowledge than them through my experience in landcare.

Even if I'm gone from this world tomorrow, my children and my grandchildren will no longer suffer the difficulties that I did. This is because I have left a livelihood and legacy more precious than gold that can last a lifetime. If I'm gone, they will always remember me through the trees and the other improvements on the farm.

From a slow start to enthusiastic involvement

I learnt of landcare in January, 1999. Initially the only thing that came into my mind is that landcare could be the same as the previous watershed project where farmers were paid by the Department of Environment and Natural Resources (DENR) to plant trees on the steep embankments of their farms. Under this arrangement, farmers could no longer plant maize, taro or any other crops on these areas. They could not even cut down the trees they had planted for household consumption for fear of being penalised by the DENR.

I did not agree with the watershed project because I did not want to plant trees on my farm and give up the maize, taro and other crops that are harvested in a short time.

At first I did not go to any of the landcare meetings that I was invited to. In fact, I was approached seven times but each time I sent my wife instead. I thought that it would just be a waste of time and would interfere with my farming.

In 1999 I agreed to visit landcare farms in Claveria with several other farmers from Lantapan. It made me very enthusiastic about landcare. I saw the benefits of establishing contours for stopping erosion or reducing it to a minimum, even in times of heavy rains. I also saw farmers growing trees on their farms that could be harvested in seven to ten years time. These trees could be used to build houses so that they didn't have to buy wood anymore.

A few days after we came back from the trip, three of us in this *sitio* immediately built our small communal nursery. I was so active with the nursery that my wife even told me to take my blanket and pillow with me since I spent most of my time there. She thought that I had lost my mind. But I wanted to show my neighbours that what we learnt and saw in Claveria would be beneficial to farmers here.

At first my neighbours, and even my brother, said that I would be 'eating' trees instead of food crops. I replied that whenever they wanted to cook their rice, they would be needing wood for it. And that I can easily get it from my plantation now. I never got discouraged, and now I've been involved in landcare for five years.



Basilio and Willie Decano looking at one of the agroforestry plots on their farm.

My family and neighbours changed their perspective during that time. From the initial three people who started landcare in our *sitio*, we now have a total of 42 households as members of the *Sitio* Kibulay Landcare Group. They have contoured their sloping farms and also planted trees. I wanted to make Kibulay a paradise and this is finally coming about. More changes happened when visitors started flooding to my area to look at how I did things. Sales of seedlings have augmented our meagre farming income.

Even if ICRAF no longer existed in Lantapan, I could continue doing what I have been doing — sustainable agriculture and environmental protection.

When I am able to harvest and sell my timber, I dream of being able to buy my own truck. If ever I am able to sell about 100 fully-grown trees, I am confident this dream will come true.

I have now performed a lot of roles in landcare. The latest was when I was invited to be a speaker at the Farmers' Day in Zamboanga (a province in western Mindanao) to share my experiences about landcare. I felt I was able to give them some sort of inspiration as a resource-poor farmer myself. I wanted to encourage my fellow-farmers in Zamboanga and give my testimony about how landcare has helped my life and family.

Now my crops are properly established, I feel independent. Even if ICRAF no longer existed in Lantapan, I could continue doing what I have been doing — sustainable agriculture and environmental protection.

Spreading landcare

I would like all the people in the community to believe in landcare like I do. That way they will have a brighter future. I hope that we can influence everyone in our communities to adopt landcare.

One of the problems I see is that some people only want immediate benefits instead of being patient and working for what they could achieve. If they have a parcel of land that is idle, I tell them to plant even just 100 trees. These trees are like money in a bank, which can be withdrawn over the next 10 years. If one harvested tree is sold for only 1000 pesos, they'll be getting 100,000 pesos from those trees. They could also use them to build their own houses and get their own lumber.

I urge my neighbours and fellow farmers to emulate what I have done, so we can all look forward to a brighter future for our families. And even if I live another 50 years, I want my grandchildren to be able to say that their Lolo is a 'hero' farmer in *Sitio* Kibulay, Cawayan in Lantapan.

I am now 57 years old and have temporarily retired from farming because of a physical ailment. For the last two years I have been unable to walk properly. My children now till the farm. It's a good thing that I have already established my agroforestry farm and it really helped in providing our daily sustenance.

LANDCARE TAKES HOLD IN LANTAPAN

Farmers leading the way

By Leo Zambrano

Current location: *Barangay* Kaatoan, Lantapan, Central Mindanao, Philippines

Occupation: Farmer with two hectares of land planted to a variety of crops and trees such as maize, coffee and timber trees; involved as one of the farmer growers of medicinal herbs supplying a local business in the municipality

Role in landcare: President of Lantapan Landcare Association

Experience: Has been a farmer for 15 years and involved in landcare for five years; also involved in the Palamboon Farmers' Association, which became part of landcare



Leo Zambrano.

Landcare leads to new learning

Landcare helps us preserve and maintain our farms in a sustainable manner and at the same time contribute to protecting and managing our environment.

From landcare, we learnt the value of contours on our farms. We also learnt other technologies and how to properly manage our farms to make them sustainable for future generations. For example, we found out about new species of trees with quicker market potential.

I see that landcare really has added income to our activities by providing us with more beneficial options. We also get extra income from holding training events for visiting agencies and from sales of seeds and seedlings to visitors.

Spreading landcare

I first saw landcare on a billboard while entering the municipality of Lantapan. I thought it was just propaganda! Now, as the new president of the Lantapan Landcare Association, I am looking forward to disseminating the beneficial aspects of landcare to our members and to other farmers — not only in this municipality but also to other municipalities. We are doing our bit by promoting landcare to the youth in our community.

For me, I still see a lot of things that need to be done. I would like landcare to be known throughout all the Philippines. I also hope that landcare will be adopted by our high-ranking officials in the government. If this could be done, then landcare could be given its own identity as an institution through legislation. This would influence all the farmers in the Philippines.



Leo facilitating contour establishment training on the farm of a landcare member at Lantapan.

The need for partnerships

I believe that there should be stronger linkages and partnership between landcare and government agencies because this would create greater potential to strengthen the landcare project.

We need our existing projects to come to fruition to help strengthen and develop landcare in the municipality. For example, the establishment of our training centre and the planned seed bank will help us promote landcare to visiting personalities, farmers or groups and at the same time promote the products of the technologies we have adopted here.

We are looking forward to various organisations, from local government units to NGOs helping the whole landcare program here in Lantapan. If these bodies could provide more appropriate technologies to supplement our existing knowledge, landcare would definitely spread further. On the other hand, our activities will slow down if there is only weak support from the municipal or provincial levels of government. This could eventually result in the total breakdown of the program and the groups.

We have already started linking with high officials in municipal and provincial governments. This will be the start of realising our dream of scaling up landcare from our municipality to other municipalities in the province, and even to the provincial or national level.

We have support from organisations and local governments within the municipality. For example, the Department of Agriculture office has supported us through their animal dispersal program and local government units have sponsored some of our training programs.

Partnerships with NGOs are very important for bridging farmers' development in landcare. Our links with ICRAF and the Heifer Project International are important for strengthening our landcare activities.

We still need a lot of support to make landcare sustainable and successful. We hope that local government officials will participate in our meetings, so that they will know about our situation and the projects we are planning. It is important for them to know more about landcare and our needs to see how best they can assist us.

As the president of our landcare association, I have high aspirations for the role that landcare could play in our municipality. Projects like the training centre and the seed bank are just a few that are planned during my term to strengthen and develop landcare and its farmer members.

A landcare nursery in Lantapan.



LANDCARE TAKES HOLD IN LANPATAN

Woman farmer passionate about landcare

By Restie Gamayon

Current location: Barangay Victory, Lantapan, Central Mindanao, Philippines

Occupation: Farmer with a corn field and small vegetable plots, including cabbage; rents out some land to another farmer

Role in landcare: Secretary of Lantapan Landcare Association

Experience: Has been a farmer for 22 years and involved in landcare for two years



Restie Gamayon.

Landcare protects soil and trees

Landcare teaches proper land management, soil and water conservation and agroforestry. The trees are being depleted rapidly and if we do not replant and replenish, they will all be gone. Landcare also provides simple solutions to prevent loss of soil on sloping land.

We have been running a nursery business for less than a year and we are already selling our second batch of seedlings. My nursery business is a great help to me. I have the skills to run this business and the parent trees to provide the seeds. Now all I have to do is sow the seeds and bag the seedlings. I think I am now earning more from my nursery than from maize production. Maize production needs big capital while my nursery activities rely mostly on my own initiative and labour, with my family and some friends assisting. All I need is a little cash for buying plastic bags and for proper maintenance and that's about it.

With landcare I have become more confident in performing the tasks assigned to me and in being more vocal, especially during meetings. I now find it easy to discuss landcare issues with others.

Involvement in landcare

I first heard of landcare when I was invited to one of the programs that ICRAF was conducting in Songco. After that, I went on a trip to Claveria to look at the activities of some of the landcare groups there. It got me interested in using trees on farm, nursery management and soil and water conservation. I have since been able to apply some of the technology — like nursery management — to my own farm.

Currently I am working on relatively flat land on which I have planted maize and vegetable crops. I have not yet worked my sloping land as I need extra capital and help to do this. Once I get that assistance, I will establish NVS contours on that steeper land.



Restie Gamayon in her nursery.



Restie Gamayon and friends work on Restie's farm.

Before my participation in landcare, I was a member of the SIA Kaunlaran Association, a project of the Department of Social Welfare and Development. This project provided loans of up to P5000 to farmers who needed capital. Most households were able to get a loan. I was able to get some funds to help start my maize production. However, most farmers in our area were hit with a seven month drought, which made it difficult for them to repay their loans. I somehow managed to repay my loan at about P80 a week.

With landcare, on the other hand, we don't need money to start up our activities. We are able to produce our own seedlings and collect our own seeds for sale, providing a steady income.

Spreading landcare

I hope to see landcare, in its entirety, adopted by most of the people in our municipality so that our environment is conserved and managed well. I especially hope that farmers in the upper barangays of Lantapan will join our cause given that their activities can have grave consequences on communities downstream.

To achieve this, we need the participation of our local governments at the barangay and village levels. Our barangay captain has been in the front line in promoting landcare here.

We need local government support for our promotional activities. We also need training and seminars on sustainable agriculture and environmental management available to all farmers in the community. We need everyone to be involved in this most pressing issue.

I have a deep longing to make our environment healthy. We should plant seedlings for every tree that is felled. I truly believe that this effort would not only mean saving the environment but also saving the very source of our food, income and livelihood — our land. I am hopeful that my children and my children's children will not suffer the difficulties that I have experienced. By practising good land husbandry, my children will be able to go to a good school and will have a better future.

3. LANDCARE BRINGS NED FARMERS TOGETHER

Ned — a remote area

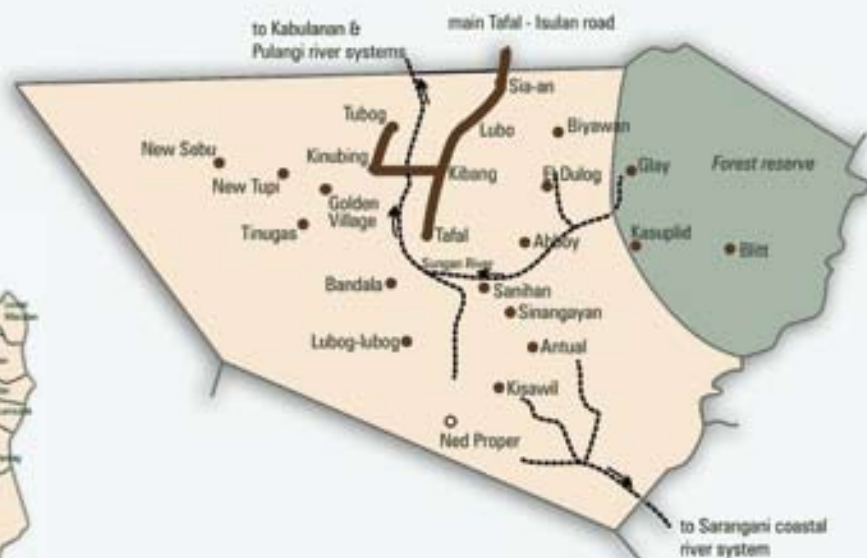
Ned is a *barangay* that is part of the Lake Sebu Municipality in the province of South Cotabato. However, its size and location away from the municipal centre means it is on the way to becoming a municipality in its own right. It covers about 41 000 hectares including the Ned Settlement Area (22 000 ha) and the Tasaday Reservation (19 000 ha), a forest reserve created to protect a small indigenous tribe.

Ned has a population of about 15 000 grouped into 30 *sitios*. The population density is about 65 people per square kilometre, but is higher in the northern part of the area, which has primitive road access.

Ned was originally part of the T'boli homelands. Starting in the 1960s, various logging concessions saw Ilonggo and other settlers move into the district, making T'boli a minority group. In the 1990s the Department of Agrarian Reform (DAR) allocated land



The location of the municipality of lake Sebu in South Corabato province (left); the barangay of Ned in Lake Sebu (below left) and the main landcare sitios within Ned (right).





A typical Ned landscape.

titles across 75% of the settlement area and took responsibility for rural development. They contracted SEARCA in 1992 to implement the Ned Agro-Industrial Development Project.

Ned has abundant rainfall, with an average of 2200 mm distributed uniformly throughout the year. The high levels of humidity and moderate temperatures (averaging 21°C) make the area suitable for a wide range of tropical and sub-tropical crops.

The countryside is rolling to mountainous with slopes ranging from 12 to 40%. The soils are neutral to acidic with low to moderate fertility. They are highly susceptible to erosion.

Nearly two-thirds of the settlement area is sown to crops, including maize and upland rice. The rest of the land is largely made up of degraded forest, with small pockets of native forest (20%) and grasslands (12%). The average farm size is about three hectares.

The remoteness of the region has restricted farmers' ability to diversify and market their crops. Tree crops such as coffee, cocoa and fruit have been planted on a limited scale.

While landcare in this region faced the formidable challenges of rapid landscape change, increasing population density and remoteness from markets, farmers were aware of the soil erosion and were looking for ways to combat it. The following stories show how farmers took the lead in spreading landcare throughout Ned.

LANDCARE BRINGS NED FARMERS TOGETHER

Farmer facilitators help spread landcare

By John Villanueva

Current location: *Sitio* New Tupi, *Barangay* Ned, Municipality of Lake Sebu, Southern Mindanao, Philippines

Occupation: Farmer; has three hectare farm with a carabao and a horse; supplements his farm income by helping another farm with harvesting and hauling of farm produce

Role in landcare: Landcare member and previously a farmer facilitator

Experience: Chairman of New Tupi Multi-Purpose Cooperative; District 4 president of the Catholic Church; *Sitio* councillor; Vice president of the Barrio Ned Integrated Trainers Association (BONITA); member of pastoral team of the parish council



John Villanueva with his family.

Diversified farming brings better income

Using hedgerows in contours has been a big benefit to my farm. It controls the soil erosion, adds biomass to the soil, and provides forage for animals. It is also a source of fuelwood because some of my hedgerows are not pruned regularly.

I used many kinds of legumes in the hedgerow, like *flemingia* and *rensonii* and also *ipil-ipil*. We also leave some of the contours with natural grown grasses (NVS). I prefer to use legume hedgerows rather than NVS to control erosion as they also provide fuel wood, forage and organic matter.

My farm now has contour hedgerows, forest trees, and fruit trees, and in marginal areas I have planted coffee. I maintain the trees beside the creek. In the upper portion I have planted forest trees.

I now have enough income for the family because with landcare I shifted to more diversified farming. I have income coming from the farm almost weekly. With this regular money, I can budget better. Before, when I planted only a single crop, money would only come in every four months so I had a lot of debts and after paying these, nothing remained.

I personally also benefit from being part of a landcare group. Firstly, by learning farming technologies like high value crop production, nursery management and fruit tree production. Secondly, we visited some places like Claveria and Lantapan and we observed their farming systems. Now my farm also looks nice.

I became a landcare farmer facilitator. Before this, I could hardly talk to farmers but little by little I overcame that and now I am confident. The way I deal with people has also changed. I have learnt how to listen attentively, especially with the old members. I can now share with them the importance of landcare.



John Villanueva with a block of forest trees on his farm.

Getting started in landcare

I first heard about landcare early in 1999 when Eldon Ruiz talked with us. After that we established a demonstration area for high-value crop production and nursery management. We established contour farms and diversified farming systems. At the same time, we organised landcare groups.

Planting hedgerows takes up a proportion of our land, but I was not concerned about that, because I saw my farm becoming beautiful with the different crops planted.



John helping to train other farmers in the use of the A-frame for establishing contours.

We attended training on coffee, durian and vegetable production, capacity building, livestock and poultry production and many other topics. I have applied all the learning I gained from these seminars to my farm, for example, I have already harvested coffee.

From farmer to farmer facilitator

In 2000, I became a farmer facilitator in landcare. This entails visiting landcare groups in different *sitios*, joining their meetings, talking to them like friends and obtaining monitoring and evaluation data. We also help individual farmers in developing their farms.

Farmer Facilitator Scheme

In the second year of the project, project staff decided to employ farmer facilitators to help handle the demand from farmers as landcare spread towards the isolated, interior parts of Ned.

The community was involved in appointing their facilitator. Six farmer facilitators worked on the project from the middle of 2000 to the middle of 2002. They were given a small fee (about P200 for each *sitio* they worked with) to compensate them for time lost on their own farms. Each facilitator worked with five to six *sitios*, and was required to visit each *sitio* twice a month. They attended monthly meetings where they took notes on the group's progress. They visited individual landcare members to discuss topics ranging from family to farming. They also evaluated the reports submitted by the different landcare groups. Sometimes they acted as trouble-shooters for groups that had conflict among their members.

Most farmers asked for technical assistance and help with developing their groups. My message to them was not to rely on us, because they can improve their lives through their own efforts. We, as farmer facilitators, will not be there forever.

I was happy to be a facilitator as I gained many friends in the process and became close to many landcare groups. Sometimes I was sad as well. Some groups were very active in the beginning, but then decreased their activities and did not adopt conservation practices on their farms. I was very sorry about that. The reason they gave was that conservation farming is very disturbing to their farm activities and reduced the area available for annual crops.

However, I was able to convince some of these farmers. For example, in Tinugas, no one was interested at first but later three farmers established contours and became active in landcare activities. I tried to organise landcare groups three times but failed due to leadership problems. So I concentrated on individual farmers who were interested in conservation farming. I encouraged them through sharing ideas and inviting them to visit my farm.

The first farmer to get interested was also active in the Catholic Church where I served as the district president. When another farmer saw what we were doing, he approached us to ask for

information. Then this farmer also adopted landcare activities on his own farm and other farmers followed. This is an example of the farmer-to-farmer approach that worked when group formation was more difficult.

I think farmer facilitators are important for landcare groups, as they can help farmers to meet and plan their activities. After the scheme ended in 2002, many landcare groups became less active.

Perhaps we should try to get some more volunteer facilitators. I still visit some landcare groups and they still treat me as a farmer facilitator. I am willing to be a volunteer because I miss the farmers!

Tips for farmer facilitators

- Talk to farmers both as individuals and in a group.
- Show them farms that have adopted conservation technologies.
- Get them to meet other farmers who have benefited from the technologies.
- Provide them with support, technical advice and group development.
- Teach farmers self reliance.

Partnerships with the church

The technology I learnt being a farmer facilitator I have also been able to bring to church groups. In District 4, of which I'm the president, we introduced landcare and took it to the parish level.

Church members are interested because it is also a wish of the church to preserve the environment and improve income through farming. We have a program called Farming and Livelihood Ministry (FLM), which caters for the farming needs of the parishioners through training about different farming systems, especially organic farming.

With such a partnership, landcare can give technical assistance to farmer church members and the church people can lecture on farmers' spiritual concerns.



John discusses landcare at a local district meeting of the Catholic Church.

LANDCARE BRINGS NED FARMERS TOGETHER

Forming the Ned Landcare Association

By Roy Divinagracia

Current location: *Sitio* Kinubing, *Barangay* Ned, Municipality of Lake Sebu, Southern Mindanao, Philippines

Occupation: Farmer with eight hectares. Three hectares have been contoured with legume hedgerows and another three hectares with NVS; the remaining two have secondary growth forest

Role in landcare: President of Ned Landcare Association, July 2000 – Dec 2003; also hired as a farmer facilitator for the landcare project for two years

Experience: Roy is a member of BONITA, serving as its president from its foundation in 1999 until now



Roy Divinagracia and his family.

Landcare involvement rewarding

Around Ned we now have a significant number of farmers adopting conservation practices. Some of these adopters have not even attended any training, but follow what neighbouring farmers are doing. I remember a hard-to-convince farmer who, after visiting other farms, decided to start conservation farming on his own farm. A neighbour of mine started with a one-hectare farm which he has expanded to 2.5 hectares. I think the awareness level of farmers, even those who are not landcare members, has increased.

Before adopting conservation farming my farm was empty. But now I have contours to keep my soil and I've also planted coffee, which has already started bearing fruit, and durian trees. In another area, I established NVS with bananas planted on the contour lines.

I have benefited from landcare by gaining additional knowledge about soil conservation and other technologies related to farming. After five years, it is rewarding to see that the trees we planted have grown and borne fruit.

Ned Landcare Association

For me, landcare is just a continuation of what we were doing before. SEARCA had already started to introduce conservation farming in 1993. With landcare, what was added was the concept of using farmer groups to extend conservation farming.

We organised people using the concept introduced from Australia. We visited neighbourhoods and convinced farmers to become part of the program.

The Ned Landcare Association acts as the umbrella organisation for all the landcare groups in the region. We act as the troubleshooter for problems encountered by different groups.



Roy on his farm — plenty of diversity.

We spearhead activities, like field days or training, that involve all landcare groups.

We try to make linkages to benefit all landcare groups. For example, we approached the provincial government for help with the 'plant now pay later program', which was later approved.

Plant Now Pay Later Program

The 'plant now pay later program' is implemented by the Office of Provincial Agriculture (OPAG). The purpose of the program is to provide planting materials, especially fruit trees, to interested farmers who want to establish orchards. To qualify for the program, the interested farmer must be a member of a farmer group or cooperative. The Ned farmers represent their landcare groups. It is a kind of loan that is payable during the first to third harvest of the fruit, or after about five to eight years, depending on the type of fruit trees provided. The seedlings are raised in the provincial nursery of South Cotabato.

We have to encourage the groups to continue their regular activities so they can achieve good camaraderie among members as well as progress with landcare. We rotate the quarterly meeting of the association between different sitios. In this way, we encourage members to participate in the meetings and we can also visit their farms to provide individual advice. Those members from other sitios can see the benefits of landcare to their area.

Meeting difficulties

Ned is a big and remote area and landcare is a new organisation. The facilitator must always visit the different groups but we have only one facilitator so we really lack personnel. There is also a large distance between landcare groups, so interaction between groups is limited. The distance and difficulties involved in travel mean that attendance during the quarterly meetings is minimal. We expect an attendance of 20–25 members but the usual attendance is only 10–15. This means dissemination of what we agreed in the meeting is limited, especially for those in far-flung areas.



Landcare farmer facilitators travelling in a remote part of Ned.



Landcare field day in Ned: Roy Divinagracia addresses the field day; farmers enjoy some games during a break in the formal proceedings.



Some landcare groups are still dependent on the facilitator. One way to make these groups more independent is to conduct additional training on how to strengthen groups. We have already conducted some training in organisational formation and development for landcare members, but we think more is needed.

While initial participation in landcare during 1999, 2000 and 2001 was remarkable, in more recent years it has declined. The problem is that landcare is a young program in Ned and the farmers are not yet mature enough to run or handle their respective groups without outside facilitators.

When we had farmer facilitators, things were different. There was someone for the group to share their problems with and help solve them. I heard farmers commenting that it was good having a facilitator visit their farm once or twice a month, and they felt proud that someone could see their accomplishments.

Currently, members are too dependent. Rather than solve their own problems, they tend to rely on my advice and ideas. It is challenging for me because although I have the skills to do it, I am not too comfortable with this kind of situation.

Future of landcare

On a personal level, if I continue to adopt landcare practices, I think my income will increase a little because of the mix of crops I have. I can see my area being full of perennial crops. The income from the farm will better help me to support my family. On the organisation side, I see landcare spreading to other places.

If we can convince all our members of the importance of caring for the land, everywhere they go they will always talk about it to other farmers. Landcare is easy to spread because conservation farming and increased income are always the aims of farmers.

LANDCARE BRINGS NED FARMERS TOGETHER

Landcare provides a focus for farming

By Judith Hocamis

Current location: *Sitio* Kibang, *Barangay* Ned, Municipality of Lake Sebu, Southern Mindanao, Philippines

Occupation: Farmer with four hectares including rice paddies, corn and a fish pond; has contoured the farm and planted coconuts, coffee plants, forest trees and fruit trees, including durian, rambutan, lanzones, pomelo, santol and guava; has a *carabao* for ploughing and a horse for hauling farm produce

Role in landcare: Secretary of Kibang Purok 1 Landcare Group

Experience: As secretary of the landcare group, she is in charge of making notes of group activities



Judith Hocamis.

Landcare improves soil and crop yields

The benefits from landcare were that we learnt to identify trees, especially forest trees, and we were able to plant durian fruit trees. It was difficult to buy tree seeds from other places in our own capacity because we were not familiar with where to buy them. Landcare guided our efforts and also taught us about soil conservation, establishment of contour lines to prevent erosion, and working together as a group.

My farm was a little degraded before I established contour lines and planted legume hedgerows. Now I can see that the fertility of the soil has returned and erosion has been reduced.

The improved growth of plants I have observed is likely to increase yields, but I have an infestation of rats and other pests at the moment so it is difficult to compare yields. My income has increased through the sale of fruit trees like rambutan, durian, and coffee, which I planted when I introduced conservation practices and diversified farming.

Before landcare, I worked on the farm without any focus. We used lots of labour, but saw little development as we lacked knowledge about farming. Now we have direction and I can see improvements in my farm and additional income from the diverse crops I have planted. We learned a lot from SEARCA and ACIAR. Landcare really gave me that direction through training and seminars and exchange of ideas from my group mates.

When we used to plant corn, it was up and down the furrows. Now you can see a lot of crops on my farm like rice, corn, peanuts and fruit trees planted in the contours. The furrows are along the contour and look like roads along the slopes. Terraces were formed to protect the soil from erosion.

My attitudes about farming and towards my own farm have changed a lot. Before landcare I was only concerned with the crop, without looking after the status of my soil.



Judith with fruit trees on her property.

I am secretary of our landcare group. As a woman, it can be a little difficult but as a member of the group you have to go with what the group wants and help them do the work. Our group constructed a tree nursery, set up a seedbed, planted trees on the farms of members and helped with the planting of corn and with weeding.

In our group every one of us is asked about our ideas and the group then takes the best one. Sometimes it is my idea that will be agreed upon. We always analyse the advantages and disadvantages of everyone's suggestion before making a decision. When my suggestion wins, they all support me and if their suggestion wins, I support them.

I like the landcare approach of teaching us that whenever we have doubts about what we're doing, we can ask our group or ask the facilitator. We have the freedom to innovate.

Landcare will help Ned prosper

Landcare will continue to help me in the future. The time will come when I can harvest the forest trees I've planted and sell the timber. I have already started harvesting the fruit trees and the rice paddies.

If members of landcare groups follow their plans, it will not take long before *Barangay* Ned is prospering.



Judith and her family enjoy the fruit from their farm.

LANDCARE BRINGS NED FARMERS TOGETHER

Landcare protects farms and beautifies the landscape

By Orlando Berdin

Current location: *Sitio Kibang, Barangay Ned, Municipality of Lake Sebu, Southern Mindanao, Philippines*

Occupation: Farmer with a 24-hectare farm with four *carabaos*, a small piggery, poultry, a rice mill, corn mill, corn shelter and solar drier

Role in landcare: Member of Kibang Purok 2 Landcare Group; pioneer president of Ned Landcare Association from its inception in July 1999 to June 2000

Experience: Orlando Berdin also served as village chieftain in *Sitio Kibang*. He is a farmer co-operator of the ACIAR-SEARCA steepeland project where trials on a number of high-value annuals were tested and has established contour farms on almost all his properties.



Orlando Berdin and his wife Cecile Caro, in their rice and corn mill.

Landcare creates a beautiful landscape

I was immediately convinced about the benefits of landcare and how it could protect my soil from erosion and retain fertility. After every ploughing, I observed that my area formed terraces, which is beneficial to me because it makes it easier to plough next time. The erosion was reduced and the terraces are beautiful to look at.

The yield is almost the same as it was and is still greatly dependent on the season. If the season is good and there are no pests and diseases, then we have a good yield. I think the additional gain in adopting contours is the preservation of the soil.

Other than contour ploughing, I also practise zero tillage and have planted 80 grafted durian seedlings and coffee. I planted legume hedgerows (*flemingia* and *rensonii*) in the contour line to form terraces in a shorter time. These legumes have a high biomass that can later be converted into organic matter to improve my soil. If the *flemingia* is not pruned for a year, it can be used as firewood. I can also use them as forage for my *carabao*.

For one hectare, it takes two days to prune if the legumes are still young, but for the legumes more than a year old, it takes five days to prune. This is laborious so I usually hire someone to help me. I think the protection it gives my soil and the increased biomass compensate for the money I have to pay. As a landcare member, I learnt a lot through sharing of ideas about things like farming techniques.

Orlando's definition of landcare: Land is like an animal that you need to take good care of because it will then give you a good response. In the same way, soil will give back good crops if you take care of it. Landcare is also about organising farmers to have a common voice that can easily be heard by government officials and politicians.



Terraces on Orlando's farm.

Landcare partners

The Office of Provincial Agriculture provided a lot of training on durian and true potato seed production. We were also able to use the 'plant now pay later program' to get things like grafted durian seedlings from the provincial government. We were able to attend training on coffee production by Nestle Philippines. The Institute of Plant Breeding provided us with training on seed production using true potato seeds. We solicited seedling bags from the Municipal Environment and Natural Resources Office and the local government of *Barangay* Ned. We also have a largely informal partnership with the provincial government to implement the Ned watershed program of South Cotabato.

Our landcare activities are starting to address our needs for knowledge in marketing and linkages with financial institutions. For example, we want training on how to use small farm machinery, as well as financial assistance to buy that machinery. We need it to accomplish our activities in a shorter time so we can have more development on farms.

Landcare expansion inevitable

Landcare will expand to other areas outside Ned because landcare helps the farmers. Governments don't consider farmers to be important, so we cannot rely on them. Landcare helps farmers by teaching them new techniques. Hopefully, governments will one day notice what we are doing.

I think it is the people who benefit from landcare, so naturally the people will continue to support it. It is the opportunity we have been waiting for and we cannot afford to abandon it in the future. I think non-member farmers will join the movement if they can see that member farmers are already successful. Landcare members must visit non-landcare members and explain the importance of this movement.



Farmers visiting Orlando's coffee plantation.

Rudy Cachuela, adopting non-landcare member

Several years ago I observed many farms belonging to landcare members and I saw they were getting good results. I realised my farm needed soil conservation as well, so I began contouring my farm two years ago to retain my soil.

In the contour lines, I planted coffee and fruit trees like marang, durian, lanzones, and rambutans. I intercropped between the contours because plants like coffee take two to three years to bear fruit so I needed to harvest other crops like peanut and white beans to maintain my income. I also planted abaca on about a quarter of a hectare in the contour lines and have already harvested 343 kg, worth between P10 000 and P11 000. I am planning to plant another 10 ha with abaca. After two and a half years, I got three sacks of beans from my coffee, which should bring in about P9000.

Contouring and intercropping were an experiment for me at first, but when I saw the results I carried on. I am happy now to see that my trees have fruit, so I will continue my efforts to plant trees and expand the contours across my farm. I adopted the landcare system because I believed it would give me a more profitable income, with the soil being conserved and its fertility increased. I now only apply a small quantity of fertiliser to my farm, saving me money. I have employed additional people to help maintain the 20 hectares of my farm, as I cannot do all the necessary work.

I am very thankful to landcare staff for sharing their technologies. Now I want my neighbours to adopt these practices to give them a more stable income too. I am encouraging them to plant durian and other crops so that they can also enjoy the beauty of contoured farms. They are very interested, but they lack ready capital to buy the things they need to implement such a system — that is the problem for most of the farmers here in Ned.



Rudy Cachuela and his wife on their farm.

Tips for involving farmers in landcare

Support development of landcare groups

- Provide benefits to farmers from attending landcare meetings.
- Provide training in technical, leadership and group skills.
- Develop the confidence of local spokespeople or champions for landcare.
- After initial assistance from a landcare facilitator, develop own farmer facilitator groups to work with other farmers — build self-reliance into landcare groups.

Support landcare group members

- Provide some financial or livelihood assistance — seed, fertiliser, livestock.
- Develop local lending schemes to help very poor farmers or farmers in times of crisis.
- Set up a landcare group nursery for providing seeds and seedlings to members and for gaining extra income for the group.
- Recognise that some benefits from landcare activities may be long-term rather than immediate, e.g. planting timber trees.

Promote landcare to others

- Invite others to landcare meetings and activities.
- Teach children and young people the importance of protecting land and water resources.
- Promote visits to farms that have implemented landcare practices.
- Involve the community, including churches in landcare.
- Share information learnt through landcare with other farmers and with researchers.
- Promote activities on landcare members' farms to neighbouring farmers.

Develop partnerships

- Form partnerships with local government units, national government agencies and relevant non-government organisations.
- Involve local councillors in landcare activities.
- Use the Landcare Association to provide a united front for gaining support and legislative changes.
- Avoid involvement in partisan politics.
- Build landcare activities into local and regional plans and initiatives.

section 3



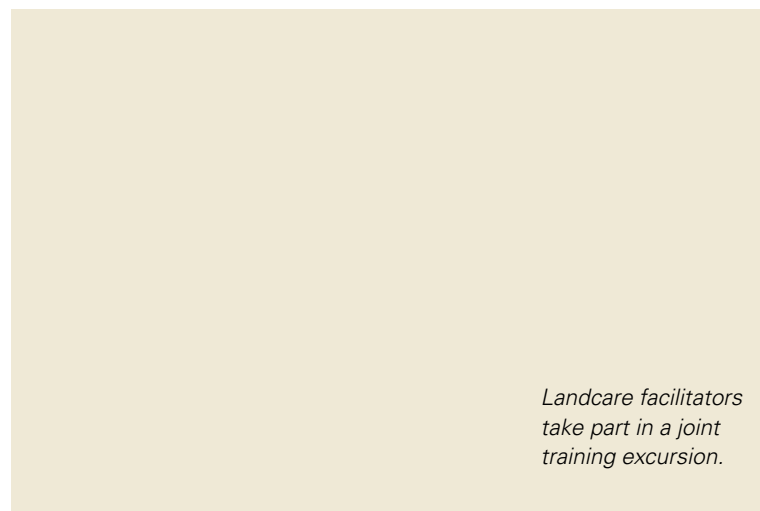
LANDCARE FACILITATORS

Facilitation — the key role

The stories from the two previous sections highlight the importance of the support provided by organisations such as ICRAF and SEARCA in implementing landcare in the Philippines. This has taken many forms, including provision of technical information and training, development of landcare group processes, and development of linkages with local government and other service providers. A key feature of landcare is the way in which this support is provided – through landcare facilitators working with farmers and other partners at the ‘grass roots’ level in a highly participatory manner.

All agencies participating in the Landcare Program have recognised the importance of the facilitation role. Both the ACIAR and AECI projects as well as ICRAF have directed the bulk of their landcare funds towards supporting facilitators. To provide a direct link with the facilitation expertise from Australian landcare, the ACIAR project has also supported the direct involvement of an Australian landcare facilitator in the Philippines Landcare Program.

The stories in this section are from five landcare facilitators who have played a major role in developing Philippines landcare through projects supported by ACIAR and AECI. However, there are many other landcare facilitators (and facilitators in training), both part-time and full-time, who have made a significant contribution to these projects and support Philippines landcare. It has been a truly international effort, with staff involved from the Philippines, Australia, Spain and Germany. This book recognises and acknowledges their wonderful efforts, although space does not allow us to print all their stories.



Landcare facilitators take part in a joint training excursion.

1. PROVIDING FARMING OPTIONS FOR A SUSTAINABLE FUTURE

By Maria Aurora (Au-Au) Laotoco

Current location: Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: Landcare facilitator, Claveria municipality in Misamis Oriental province

Role in landcare: ICRAF landcare facilitator involved in group facilitation, training and promotion of conservation farming technologies

Experience: Before joining ICRAF, worked as the municipal planning and development officer of the Claveria municipality; has experience in land use and physical framework and development planning, agrarian reform and as an agricultural economics and statistics teacher



Ma. Aurora (Au-Au) Laotoco.

Benefits of landcare for upland farmers in Misamis Oriental

Since landcare started, the landscape has slowly been transformed into a tree-based farming system, especially in the lower part of Claveria. I think this is the most noticeable change. Another improvement has been in the condition of the road. When I was new here, most of the *barangays* were not accessible by transport. But now, with the cooperation of local government units and other agencies, you can see big improvements in the roads.

People also see farming systems being diversified, which will eventually bring benefits to farmers in the region. But achieving economic benefits from these changes is quite slow.

With landcare, farmers have been able to work together to discuss the common problems related to their farms and the resources around them. Then, as a group, they can address the issues. Farmers are very concerned about the soil erosion from their steep sloping lands.

The Claveria Landcare Association is a big network of landcare groups that are working in the *barangays* and villages. People involved in these groups learn a lot from working with the other people in the group. They develop the social skills to deal with other people and they also learn how to manage projects better. Working in a group also reinforces the feeling that they are not alone and that other people out there have similar problems and are willing to support them.

Building on local knowledge

I have been living in Claveria for 18 years. In 1989 I joined the Department of Agrarian Reform to work on support services, helping farmers develop projects of benefit to them. After this work, I was invited by the Mayor of Claveria, who is now the



Au-Au talks to barangay captain, Samuel Abrogar.

Governor of Misamis Oriental, to work as Claveria's municipal planning and development officer.

As a planning officer, I became involved in some landcare activities as I was invited as a resource person to participate in various capacity-building activities. This involvement impressed on me the potential of landcare for making a meaningful difference, so I applied for the job of landcare facilitator to look at taking landcare beyond Claveria to the rest of the province of Misamis Oriental. I am passionate about the nature of the work I am doing now.

Taking landcare beyond the municipality

It was not easy taking landcare from Claveria to other areas that had not heard of it before and that had not experienced working with research organisations and NGOs. Everyone had very high expectations about the program. Some people expected a lot of funding from the project, and when they realised it was not forthcoming, they lost interest. However, most of the communities were very interested to learn about landcare

and adapt it to their own situations. That was inspiration enough to continue with the work. In some communities, the landcare concept of people working together was very acceptable, but there was a need to help communities with technologies beyond NVS or tree-planting.

A number of government officers and NGOs were very open to the landcare concept and landcare became successful in their areas, for example, in the municipalities of Jasaan, Sugbongcogon, Medina, and Kinoguitan. There are also excellent efforts by NGOs in the municipalities of Alubijid, Naawan and Laguindingan.

Building community confidence

When I joined landcare, I saw that many facilitators had a clear agenda of what they wanted people to do. This was based on the high level of awareness amongst facilitators about the pressing problem of erosion in the region. I think it was effective to focus farmers' attention on an issue that they could solve by applying simple technologies like NVS or agroforestry.

It gave them the confidence to solve other, more complex problems likely to confront them in the future.

However, I also believe landcare should focus on finding out the real environmental, social and economic issues that a community is facing. It is also important to find out what the community's previous efforts are, and try to build on these. We need to encourage a community's desire, their own understanding, and their own ways of solving their problems.

Tips for building community confidence

- Build confidence in landcare by helping people identify problems with relatively simple solutions.
- Find out the specific issues and problems of each community involved in landcare.
- Identify previous community efforts to solve problems and build on these efforts.
- Avoid set prescriptions for solving problems.
- Encourage the community to understand and solve their own problems.

Landcare Foundation for the Philippines

We need to remember that we are dealing with poor upland communities and local government units that have barely enough resources to provide the activities and services that are mandated by law for them to provide to their constituents.

There are many piecemeal activities and efforts going on with minimal support from NGOs and development organisations. I think there are too many community development activities, projects or programs going on in the Philippines related to conservation farming practice. Landcare is one way of trying to unite all the activities related to natural resource management.

I am quite passionate that we need a certain body to bring all the natural resource management activities together. This should not be a local government unit because it might not have the resources or capacity, and there is also the issue of political factors. ICRAF's mandate for doing research means it is also less able to take on this facilitation role.

An NGO or Landcare Foundation is needed to network all these activities, projects and programs. It could also take a lead in community problem-solving and community development. It is important that such a body has a united agenda for community development that focuses on natural resource management, and that it tries to link environmental improvements with the social and economic condition of our poor upland communities.

After two years of negotiation, it looks as if a Landcare Foundation is now ready to take off and build on what has already been achieved in the past four to five years. ICRAF has provided assistance in establishing the Foundation.

Landcare needs to recognise the needs of the poor

We need to remember that our poor communities have little to spare. Aside from the time that they are willing to share, they may have little money and materials to participate in the landcare program. Apart from that, there is a whole range of issues related to developing their confidence in participating in landcare for the long term.

I think we really need to be realistic about this because we are dealing with very poor, small farmers and most of them do not even own more than three hectares of land. So they have barely enough resources to be able to survive. I think we need some kind of external assistance to enable the farmers to improve their farming systems but, at the same time, sustain what they have actually already started.

We talked to a number of landcare groups here and many of these groups have indicated that they need some assistance in improving their livelihood, such as livestock production projects. It could be something as simple as providing a pair of goats or some cattle. This doesn't require much money and I think this is one project that farmers are very interested in.

I believe it is still a very big challenge to achieve a sustainable landcare program and movement here in the Philippines. Fortunately, we have a culture of willingness to help others and to come up with a united and common vision for our communities.



A farmer and village kids from Claveria take an interest in Louise Hateley's Waterwatch activities.

Waterwatch in Claveria

Australian support for a Waterwatch program

In Australia, water quality monitoring through community based Waterwatch programs has become an integral part of Australian landcare. In the Philippines, a similar need and interest developed as the Philippines Landcare Program grew. An opportunity to support the development of Philippines Waterwatch with Australian expertise was facilitated in 2002 when the ACIAR Philippines–Australia Landcare Project arranged for the placement of an Australian Waterwatch volunteer in the Philippines at Claveria, under the Australian Youth Ambassador for Development (AYAD) scheme. Louise Hateley was that volunteer, and this is her story.

I had just completed a Diploma of Conservation Ecology in 1999 when I heard about a Waterwatch position in my local catchment at Ginninderra, near Canberra, Australia. I spent a year as the local coordinator working alongside the Ginninderra landcare coordinator, running workshops with community groups to raise awareness about stormwater runoff, and encouraging and training groups to regularly monitor their local section of the creek.

After this, I assisted Waterwatch at the local government level in the Australian Capital Territory (ACT), before going to James Cook University in north Queensland to do a Bachelor of Environmental Science. When I heard about the volunteer position in the Philippines in March 2002, I knew straightaway that I wanted to go.

When I arrived in Claveria, I started by submerging myself in the ICRAF program and Filipino culture. I found out what had been done previously, and started to build relationships with the people from ICRAF and their families.

The next step was to train facilitators and write materials appropriate to some of the communities in the area. That was what I spent most of my time on, as well as taking school groups and landcare groups down to their local creek for some enjoyable, hands-on experiences with Waterwatch.

I can honestly say they were the most enthusiastic and eager to learn group of people I have ever met. It was great working with Ruby Monera and Thelma Paday (their stories follow), who could translate for me and help me to communicate with farmers and students. I don't think I could have done it without them.

Implementing the Waterwatch program took longer than I had anticipated. But, coming from Australia, I didn't appreciate that things would be different and take more time to happen,



Ruby Monera demonstrating how to conduct a turbidity test on water from a creek in Claveria.

particularly as a result of the challenges of cross-cultural communication. When I left Claveria for Bohol six months later, because of concern for my safety, I felt that I had only just started to get things off the ground. I was sad to leave my host family and the friends I had made in and around Claveria.

In Bohol I found out about other water quality projects in the area and was able to get involved in these, which was fantastic. I also got to produce a Waterwatch manual, which is helping Waterwatch groups in Claveria, Bohol and other areas.

The highlight for me was the Waterwatch workshop that I organised towards the end of my stay in the Philippines. With ICRAF staff and facilitators, local government officials and NGO

representatives, we spent three days reviewing the manual and doing lots of hand-on activities. Seeing it all come together, being able to spend some time with people from different parts of the country, and to know that I was leaving a useful resource behind, was very rewarding.

I think that the landcare ethic has been embraced really well in the Philippines and I think it will grow even further. Landcare cements community ties and networks. Waterwatch complements landcare, and I think with people like Ruby and Thelma it will be a great success.

Waterwatch in the community

I am Ruby Monera and I have been a landcare volunteer since 1999. After training under Louise Hatley in late 2002, I took on the facilitation of Waterwatch community landcare groups in Claveria. We are piloting water quality monitoring activities with the Poblacion *barangay*. After six months of monitoring, we will analyse the data and make recommendations for taking Waterwatch to other groups.

The community monitors the physical and biological characteristics of the water such as nitrate and phosphate levels, pH, turbidity, habitat change and any impacts from land use in the area. We do this monitoring on a monthly basis during both the rainy and dry seasons.

So far we have found that the quality of water varies along our three monitoring sites in the Napolog and Hanopolitan creeks. These creeks run from the upper part of Claveria down to the sea. The water quality does seem to be better in the areas that use conservation technologies like NVS.

The *Barangay* Council has been very interested in Waterwatch as they can see the relationship between it and the other activities we are doing in the area. All the canals in the Poblacion area flow into Napolog Creek, so what is done on the land will affect the quality of water in the creek. Some farmers have already suggested planting trees along the creeks to rehabilitate the riparian zone.

Landcare is not only about conservation farming, it is also about the community. People become more socially involved through the landcare approach. I would like to see Waterwatch adopted by all the communities in Claveria as part of their landcare activities.



Thelma Paday (centre) demonstrates macro-invertebrate testing during a Waterwatch training day.

Waterwatch in schools

I am Thelma Paday and I have been a landcare volunteer since 1999, assisting with two *barangays* in lower Claveria. I now facilitate landcare in both elementary and secondary schools and am also involved in Waterwatch. I help teachers with subjects like technology and home economics to inform students about soil and water conservation.

In 2002, we started Waterwatch in some schools and we now have five schools that know about the importance of water. Students from these schools go to the creek where we divide them into groups to observe various things about the water. They enjoy the activities, which are simple and easy but teach the importance of caring for water.



Claveria students involved in Waterwatch activities.

Waterwatch and landcare are closely connected, because if we don't care for the land and soil in the upland areas, then the quality of water in the lowlands is affected.

2. BUILDING PARTNERSHIPS WITH UPLAND FARMERS

By Gerardo (Gigi) Boy

Current location: Malaybalay City, Bukidnon, Central Mindanao, Philippines

Occupation: Landcare facilitator, Lantapan municipality in Bukidnon province

Role in landcare: ICRAF landcare facilitator involved in group facilitation, training and promotion of conservation farming technologies

Experience: Before joining ICRAF, worked as a cropping systems researcher with Environmental Science for Social Change (ESSC), based in Malaybalay City



Gigi Boy.

Landcare provides options for upland farmers

The major benefit of landcare for upland farmers is the increased number of options for farming. Through ICRAF landcare has provided new farming systems. The basket of technologies promoted may not be new, but landcare provides options so that farmers can easily select the technologies that best apply to their situation.

The technologies we are promoting have long-term benefits. It is difficult to see changes overnight from landcare, but we can see already that farms have evolved from single crops to much more diversified farming systems. I can see that farmers now have more crops planted on their fields. To me this means they are more likely to be productive than when they had their fields only planted to one crop, such as corn. This increased productivity is likely to mean families now have more food available, and it is likely to be more diverse and therefore more nutritious. They possibly also have more crops, and even seedlings, that they can sell. This all increases household incomes.

Farmers' awareness about sustainable agriculture has also substantially increased. Instead of just maximising the use of the land for their present needs, they now see beyond today. They are already thinking of their children and their children's children, where they might get wood for house construction or for firewood and so on.

From Manila to Malaybalay City

My first involvement with landcare came about when Delia Catacutan (ICRAF landcare manager in Lantapan at the time) asked me to meet Dennis Garrity, the (former) Southeast Asian Coordinator of ICRAF. We met in Malaybalay City for an interview in 1999 because they were looking for someone to fill a new position in ICRAF.

I had previously moved from Manila to Malaybalay City to take up the position with ESSC, where I was in charge of data collection for maize and coffee production systems. After my marriage to Karen, we had decided that the big city hassles of Manila were not right for us. We dreamed of a place where we could raise a healthy family connected with nature. And that is what we found in Malaybalay City, in the heart of Bukidnon Province — our own little paradise.

As a landcare facilitator I found myself involved in group facilitation, training, promoting ICRAF's conservation technologies, building the capacity of landcare groups in skills like leadership, conflict resolution, group formation and networking.

I trained other facilitators and farmers about various relevant techniques. This included promoting NVS, establishing contour lines, seedling collection and propagation.



Gigi talking to a farmer group.

The first time I was in Bukidnon, it was really hard for me to adapt to the local conditions. I was from Manila and transferring to a city within a rural setting was difficult. The first major obstacle for me was the language — I could not speak the local dialect. At the first training I did with farmers in Lantapan, they commented that my language was lousy! Slowly I improved, which made me feel much more confident, even though they still laugh at me when I get tongue-tied.

An evolving understanding of landcare

The first definition I had for landcare was really all about the technology. I saw landcare as essentially referring to technology like NVS or to agroforestry. This was how it had been introduced to me by facilitators in Lantapan. But, when I had a chance to go to Australia in my second month with ICRAF, I learned that landcare was not just a technology, and not just about agroforestry, NVS or conservation farming. I found that it's more about the involvement of people who are trying to work out issues or adopt technologies in their local situations, in response to pressing issues related to environment, sustainable agriculture and production. It really broadened my perspective to understand that landcare can be applied in very different biophysical, socioeconomic, cultural and political set ups.

Gigi's definition of landcare: Landcare for me now is really an ethic of integrating environmental issues, social skills and support systems into the culture of the Filipinos. It is a combination of knowledge and skills to produce social, economic, and environmental benefits for sustainable development.

My perspectives about landcare have grown so much in the past four years. From applying the technology, I was able to build on the lessons and insights we got from the communities as well. We did this by incorporating the farmers' ideas into the overall landcare agenda.

I look at landcare as something that is reviving the old Filipino 'bayanihan' system, which is based on cooperation and volunteering to do both simple and difficult tasks. It is voluntary and I see the benefits for the farmers being involved without the usual motive of financial or material rewards.

I learned that landcare was not just a technology, and not just about agroforestry, NVS or conservation farming. I found that it's more about the involvement of people who are trying to work out issues or adopt technologies in their local situations, in response to pressing issues related to environment, sustainable agriculture and production.

Gaining confidence in partnerships

As a community, we gained confidence in dealing with local governments and partner institutions. This happened by not relying completely on what partners could offer, but by building on the ideas and synergy formed from dealing with different partners.

Given the mandate of ICRAF, the technology aspects are still an important component of the whole approach. However, we do connect landcare groups to other service providers to examine other technology options, livelihood opportunities or projects that might help meet their needs. This could mean considering a change from subsistence to commercial farming. Or it could include training in the social skills needed for sustaining the enthusiasm of the groups involved in landcare.

For example, some groups were interested in growing mushrooms. We connected them to the extension service at Central Mindanao University. We invited some of their staff to Lantapan to do some training. Developing networks and linkages is important for complementing the existing resources of ICRAF and supplementing any skill or knowledge limitations. We worked with Catholic Relief Services (CRS) in Davao to provide basic accounting skills to farmers. The aim of this training was to increase farmers' awareness of farming as a business and not just a source of food.

We are also trying to develop a better and more efficient relationship with the mayor. We are really hoping this will blossom and result in more positive interaction and collaboration. The mayor has told us he wants to promote landcare to the seven municipalities that are members of the Protected Area Management Board. This would be great.



Gigi talks to Pearla Binahon, a landcare member from Lantapan, about new crop opportunities.

Key success factors for forming landcare partnerships

- Building self-reliance of the farmers involved in landcare.
- Establishing networks and connections with partners who can provide ideas or training that is useful to the landcare groups.
- Looking for partners who can provide new options that are relevant to local needs.
- Training in social or group skills can be just as important as technical training.
- Building a degree of independence from outside funds.



Gigi demonstrates agroforestry developments to a mixed audience of farmers and LGU representatives.

Taking landcare to new areas

The first thing that people asked when I went to a new area was: “what’s in it for me?” Lantapan has many development projects that give out funds for income-generating activities. However, landcare is really about on-site technology transfer and skills development. There are still people who join landcare thinking they will get some direct financial or material benefits from joining. However, as a landcare facilitator, I think it is important to build relationships of honesty and trust. I try and tell them that landcare is not a funding institution, but will help to provide them with a more sustainable agriculture or a more sustainable environment.

It is also important to understand early on what a community’s needs are. We have to do our basic research so we understand local conditions, instead of just implementing a project without any local knowledge. The next step is to promote open communication so no constraints or issues are likely to emerge because of misunderstandings. We should promote trust and honesty and try very hard to develop relationships with people on the ground, because they are our real partners. Officials come and go but the people on the land are always there.

Achieving wider participation in landcare

My vision is to expand the areas covered by landcare. We will need to involve more and more entities, agencies and local government units in the program. We need to make them more aware of the benefit of having farmers as major partners in sustainable development rather than local governments implementing programs that are spoon-fed to farmers.

The challenge is to get governments giving their full support to landcare instead of looking at their own political agendas or the next election.

Communities have many resources and local governments should tap into these appropriately. While the local government units are capable enough to support landcare, they may need information, technical skills and institutional skills on how to provide the right support for the community. They will need to work with the community, development agencies, agri-businesses and technical facilitators in partnerships to achieve positive outcomes for all.

With such partnerships in place, I am optimistic that landcare will be a national program in the Philippines within five to 10 years.

3. TRAINING PARTNERSHIPS FACILITATE SKILLS AND CONFIDENCE

By Eldon Ruiz

Current location:	Lake Sebu, South Cotabato, Southern Mindanao, Philippines
Occupation:	Landcare facilitator, <i>Barangay</i> Ned, Lake Sebu municipality, South Cotabato province
Role in landcare:	SEARCA landcare facilitator involved in group facilitation, training and promotion of conservation farming technologies to <i>Barangay</i> Ned landcare groups
Experience:	Before joining landcare, worked for SEARCA-ACIAR as a research assistant in Ned on evaluation and development of different production systems for steep land, and before that in another ACIAR project on the management of acid soils in Bukidnon province



Eldon Ruiz (left) talking to a farmer.

Benefits of landcare to farmers in Ned

The first benefit of landcare to farmers was that they were able to attend training, which they had requested, on conservation technologies and capacity building. Farmers able to visit Claveria or Lantapan saw different farming systems, giving them ideas for their own farms. Farmers moved from using NVS to planting coffee, fruit and forest trees along the contours and planting high-value annuals in the alleys. This led to farms becoming diversified with multiple sources of income. For some farmers, this now means a daily income from selling vegetables locally rather than waiting five to six months to get an income from a single crop and incurring lots of debt on the way.

Although farmers say that increases in income are not noticeable yet, they believe when trees bear fruit or are harvested for timber, there will be a big difference. Farmers have learnt tree nursery management techniques and are able to produce seedlings on their farms. Excess seedlings are sold to other interested farmers, creating additional income.

Some landcare groups focus on producing high value annual (HVA) crops like capsicum, cabbages, potato or carrots, but still on a small scale. They are experimenting with the marketing side of those commodities and planning for commercial production in the next couple of years. The landcare movement is still young, but the necessary foundation for a better farming future is already in place.

Farmers find they can better take control of their own situations through landcare. For example, as a group they can ask different service providers for assistance with things like providing shovels, scythes, seedling bags, fruit tree seedlings and seeds of fruit and forest trees.



Ned farmers visit a landcare member's farm in Claveria during a cross-visit.

Researcher to landcare facilitator

Before joining landcare in 1999, I was employed by ACIAR as a research assistant on a project evaluating and developing different production systems in the Ned area. Initially, I had no clear idea about what I was meant to do when I started working with landcare. Facilitation is a new role and I knew very little about it. We were supposed to be trained at the start of the project, but due to some changes with the project, the training came a little later. At the start, it was up to me to find approaches on how to do landcare in the field. I found this very difficult, as I had no clear direction of where I was going.

My two previous projects focused on technical research while landcare is more about participatory research and I had no experience in this area. I found the first year very tough with lots of adjustments needed. However, as time went by, I worked through the process with the farmers and other partners, and I slowly made some steps with landcare. Later I attended training about the landcare approach, which really helped. I also attended technical training on topics such as coffee production and durian production, which helped me to feel much more confident about working with farmers.

Landcare gives me a chance to work with many people and increase my capability to deal with them or respond appropriately.

Responding to farmers' needs

Most of the farmers wanted to find out about the technical aspects of HVA crop production. So I decided to start the landcare activity by providing training on that. High-value annuals include temperate crops, such as potato, cabbages, carrots, capsicum, tomato, cauliflower and broccoli, that grow at higher elevations in the Philippines.

A downside of this training was that some farmers had the perception that landcare was only about vegetable production. This meant we had to re-orientate their thinking through further training. Now they understand that landcare is a process.

One of the lessons I learnt is that we must clearly explain the project's objectives and activities before going to the farmers. This avoids confused messages and wrong perceptions. Setting clear objectives and plans before doing a project is necessary for it to run smoothly.

I think it's very important to listen to the farmers, as I believe we can solve most of their problems this way. Often when we listen to farmers, we find they already have a solution in mind, and they just need someone who will direct them or link them to other service providers who can help them solve their problems.

For example, at the early stage of landcare we were able to contact Nestle Philippines, who provided us with free training on coffee

production. We were able to send five farmers, and in return conducted training seminars for about 150 other interested farmers in Ned. Some of those farmers have already harvested and sold their coffee. One farmer told me he had harvested about five 90 kilogram sacks of coffee beans and sold these for P35 per kilogram. This is great, given that this coffee was only planted on contour strips.

Building partnerships

We found that partnerships were very important for landcare's success. Through landcare, farmers have made linkages to service providers like the provincial government, municipal government, *barangay* council as well as NGOs that help them sustain their activities.

The Ned Landcare Association was able to get seedling bags and seeds through the Department of Environment and Natural Resources (DENR) and Office of the Provincial Agriculture (OPAG). I was able to invite the head of OPAG to visit farms owned by landcare members in Ned. He appreciated it so much that he immediately set up a meeting with me, the Governor and the Ned Landcare Association President. We learnt that the provincial government had a program called the "plant-now-pay-

later" scheme for fruit trees. Through this program, interested farmers could loan fruit tree seedlings payable at the first, second or third fruit harvest. They provided us with 5000 durian seedlings, and so far 1400 have been planted.

The farmers also work with other partners like the local government and the Department of Education to plant trees in the community and around school campuses. Another good linkage is with the Institute of Plant Breeding (IPB). We invited one of their experts in plant breeding to talk to us about using the Open Pollinated Variety (OPV) of corn, and now some landcare members are using this variety.

I helped make linkages between the farmers and different agencies or NGOs who could advise and support us. My aim now is to make the farmers feel more independent by minimising my time with them and encouraging them to devise and implement their own activities.



Farmers helping each other learn. Left: the A-frame method for establishing contours. Right: establishing high-value annual crops.

10 tips for new landcare facilitators

1. Find out from others in the field what landcare is all about.
2. Work through the process with local farmers and other interested groups.
3. Identify and participate in any training available, especially in group development and facilitation skills.
4. Take farmers new to landcare to see the process and technologies in action at a place where landcare has been operating for a few years.
5. Listen to farmers, find out their needs, and respond to them.
6. Make it very clear to farmers that landcare is a process and not just a single technology.
7. Work with farmers to identify clear objectives and activities before starting landcare projects.
8. Identify service providers who can link to farmers and meet their identified needs.
9. Encourage activities that give farmers confidence to be self-reliant.
10. Don't intervene too much in group activities, encourage independence.

The *Barangay* Council has provided farmers with some material assistance, but this is not enough to cater to all interested farmers. We need more local support. We were able to lobby for an ordinance that prohibited farmers from tilling steep areas without using conservation practices and conserving the remnant forest. The ordinance was approved, but not fully enforced due to lack of personnel.

Landcare is not part of the national mandate so there is a risk that government units at a lower level won't see the need to support the program. I believe it is important to identify the partners who will make landcare a national program, to institutionalise it. At the local level, we have to sustain group formation, provide appropriate technologies, and continue to build the capacity of the farmer leaders. We need to do this with different partners like the Catholic Church, who actively promote conservation farming to the community, the families within it and local government agencies supporting it.

Overcoming Ned's isolation

One of the biggest problems that I face implementing landcare is that Ned is an isolated area with activities mostly focused within the *barangay*. This makes it difficult to get involvement from municipal and provincial governments. Although we have invited staff from different government agencies at the municipal and provincial levels to visit Ned, the poor accessibility of the region makes this difficult. Visiting different *sitios* within the *barangay* is also limited; I have to walk, making it very time-consuming. The good news is that the Department of Agrarian Reform is planning a big project to develop the Ned area, which has received funding support from the Asian Development Bank. The planned project includes both infrastructure and agri-livelihood development. It is due to start this year (2004) and continue over the next decade.

4. TAKING LANDCARE TO THE VISAYAS

By Zorina (Zori) Culasero-Arellano

Current location: Leyte State University, Baybay, Leyte, Philippines

Occupation: Formerly, landcare coordinator, Visayas; currently provides technical and administrative assistance to ICRAF

Role in landcare: AECI landcare coordinator involved in helping facilitators to plan and implement landcare on the Visayas Islands of the Philippines

Experience: Worked in Palawan as forestry specialist, and during the six months before taking up the AECI job worked as monitoring and evaluation manager for the ACIAR landcare project in Mindanao with Dr Rob Cramb



Zori Culasero-Arellano (right) talks to a group of landcare members at San Isidro, Bohol.

Benefits of landcare to the Visayas

Although we don't have clear economic data about farm yields, and how conservation technologies help improve farmers' livelihoods, we can already see some improvements in soil condition. When you ask the farmers, they also see a difference from the time they first applied the technologies. I don't think they would apply the technologies if they didn't see any benefit from them. They can see the difference in soil condition and sometimes some improvement in their production.

I don't think farmers will see major increases in their production for a long time. In the first year of applying the NVS technology, there were small decreases in yields because of the areas being used for the NVS. However, in the longer term this is likely to be compensated by the economic benefits from trees or other crops that farmers plant along the contour.

Testing landcare in the Visayas

The AECI landcare program in the Visayas was designed to test the applicability of the technologies developed in Mindanao to the islands of Visayas, particularly in Bohol and Leyte.

The technologies particularly tested were NVS and minimum tillage. However, we didn't just introduce technologies, we also looked at the farmers' existing technologies to see whether this could be improved or changed to meet conservation needs.

To help implement landcare in the Visayas, we developed relationships with strategic partners in Leyte and Bohol who are members of the Conservation Farming in Tropical Uplands (CFTU) network. CFTU member organisations include academic, non-government and other research organisations. We developed



The islands of the Visayas showing the location of Bohol and Leyte.

and implemented research activities with the concerned agencies and in some cases they helped us facilitate activities with the farmers. There were also times when we provided technical assistance to the partner organisations.

One of the problems that facilitators initially had in the Visayas in implementing the landcare program was the perception of farmers that landcare was just another project. They were concerned there would be initial support and involvement by different organisations, but once the project was completed, the organisations would leave and the thrust of the project would be lost.

The Visayas has a traditional labour system where farmers try to work together to attain certain goals. Landcare fitted in well with this concept and we used this to involve farmers directly in the project. We involved farmers from the planning to the implementation of various activities based on what they said they needed, rather than what we thought they needed. This helped to solve the initial perception problems. The exciting thing is that since the project has finished, farmers appear to be continuing landcare activities.



The location of landcare activities on Bohol and Leyte.

Farmer-to-farmer extension

Landcare is a real farmer-to-farmer means of approaching extension, which helps to strengthen a landcare group. The formation of a Farmer Trainers' Group, a group of selected farmers who were trained to serve as local facilitators, helps ensure the continuity of sharing knowledge among the farmers and will help landcare to continue to prosper in the Visayas.

The vision for landcare

My vision for the landcare program in the Philippines is for more farmers and more local government units all over the Philippines to be involved. This means not only doing soil conservation farming, but also addressing other issues of the environment that might affect our land. I think we need to work together and we need to make people more aware of what is happening in our environment. This means implementing effective information and education campaigns about our environment.



I particularly hope that local government units take up the landcare program seriously and include it in their regular activities. This means allocating a budget to sustain the program. I also hope that it will spread all over the country and not only in the areas where ICRAF and SEARCA have been working.

It is very rewarding to be involved in something that is helping to change the landscape and the lives of people, especially at the grassroots level. If I am no longer formally employed in the landcare program after this project ends, I still hope I can apply it in different ways and help restore our environment.



NVS at San Isidro in Bohol.

The impact of NVS clearly demonstrated at San Isidro, Bohol. In the foreground, unprotected slopes are heavily eroded and degraded. In the background, slopes protected by NVS are stable and productive.

Helping to scale up landcare in the Visayas, By Geramil Cordero

I was a research field worker helping Sam Koffa on tree domestication research when the landcare program came to Lantapan. I worked as a landcare volunteer in Lantapan for a year before getting involved in the new project to scale up landcare in the Visayas.

The first thing I did as a landcare facilitator in the municipality of San Isidro province of Bohol was to explain landcare to the local government. They responded by providing us with transport to meet the communities and they also provided venues and food during meetings. Local government support was useful in gaining farmers' trust. Before going to the community, I asked the mayor's permission and advice to ensure security.

Landcare has really helped farmers improve their farms in Bohol. They can now see some real improvements on their lands. For example, there is land that was not farmed for 20 years because it had lost productivity due to soil erosion. Through landcare, we encouraged them to try NVS and now 47 farmers are working on this once abandoned land.

Most officers of one of the landcare groups in San Isidro in Bohol are also officials of the barangay, so they are informed about government projects. These officials became more active with landcare and wanted to improve the condition of the community. Through their concerted efforts, along with other members



Geramil Cordero (left) with farmers at San Isidro, Bohol.

of the landcare group, they were able to obtain financial assistance of P100 000 from the Congressman and municipal local government for road improvements, seeds and fertiliser.

Through landcare, the local government now has some projects on environmental rehabilitation and conservation. The local government units worked through groups because they believed that would be more effective than working on projects with individuals. The continuous support of the local government will keep landcare going in this community. Even if our project ends, the landcare groups will continue to sustain their activities and raise their own funds because they have developed a partnership with local government.

A typical river scene in Bohol.



5. BUILDING GLOBAL PARTNERSHIPS IN LANDCARE

By John Muir

Current location: Maleny, Sunshine Coast Hinterland,
South-east Queensland, Australia

Occupation: Landcare facilitator, Barung Landcare Inc,
Maleny

Role in landcare: Coordinator for Barung Landcare Maleny
(1995–99), and then landcare project
facilitator with the ACIAR Philippines–
Australia landcare project (1999–2004)

Experience: Has qualifications in agriculture and rural
development; previously worked for 10
years as a district extension agronomist
with NSW Agriculture with a two-year
secondment to an AusAID-funded
Integrated Rural Development Project in
Cambodia with Australian Catholic Relief
(1992–94)



John Muir.

Landcare changes lives and landscapes in the Philippines

I feel very privileged to have been part of a participatory action research landcare process. In areas where landcare has been working for several years, you can now look at hills that were once planted with only one crop, but are now contoured with established trees and shrubs. You are now more likely to see patchworks of complex farming systems with root crops, ground cover, fodder grass, windbreak shelter belts and fruit trees. Common land is also being revegetated and protected communally. The Filipinos can now grow more diverse crops, with less erosion and increased production per hectare. The livelihoods of the landscapes and people are becoming more resilient.



John Muir with three of the Philippines senior landcare facilitators – from left, Eldon Ruiz (Ned), Ma. Aurora Laotoco (Claveria), and Gigi Boy (Lantapan).

Barung Landcare

After life-changing experiences in Cambodia, I was fortunate enough to move to Maleny, near Brisbane in 1995, where I became the Barung landcare coordinator. Barung Landcare Incorporated is a natural resource management community group that started 15 years ago and was one of the first such groups formed in Queensland. Given that more than 90% of the natural rainforest was cleared from this sub-tropical mountainous region, revegetation remains an ongoing focus of activity. To help support this activity, Barung Landcare worked with the community and all levels of government, to implement revegetation projects, and develop a community-based, commercial, native rainforest nursery and an information and education resource centre.

Barung Landcare Logo

The logo for Barung Landcare was designed 15 years ago as a germinating Quandong seed *Elaeocarpus grandis*, with a map of the world (that showed the Philippines). Now Barung



Landcare is working in partnership with the Philippines. This logo represents us acting both locally and globally. 'Barung' is a local Aboriginal name of an extinct local kangaroo that used to live in the now depleted rainforests of the area.



Philippines landcare facilitators visit the Barung Landcare Nursery and Resource Centre at Maleny in south-east Queensland.

Since forming in 1988, Barung has grown into one of the largest landcare groups in Australia, with more than 600 financial members and an annual budget of more than A\$500 000. Less than half of this comes from government funding. We generate funds from nursery sales and an annual three-day native timber/furniture wood Expo (attended by 10 000 paying visitors). As a result of being a more independent landcare group, we can follow our own agendas, rather than just meeting the project objectives of external funding sources or government.

Barung has several paid professional staff: a coordinator, a nursery manager, an assistant administrator and a revegetation field worker. Other revegetation and specific project staff are brought in as required. The energy from these people and our community volunteers comes together and generates focused activities. Things happen, that is, grassroots people addressing local issues together.

One of the keys to our success is that we have always had a practice of welcoming everyone and making them feel comfortable. This means we get farmers, government people, hippies, and unemployed people from 'work-for-the-dole' projects. We get very conservative landholders right through to retired business people. We have always tried to make ourselves open to anyone who has even a little interest in the environment, revegetation, conservation or sustainable farming.

It can be hard for landcare groups even to manage all their many local activities, let alone think about developing global connections. They are often just too busy. In the Maleny community, Barung is very fortunate in that we can delegate responsibility to 'Grey Power' — those semi-retired professional people who have an environmental ethic and spare time. They are more able to be on a management committee or executive. They often have their own international contacts and can more easily juggle both global and local issues. Landcare is something most people want to be part of in Maleny — it's the biggest thing in town.



Gigi Boy (foreground) participating in a landcare-organised community tree plant at Maleny.



Australian and Filipino team members working together.

Five key success factors for Barung Landcare

1. Accepting and valuing different people participating in landcare.
2. Demand for and delivery of local information.
3. High local enthusiasm and involvement.
4. Use of both paid and volunteer help.
5. A degree of independence from outside funds and programs.
6. Great networks and local knowledge.

Making connections

In 1998, ACIAR was looking for a partner to work with the Queensland Department of Primary Industries in developing a project to help build and evaluate landcare in the Philippines and in selected intensive horticultural industries in south-east Queensland. It just happened that I was in the right place at the right time, as this was also a high priority for Barung. So we negotiated with DPI to develop a partnership for this project.

Everyone is connected, whether it is here or in the Philippines. We have similar problems and issues at different scales and contexts. Barung has been able to take on the challenge of working globally. It has broadened our horizons and shown us that we can all help each other.

The ACIAR project leader, Noel Vock, has been able to build and manage a great team of people with many different skills. We know how different they are, as we carried out a review of people's roles and responsibilities about halfway through the project.

Our Filipino colleagues now see us as friends and they stay in our houses when they are here, and when we go over there we do the same. It's more like a family than a project. It has been a huge leap of faith, trust and friendship from all of us over the past five years and we have all benefited from it.

When they tell me "John, you are *bogoy*", it means we can be one-on-one with each other. It's all based on friendship, respect and personal relationships. Without that, you are just someone else walking in and out of people's lives, with a project document and a chequebook, and that is definitely not what landcare is about. Landcare is people care. In fact, I believe the landcare approach will bring a lot to international development.

As a westerner, it's easy to get frustrated with the speed at which some things happen in the Philippines. The time it takes to transport anything and the inevitable delays can be wearing in the heat. Things happen at their own pace. This means slowing down and taking time — which helps you to think longer and reflect better, resulting in better decision-making in the long term.

Empowering communities

I suppose this project could have had a typical top-down technical research focus. But ACIAR really went out on a limb to see if a more grassroots participatory and integrated approach like landcare could work on the ground.

The best thing about this partnership was having a landcare group, such as Barung, connected to the local groups in the Philippines and the team members. It wasn't just a consultant-working top down, it was actually about people walking and talking together. They could come here to Maleny and see landcare in action and talk to people at the grassroots level.

I have found that if you let people do things themselves and take a back seat, you are more likely to be successful. In our training sessions, we did not tell the local Filipino facilitators how to do their work. Instead, we worked as mentors, taking an interest in their work and offering support and encouragement. This turned into a process where we were learning from each other.

Our Filipino colleagues are such good natural facilitators that they are the ones addressing all the conferences, the training workshops and the seminars about the project. They are driving the process now. It's quite rewarding to find that you can step back and put yourself out of a job.

Putting landcare into context

The Filipinos who visited us in Australia said the landcare connection was always better in Maleny where the landscape was similar to their own tropical rainforest and steep volcanic hills, compared to other parts of Australia. Certainly, the farming scales are different between the two countries. However, when they visited us, we took them to visit the smaller-scale organic farms like those found at the nearby 'Crystal Waters' international permaculture village community. Such permaculture farming is more like the small one-hectare self-sufficiency style of farming familiar to them. Now they are training themselves in permaculture farming techniques. The similar geography and landscape of this part of south-east Queensland and the Mindanao area of the Philippines provides a strong connecting force.



During a visit to Crystal Waters permaculture village near Maleny, the Filipino landcare facilitators participate in a dig to examine soil health.

It is hard for us to go into villages by ourselves and make any real comments because it is likely to be out of context. It is better to work through the local people and facilitators. It is very humbling to see farmers walk five miles to attend a landcare meeting, and then feed us with their own produce, when they are living a subsistence life themselves.

We learnt a lot from the local facilitators we worked with in the Philippines. We brought back more, I am sure, than we took over there. And we don't call it 'train the trainer' anymore. We call it 'trainers training each other'. We are all sharing our experiences, expertise and world views at a local level.

We look together at the need for appropriate technologies in the right place, rather than just going out there and doing things that we think are good for people.

We did several landcare facilitation training workshops with the technical landcare team in the Philippines. From this and their own knowledge, they developed their own Filipino landcare trainers' manual, something we didn't even have in Australia at the time.

I didn't train the farmers involved in landcare. The facilitators we worked with trained farmer facilitators. Farmers are now out training other farmers, and so it just keeps going on. It is very apparent that the whole dynamics of peoples' skills, knowledge and attitudes are changing.

There are often a lot of presumptions made at the beginning of projects. This project initially proposed certain development strategies based on the perceived stage of development of landcare at each site. But these were not always accurate. You can never believe the book that says “this is what landcare is going to be like”. You have to be continuously reviewing and improving what you are doing for a reality check. That is action learning or action research.

We saw some landcare groups form and then fail. It is relatively easy to form a group but it is much harder to keep it going. We found it important to focus initial efforts more on the process of how to run a group rather than on the technical things that needed to be done. It is always a fine balance for facilitators between group processes and technical content — this is what makes a good landcare facilitator, being able to pick the right mix, depending on the situation.

Tips for effective global landcare partnerships

- Establish or use existing connections to make things happen — do not reinvent the wheel.
- Clearly define the objectives of landcare and the roles and skills of team members at the start of the project.
- Focus initial training efforts on group facilitation skills rather than just technologies.
- Develop relationships of mutual trust and true partnerships based on collaboration and cooperation.
- Fit in with the local culture and be patient — let things happen at their pace.
- Involve and encourage volunteers who have the time, energy, enthusiasm and will power.
- Support grassroots efforts.
- Encourage self-reliance and long-term sustainability of effort.
- Make connections across countries with people from similar landscapes and similar issues.
- Work at the local level with local people.
- Learn from each other — trainers training each other.
- Continually review and reassess progress within the local context.

Benefits to Barung Landcare (and wider internationally)

Going to the Philippines made us remember what Australian landcare was like over its 15-year history. It reminded us of our own landcare roots. When people are complaining in Australia about what they haven't got, we can now say: “The people we work with in the Philippines have even less.”

Working globally as well as locally we are now much more aware of the value of Barung as an established community resource, with its people, knowledge, networks, experience and on-ground works. We all live on this planet together, and we are all trying to survive and improve it in our own ways.

More than 80% of Australia's population know what landcare is and more than 40% of farmers are involved in it. South Africa and New Zealand also have landcare programs now, while India, America and other countries (including other organisations and United Nations agencies) are also looking at landcare to see whether it's appropriate to their situations.

Sharing landcare with our new Filipino friends, has given Barung the opportunity to share this wealth of experience, to help our friends by pointing out some of the shortcuts and pitfalls, and has broadened our own view of the benefits of our own achievements and relevance internationally.

The future

Landcare in the Philippines is still evolving, and who knows what it will grow into in the future. More than half of the country's 85 million people depend on the land for a living, and it is a challenging country with lots of problems. Much of the landcare ethic already exists and the ‘people power’ is there, but is the timing right? The answer to this is possibly ‘yes’, given the present local community action, civil society, and international funding programs. A Landcare Trust Fund of over US\$200 000 has been initiated. However, landcare still depends on individual people working together, in the right places, making the right connections and decisions, with creative results on the ground.

section 4



LANDCARE INVOLVES GOVERNMENTS

Government involvement is vital for the success and long-term sustainability of landcare. This is particularly true at the local government unit (LGU) level. There are two reasons for this. Firstly, most of the services provided to rural communities, including those relevant to agricultural development and natural resource management, have now been devolved from the national government level to the local government level. Secondly, research and development agencies that were involved in the early development of landcare in the Philippines — such as ACIAR, ICRAF, SEARCA and AECI — cannot continue to lead its development indefinitely.

Where landcare is considered an appropriate approach for engaging with rural communities, local governments must ultimately take a major responsibility, along with the communities themselves, for developing and sustaining it.

This can be difficult given the general lack of resources, the remoteness of some communities, political instability, or uncertainty about the real benefits of a new approach.

Similarly, at the provincial government and national government agency levels, there are challenges in the integration of landcare into higher level programs and services across the agricultural, agrarian reform and environment/natural resources sectors.

Many of the other stories in this book highlight the need for serious government participation in landcare. The following chapters in this section tell some of the stories of the pioneering efforts in landcare from the *barangay*, municipal, provincial and national government perspectives.



Increased tree cover and carefully managed cultivation with NVS are changing the landscape.

1. MUNICIPAL GOVERNMENT SUPPORTING LANDCARE

By Mayor Narciso Rubio

Current location: Malaybalay City, Bukidnon, Central Mindanao, Philippines

Occupation: Mayor, Lantapan municipality in Bukidnon province; municipality has a population of almost 44,000 people

Role in landcare: Observer and supporter of landcare

Experience: Mayor Rubio is a certified lawyer, and was Mayor of Lantapan from 1972 until 1986 before going into private life as a farmer. He became mayor again in 1998 and is currently aiming for a third consecutive term.



Mayor Narciso Rubio with his wife, Dr Felicidad Cabacuñgan.

Benefits of landcare

Personally, I have seen the effects of landcare, especially in sloping areas. After maybe three or four years, the land has formed terraces already and the topsoil is still there. The natural vegetative strips (NVS) help stop soil erosion, but eventually I would like these strips to be planted with perennials or forage grasses or a combination.

One of the benefits of landcare is that it is affordable. You just maintain the NVS, which any farmer can afford. The most important thing is that it minimises soil erosion. Once a terrace has been created, it is also easier to plough. From what I hear, the topsoil takes thousands of years to form, so it is important to adopt these practices, given that 60% of our lands are sloping, gently rolling areas.



A typical landscape of the Lantapan municipality.



A sign on the outskirts of Lantapan proudly displays Lantapan's landcare links.

Importance of landcare to Lantapan

The population in Lantapan is growing very quickly. About half our people are farmers who mostly work the upland areas. Vegetables grow here, mostly in poor areas. We also produce sugarcane and bananas for export. Bananas are exported to Japan and to the Middle East. We have two big corporations here, the Mt Kitanglad Agriventures Inc. (MKVI) and DOLE Philippines. We are happy that they are environmentally-friendly companies. For example, the flat areas of the land they leased from farmers are devoted to planting bananas, the riparian areas are planted with trees, and grasses are kept to hold the soil and minimise soil erosion.



Bananas being processed at the MKVI plantation in Alanib, Lantapan.

Landcare does not cover a very big area yet in Lantapan. Nevertheless, it's still a really big help. We will be having a series of seminars here with community leaders to somehow bridge the gap between research and the grassroots level, so that landcare can be further applied. I have already provided for this sort of activity in my budget for this year.

Landcare is also relevant to the people in the lower areas. If siltation is severe, this will shorten the life of dams. Considering that these tributaries lead to the Mindanao Sea and Saranggani Bay in Cotabato, this will also affect the fish populations in these areas. So erosion will cause a chain reaction in the lowlands and result in the rivers drying up.

People in the lowlands need water so they should also adopt landcare. Perhaps the water users should give a percentage of their proceeds to environmental protection.

Mayor Rubio's definition of landcare:

Landcare is improving the system of agriculture through the use of contour farming. It is not only the concern of the farmer; it should be the concern of everybody. Perhaps even the church and schools should teach landcare. When we own a land title, strictly speaking, it is not owned by us, we are just stewards. I think we have reached the critical stage, such that if we do nothing now, maybe we are already at the point of no return. So landcare is very important.

Partnerships for landcare

It is important that we link with the companies in the municipality because environmental conservation cannot be done alone. It has to be participatory and collaborative. We also have to establish effective linkages with other government and private agencies to be more effective.

We are the direct supervisors of the *barangays* under the local government rule. Landcare is one of the issues we discuss. We look at distributing fruit or timber trees through a partnership approach with them. The municipality is like the father and they are supposed to be like our children. Whatever problems they cannot solve themselves, they bring to us. We may then also go to the governor or congressman.

Benefits of landcare to a municipality

- Technologies are easy for farmers to implement.
- Influences development in the municipality; eg when a large corporation comes in to set up a banana plantation.
- Involves the whole community.
- Provides mechanisms for distributing timber and fruit trees and animals as part of municipality programs.
- Can be included in municipal plans, such as a watershed development plan.
- Municipal activities (eg nurseries) can be linked to skills development of farmers.
- Protects soil, water and forest resources.

Providing incentives to participate in landcare

Our municipality has livelihood programs and those adopting the landcare concept will be given priority in these programs. For example, we have an animal dispersal program to assist farmers obtain animals like cows that could be used for ploughing crops. But we would require them to maintain their NVS in order to receive these benefits.

With the new nursery we will be developing root crop planting materials but farmers will not receive them unless they adopt landcare farming practices.

We are also looking at providing infrastructure support such as better roads and water systems for those farmers who adopt the system. I think this will lead to a unity of purpose for those living here.

Another incentive might be to give public recognition to landcare farmers during our Foundation Day celebrations through a contest for prizes.

Little by little, landcare has to be inculcated in the people. I think they are already aware of environmental degradation. One of the pillars of sustainable development is environmental conservation. For example, the agri-based industries here will die a natural death unless they take care of the forests from which we get water.

Watershed development plan

As a municipality we are building landcare into our watershed development plan. The plan in Lantapan is part of the overall objectives of the Bukidnon Watershed Protection and Development Council, which prescribes measures to preserve the watershed resources of the province. The province is divided into seven major watershed clusters consisting of four or five municipalities, which, in turn, develop their respective plans for watershed protection and development. The plans are developed to address environmental issues and challenges related to watershed management within the political boundaries of each locality.



Mayor Rubio with some of the participants in a forum to build landcare into local government plans.

The future of landcare in Lantapan

People must be educated and ultimately make landcare their way of life. The knowledge should be internalised and the experience handed down to the next generation.

I will be looking to spread our experiences with landcare to other municipalities. I could do this at a meeting of the Provincial Watershed Development Council.

We will intensify our education and communication about landcare. We have to maintain communication to be serious about it. We aim to have model farms in every *barangay*.

We are developing a nursery here. The school will lease the land to us in return for the trees they want to plant. The multi-purpose nursery will be planted with root crops, herbals, ornamentals and forage grasses. We will distribute plants free to farmers, and each plant will come with a package of technology about how to care for it.

We will also encourage the *barangays* or even the *purok* or *sitios* to put up nurseries. Aside from being a distribution centre, the municipal nursery will be a model for the *barangays* or maybe even other municipalities.

There is a Chinese proverb that says: "If you give a man a fish, you feed him for one day, but if you teach him how to fish, you feed him for the rest of his life". Applying this to our nursery concept, we will be maintaining parent trees and teaching the farmers how to care for their own trees. We will expand this landcare concept to involve everybody.

Non-government organisations, like AGRI AQUA, are also engaged in environmental concerns. We will accept anybody who cares to help us but for now we have to really depend on our own resources.

I am toying with the idea of allocating P8 million of our infrastructure development funds towards environmental projects. This, together with whatever else we can receive from other sources, will go a long way to spreading landcare in Lantapan and beyond.

2. BARANGAY COMMUNITY BENEFITS FROM LANDCARE

By Samuel Abrogar

Current location: Claveria, Misamis Oriental, Northern Mindanao, Philippines

Occupation: *Barangay* Captain, *Barangay* Madaguig, Claveria municipality in Misamis Oriental province; also has a six-hectare farm that is contoured with timber trees, banana and other crops

Role in landcare: Chairman of Claveria Landcare Association

Experience: A *barangay* captain since 1997. Also has experience as a local facilitator and community para-legal officer on legal issues affecting local governance and land tenure.



Samuel Abrogar.

Landcare helps overcome malnutrition

My *barangay* has only 167 households and about 60 of them have adopted the landcare approach. They are practising the NVS system of farming and have planted different trees on their farms. For example, there are 33 farmers living in Tungol *sitio*, and almost all are practising NVS.

Some of our farmers live along river banks, and trees are already growing there so they do not need to contour their farms, but most of the farmers who till sloping areas have adopted the landcare technology.

There was a big problem of malnutrition in my *barangay*. When we analysed the problem, we discovered that the farmers weren't earning enough income from their farms to buy enough food for their families.



Samuel Abrogar's farm at Sitio Tungol.



A farm at Sitio Tungol showing trees and maize production.

I hoped that by introducing the landcare technology, I could lift farmers' incomes. Based on my observations since landcare started in my *barangay* in 1998, most of our farmers have now increased their incomes a little. They started using NVS then changed to a small agroforestry system and if you take a look at it now, we can see changes and improvements on their farms.

My *barangay* was a pasture area before landcare and most of the grasses were cogon grass. After we adopted landcare, we transformed the *barangay* into an agroforestry area. With landcare, there is cooperation between the farmers and the *barangay* officials.

When we researched the causes of malnutrition here, we found that many households did not have a toilet and did not clean around their houses. Many did not eat vegetables or have a backyard vegetable garden. After adopting landcare, we also focused on having a clean environment. We spent time on activities like cleaning the whole *barangay*, beautifying our own surroundings, and cleaning our houses every morning. There were members of the community who used to be in and out of hospital with illness, but now that's all gone.

Before landcare, people did not seem to mind if their areas were dirty, they did not know what was causing their sickness. Landcare was used to 'piggyback' an information drive about health care. We have charts in our meeting places to monitor the number of contours that have been ploughed, and charts to monitor people's health.

MEMBERS	NO. OF TREE PLANTING			
	SHRUB	SHRUB	FRUIT TREE	FRUIT TREE
1. BOYSSAN				
2. NARBERG				
3. JEAR P				
4. ECARANUN				
5. MARIANAN				
6. MADRELLAS				
7. CONQUIT				
8. SANG				
9. SANTAN				
10. ERIO				
11. TUBONG				
12. NARIN				
13. EKARANUN				
14. PESHER				
15. APILIANO				
16. CALINDEA				
17. SANABEN				
18. SORON				
19. SALCEDA				
20. LIM TAO				
21. ROSAN-AN				
22. SORON				
23. SORON				
24. ECARANUN				
25. SOLISE				

Landcare monitoring board at Sitio Tungol in Claveria.

Sixty percent of my people are indigenous people with their own traditions and beliefs, which can hinder landcare. Even if I say they must plant trees, if they believe that planting trees is a curse to them, they will not do it. However, after imposing the ordinance, people noticed that although many trees had grown, they were still alive.

Landcare helped our people work together for sustainable farming and also changed their attitudes and behaviour.

Support from the *barangay*

Landcare activity in Claveria needs support from local officials. Together, the *barangay* captains are the policy-making body and implement laws regarding activities of the *barangays*.

For example, we made an ordinance about sloping areas and the need for contour farming. If farmers are tilling sloping land, they need to implement contour farming, otherwise they will not be given support from the local government. If they ask for a *barangay* clearance (permission to apply for a job or to travel to another place), and they have not adopted soil and water conservation, the *barangay* captain will not issue the clearance to that farmer.

If landcare is to spread throughout the Philippines, the role of the *barangay* captain needs to be recognised, as the captains are the 'fathers' of their communities. If the *barangay* captain does not accept the landcare approach, then it is not easy for it to penetrate to other members of the community.

Making landcare easier for farmers

While most of our farmers have now accepted the technology, there are still some farmers who have problems adopting landcare because they don't have enough resources. As a *barangay* captain, I am looking for partners who could help or give support to such farmers.

Often our farmers do not have enough funds to live on or to develop their areas. Farmers who have planted trees are not yet earning an income from them. These farmers are likely to need assistance so they can keep on with their activities. They may need goats or livestock to help them.

Some of the farmers in other *barangays* find it hard to adopt landcare if they don't own their own land. As chairman of Claveria Landcare Association, I am encouraging other *barangays* to work with the Department of Natural Resources and Environment to release that land to the farmers.



Goats have been provided to the farmers of Sitio Tungol, Claveria.



Landcare has helped beautify the gardens in Sitio Tungol, Claveria.

I am hoping the experiences I have had in my *barangay* will help or inspire other *barangays* to adopt landcare. My vision for landcare is that what we have done now will benefit the next generation. To achieve this will require a commitment from our leaders. There are three partners working together: the local government unit; the technology experts, like the ICRAF staff who serve as an agent of success; and the community. These three determine the success of landcare.

Benefits of landcare to *barangays*

- Increased income for farmers.
- More trees available for multiple uses.
- Cooperation between farmers and *barangay* officials.
- People with backyard vegetable gardens, providing household food.
- Clean houses and surroundings.
- Linked to health care, it decreases illnesses and malnutrition.
- Provides an avenue for supporting poorer farmers.
- *Barangay* officials can help farmers to own their land, through a greater influence with other government agencies.
- Improved care of soil, water and forests.

3. TAKING LANDCARE BEYOND THE SITIO

By Igmedio Villamor

Current location: *Barangay Ned, Lake Sebu, South Cotabato, Southern Mindanao, Philippines*

Occupation: Councillor of *Barangay Ned*; Chairman of council's committee of agriculture

Role in landcare: Vice President, Ned Landcare Association, farmer facilitator for two years

Experience: Adopter of soil conservation practices, planted fruit and forest trees on his contoured farm; planted 100 hills of rambutan trees which are already bearing fruits



Igmedio Villamor.



Landscape of Sitio Kibang.

Spreading the concept of landcare

After setting up a demonstration area, we found we had good crops, which we were able to sell. Since this time, adoption of conservation practices can be seen in *sitios* Kibang, Tafal, Kinubing, New Tupi and Tubog. This includes contouring of the land with legume hedgerows, NVS, and planting of fruit trees and coffee.

Farmers planted coffee and durian seedlings with the help of the landcare project. They also planted fruit and forest trees from the seedlings produced by the group nursery we established.

Through landcare we developed a feeling of being extension workers concerned for others. That is why we go to other *sitios* and organise landcare groups there. We want this program to spread because we want other farmers to benefit.

Our group also participated in the Mindanao Baptist Rural Life Centre's (MBRLC) 'Botika sa Binhi' (drugstore from seeds) program, where we provided limited free medicine to members and sold medicines to the wider community at an affordable price.

Moving to smaller groups

After initially organising a landcare group in Tafal, we decided to separate it into three new groups. We did this because the original group was big and the members lived a long way away from each other.

At the start, the three groups had their own activities and selected their own officers. I was elected as president of the Tafal Purok 4 Landcare group. Unfortunately, the other two groups became inactive and disbanded not long after they formed.



A meeting of members of the Ned Landcare Association.

In our group, attendance at meetings is high because members live near each other. We can easily inform and convene the members during *dagyaw* or group work and dissemination of information is fast. Our group conducts monthly meetings on the first Tuesday of every month. Recently our activities declined but the group is still intact and most of our members have already adopted conservation practices.

Taking landcare to other *sitios*

In July 2003, I was elected as a *Barangay* Kagawad (councillor) to chair the agriculture committee. I tried to bring everything I learned from landcare to the council. The *barangay* council has adopted a municipal ordinance protecting the watershed area of Ned. We are going to plant trees on the steep sloping areas, so I think landcare can be the people's organisation that will implement this ordinance. They can help the farmers by providing technical assistance.

We are planning to establish a *barangay* tree nursery as a source of planting materials for the farmers. We are going to raise fruit and forest trees. We have also conducted seminars on livestock and poultry management in four *sitios*. The farmers who attended the seminars were able to get the pigs and poultry provided by the council.

I think landcare will continue to educate farmers about conservation and the local government will continue to provide assistance. However, this will be minimal as my budget is only P40,000 for one year. It is important that another institution also provides financial assistance or material inputs such as tree seeds and seedlings or support for training. Ned is a big area, and the *barangay* cannot handle all the expenses for development.



A landcare group nursery in Sitio Tafal.

Without additional assistance, development in this *barangay* will be very slow. We are sending a resolution to the municipal and provincial offices, but they still cannot cope with everything that farmers need.

To spread landcare further, we must have a technician who can visit farmers with a member of *barangay* council so that farmers here in Ned will adopt conservation farming. About 20% of the farmers in Ned already know about conservation farming, but I think if there is someone who can continue to encourage them, that proportion will grow to 50% or more. As I have observed before, there is a gradual increase in adoption when a farmer facilitator is involved in visits to a *sitio*.

Tips for gaining local government involvement in landcare

- Get involvement and support at the start of landcare activities.
- Organise visits for local government officials to other regions with farmers who have adopted landcare technologies.
- Train councillors and municipal agricultural offices in landcare technologies and group skills.
- Involve local governments as equal partners in landcare initiatives.
- Invite local government representatives to speak at landcare group meetings and seminars.
- Get local government assistance to coordinate meetings and training activities.
- Use landcare to build on and add value to existing local government activities.
- Work with local government to develop and implement ordinances for promoting landcare activities.
- Partner with local governments to distribute seeds, seedlings and livestock to landcare groups.

Jimmy Lanzarote, Ned *Barangay* Captain



Jimmy Lanzarote.

I really like the landcare project because it gives benefits to the farmers in Barangay Ned. The farmers have been able to learn contour farming to prevent soil erosion and landslides, which is very important in our mountainous area during the rainy season. Landcare members are able to plant fruit and forest trees and establish contours with legume hedgerows, which are also used as forage for livestock like *carabao*, horses and goats.

I estimate that about 30% of our total population has benefited from landcare so far. In some *sitios*, about half the farmers are involved in landcare or have benefited from it. Based on what I have heard from the first farmers who adopted landcare, it really does improve their living.

Our barangay has a budget of P40,000 for farming activities through the agriculture committee headed by Kagawad Villamor. This could be used to help landcare projects. For example, in 2000 we gave about 15,000 seedling bags to landcare groups. We can provide support for seedling bags, fruit tree seedlings, and seminars.

We can increase awareness and membership of landcare even further through monthly seminars in each *sitio*. This will reach a lot of farmers who will gradually adopt landcare's conservation practices.

4. LANDCARE SPREADS TO MALITBOG

By Judith Saguinhon

Current location: Malitbog, Claveria, Northern Mindanao, Philippines

Occupation: Municipal Agricultural Officer

Role in landcare: Involved in promoting and organising landcare activities



Judith Saguinhon.

Increasing adoption of landcare

Before the landcare program started in Malitbog, soil and water conservation were already part of what we were trying to do at the Municipal Agriculture Office. There was the SALT program (Sloping Agricultural Land Technology) that introduced soil and water conservation, but there was low adoption among farmers.

Landcare started here after several Malitbog municipal officials participated in a visit to Claveria in 1997. After this, several ICRAF staff visited here and demonstrated how to establish contours using NVS. Then ICRAF provided a landcare facilitator who helped us to organise landcare groups. These groups visited Claveria and then planned what to do in their own groups.

The landcare facilitator joined us on our visits to the barangays where we conducted a participatory process to find out what problems the farmers had. With ICRAF's assistance we were able to help the farmers address their problems as well as issues such as lack of mobility and the farmers' wait-and-see attitudes.

Since that time, soil erosion has decreased as people started to build contours.



Farm contoured with NVS in Malitbog.

We found that it was better for farmers to actually see a model farm rather than just seeing a picture of one. When they came back to their own farms, they implemented what they had learned.

Landcare for managing water as well as the land

At the Municipal Agricultural Office, we now coordinate and support all landcare activities. I am one of the members of the Board of Trustees of the Landcare Foundation and contribute ideas and assistance.

My initial understanding of landcare was that it is just focused on the land. Later I realised that protection should be given to the entire watershed. If you adopt landcare, you help protect the entire watershed in the municipality and you help solve a global problem. Landcare groups take part in strengthening the watershed management plan.

I hope that the level of awareness will be raised so that people will have concern for environmental protection and watershed management, including landcare.



People involved in water monitoring activities.

Partnership needed for landcare's future

To continue doing these things we need a partner, such as ICRAF. For example, we need to participate in training so we are aware of new methods. We also need to attend workshops.

Landcare should be part of the local government program with funding to implement it. It will be sustained if the local government unit is supportive. However, one of the challenges we face is to keep local officials supportive of the program. The Department of Environment and Natural Resources and other government offices with natural resource management concerns also need to be involved.

I want landcare to re-green Malitbog's mountains. To do so, we need to encourage people to support and preserve natural resources. There should be a reward system for those who adopt proper measures that help protect the environment. We need to strengthen the groups and empower them, because they are not fully empowered yet.

5. LANDCARE BENEFITS NED FARMERS

By Celso Caro, Municipal Agrarian Reform Officer

Current location: *Barangay Ned, Lake Sebu, Southern Mindanao, Philippines*

Occupation: Municipal agrarian reform officer with the Department of Agrarian Reform

Role in landcare: Supporter, partner, involved in training

Experience: Certified agricultural engineer who has worked in Ned for 22 years



Celso Caro.

Landcare helps farmers focus on conservation in Ned

Before landcare, we tried to put some effort into soil conservation, but this was a sideline to our main program, so we were very thankful when landcare brought a focus on conservation to Ned.

The landcare program is making farming more sustainable and protecting the environment of *Barangay Ned*. It is not only helping us to achieve our goals, but is also achieving the goals of the Department of Natural Resources and Environment for reforestation and restoring ecological balance.

Previous reforestation projects failed because they tried to plant only forest trees without considering farmers' economic viability. Landcare is an art as well as a science. It must consider farmers' economic needs; farmers know that if they plant the right kinds of trees, they will get a bigger income in the long run.

Durian trees planted on the contour lines with corn in the alleys.



There are plenty of farmers who tell me that the farming system of landcare is much better and that their incomes have increased or that they are now able to keep farms that they otherwise would have sold.

Landcare is a big help not only for increasing farmers' incomes but also for protecting the water so it is clean for drinking.

Before landcare, it was usually only the men who worked on the farms, but now wives and children join in farm activities. The children take care of the nurseries while the wife is helping her husband with farm work. This is because the farm looks so much nicer that the wife wants to be at home involved in the business instead of visiting neighbours and gossiping.

The landcare project has had a big impact on *Barangay* Ned with the adoption of conservation practices. Now you can see fruit trees in the contour lines, high-value annuals in the alleys, fish ponds and rice paddies near creeks. All of these activities have increased farmers' incomes.

Most farmers who have participated in landcare also become farmer trainers little by little. Every time they have visitors, they explain what they are doing and why they are doing it, and after a time they are confident about giving lectures to bigger groups of people.

Nobody used to think that Ned, given its remoteness and isolation, could be as developed as it has become with landcare. But the partnerships between the various organisations involved in landcare have helped make this happen. I am looking forward to the farmers living in Ned becoming prosperous in a place that is like a paradise.

The farmers now know that farming is not only about cash crops, about food and about clothing, but that farming is also about helping to maintain the environment. This improves their living conditions and is better for the whole family. Landcare combines all these aspects of farming into one concept.

Expansion of landcare

I think the landcare project will be expanded to the Agrarian Reform Community and will also spread further throughout the province of South Cotabato and to other provinces in the Philippines.

The Agrarian Reform Community (ARC) is a program of the Department of Agrarian Reform to develop a community/settlement area. It provides basic services like infrastructure, farmer training and technical support. Ned is considered a special ARC because of its size and remoteness.

We have to find ways to support this program so that it is implemented throughout the whole Philippines. For example, here in *Barangay* Ned, we have the peoples' organisation that could help landcare. We could also get legislative support for landcare if our landcare association was to make a resolution through the municipal council, which would then go to the provincial legislative body. Fortunately, our government officials today seem to want to rehabilitate our environment.

Training

Landcare leaders need to unite, rather than compete, with other organisations and community leaders. We need more advanced training on leadership. The Department of Agrarian Reform has a program called continuous education, which includes training farmer leaders. We consider a farmer to be a leader if he or she has attended five training sessions. Our farmers are lining up for such training. Most of them are members of BONITA (Barrio Ned

Celso Caro providing permaculture training to farmers at Ned.



Integrated Trainers Association), and many are also leaders of landcare groups. BONITA was established to conduct training on environmental awareness and protection and the socio-economic benefits of such activities.

When BONITA conducts training, they try to integrate it with the landcare program to look at transforming farms into sustainable management. BONITA could be an effective tool for spreading landcare across the entire province of South Cotabato.

BONITA — a farmers' training association

BONITA started in 1993 during the time of the Ned Agro-industrial Development Project (NAIDP), a joint project of SEARCA and the Department of Agrarian Reform. Started as the Barangay Health Workers Group it was later renamed BONITA. It was composed of women and farmer trainers. The health workers were trained in health and sanitation while the farmer workers were trained in agricultural technologies. It was decided to integrate these activities into one group so that trainers could help people interested in different topics or issues. BONITA has done a lot of training in Barangay Ned on topics such as health, sanitation and soil conservation.

When landcare started, I could not explain the concept to farmers or even to myself. What is landcare about? What is its purpose? Looking back, I can see that, even though it took longer, it was good that we were able to give the project its own meaning. Now we need another project to sustain the definition of landcare that we found appropriate. The new project should not be site-specific but should start in the Province of South Cotabato and then spread to the entire island of Mindanao. With our experiences we can easily guide farmers who have no idea or have never heard about landcare. We should be able to convince them to adopt landcare because we have learnt how to implement it.



NVS on fields at Ned.

6. LANDCARE BUILDS COMMUNITY OWNERSHIP IN LANTAPAN

By Cecile Egnar, Bukidnon Environment and Natural Resources Office

Current location: Malaybalay City, Lantapan, Bukidnon, Central Mindanao, Philippines

Occupation: Head of Planning and Research Division of Bukidnon Environment and Natural Resources Office (BENRO), and facilitator of the Bukidnon Watershed Protection and Development Council (BWPDC)

Role in landcare: Member of Kaamulan Landcare Group, which is made up of professionals representing local government units, NGOs, research and development organisations, business, private organisations and many other institutions

Experience: Formulates provincial plans, programs, project proposals and policies



Cecile Egnar.



Cecile Egnar presents an overview of the Bukidnon watershed program to a group in Lantapan.

Landcare builds community participation

I first learnt about landcare in 2001 when ICRAF was very active in our area and very much involved in the Bukidnon Watershed Protection and Development Council.

There are many technologies involved in landcare, such as soil and water conservation, forest rehabilitation, agroforestry and water quality monitoring. Landcare has made a big contribution to our province over the past five years with a number of model sites in Lantapan for farmers and others to visit.

There are several programs in our province focusing on soil and water conservation methods, but landcare is different in that it has gained a sense of ownership from the community that the other programs have not. Landcare has a grassroots, bottom-up approach to its activities, which is unique.

With such an approach, landcare is very important for technology dissemination, training, education, research and development, and capacity-building.

The importance of partners

Landcare needs a lot of partners to make it work — national government agencies, non-government agencies, local government units and, most importantly, the community.

Local governments are beginning to understand their role in environmental rehabilitation through the watershed management program. They have prepared a forest land use plan, which was included in their comprehensive land use plans. This was a very big step. They have also prepared watershed, municipal and city watershed plans, some of which have included landcare activities. They have allocated budgets for environmental and natural resource management projects.

It is very important that local government units and agencies like the Department of Environment and Natural Resources support landcare through financial assistance and policy incentives.

The future

Ten years from now, I would like to see landcare as a way of life for people in Bukidnon and for the whole nation. If landcare is strengthened in our province, it will be a showcase for other provinces, so that landcare can be incorporated into national policies.

In the Philippines we have the mayor's league, a body of local chief executives, who can influence the national government to adopt the landcare program.

I don't think a change in mayors or government officials with political elections will affect support for environmental management projects like landcare. There is so much support for these activities that I think they will continue, regardless of who is in power. For example, the watershed management project was developed by the previous administration but is still growing strongly under the current one.

Many leaders are aware of what we are doing in the environment. We can sit down with new leaders and provide substantial data to show the benefits of what we are doing.

I want my children to grow up in an environment they can enjoy. It takes a lot of sacrifice and commitment to save the environment. We need our leaders to champion this cause, and we need the people to work together to help our environment for the next generation.



Children in Bukidnon at the end of the maize harvest.

Links between landcare and community-based forest management

Belen Daba, Chief of the Protected Area and Wildlife Division of Department of Environment and Natural Resources

I started working with landcare when the Agroforestry Support Program for Empowering Upland Communities (ASPECTS) project was launched in Claveria, involving different sectors such as academics, other government agencies and local government units.

This project offered training and focused on agroforestry. It started by looking at how we plan agroforestry, implement the plan and then replicate it into surrounding areas. ICRAF was one of the members of the organisation, and through this I met Jun Mercado. We discussed caring for our land and improving productivity.

The beneficiaries from our program were provided with land tenure through the community-based forest management agreement, so we had to help them generate income out of the land from agroforestry and other farming. I decided to link with the Claveria Landcare Association to help make this happen.

Community-based forest management agreement

This agreement is awarded to an upland community giving the community rights and responsibilities to manage a forest land or public land sustainably. It has a term of 25 years and is renewable for another 25 years.

The ICRAF facilitators helped to train our farmers in agroforestry and natural vegetative strips. We were able to attend training in Claveria and have our farmers visit some

of the farms there. They were impressed by seeing those developed farms and tried to model their farms on what they had seen in Claveria.

Belen's definition of landcare: Landcare means caring for the land in the best way you can so it will produce good yields without exhausting resources like soil fertility. I think landcare is about technology. The front liners are farmers and they are the ones who really need the technology.

We now have a memorandum of agreement between the Claveria Landcare Association and the Department of Environment and Natural Resources. Landcare provides training as technical support to farmers through two phases: one is training new landholders and the second is the village forester training.

We need to protect all our land, whether it is in the protected area or outside it. We insist on the 80–20 rule, 80% of land can be developed for agricultural purposes and 20% should be protected, which might mean planting trees for conservation.

I try to pass on the knowledge I have gained about landcare technologies to farmers. If all the people in the uplands adopt this approach, I think we will have food security and a beautiful landscape.

Landcare faces many challenges. One is the dislocation of farmers through multinational companies setting up operations and aiming for high yields rather than caring for the land. I think that for landcare, it is very hard to push through a program if the government does not back it up. But it is important that whatever resources we have now are available to be shared with the succeeding generation. Landcare can help achieve that.

Links between landcare and community-based forest management

Conrado Sescon, Head of the Environment and Natural Resources Office (ENRO) of the Provincial Government of Misamis Oriental, Cagayan de Oro City.

The program that ENRO is implementing focuses on forest management and development. ENRO's participation with the landcare program started in 2000 in collaboration with ICRAF. ENRO's activities complement landcare through the forest management program that includes nursery management and the distribution of forest tree seedlings, including fruit tree seedlings.

We have 10 technical people working on the environment and natural resources program. We are employing an extra two people to help implement landcare activities. These people will be involved in the community, helping to organise groups and develop the community-based forest management agreements and issue Certificates of Stewardship Contracts (CEC). CECs give individual farmers a contract for 25 years to manage the trees on their property. They encourage farmers to develop the area assigned to them.

There is a great future for landcare through our partnership with the program. ENRO is now planning to implement the landcare approach, using our people and focusing on conservation technologies to be promoted by the Landcare Foundation.

Tips for involving national government agencies in landcare

- Develop a partnership approach with regional representatives.
- Work with agency representatives to gain legislative support for landcare.
- Involve regional agency representatives in local training programs and link in with whatever training programs they already have in place or are planning.
- Use regional agency representatives to help guide landcare processes.
- Link to and add value to national government agencies' initiatives and programs that are relevant to landcare, particularly technology dissemination, education, research, development and capacity building initiatives.
- Promote benefits of using landcare to develop policy and financial incentives for increasing farmer adoption of landcare.
- Demonstrate benefits of landcare for achieving the objectives of national government agencies.
- Look at ways to share resources between landcare programs and agency initiatives for cost-effective development and implementation of activities.

section 5



LANDCARE INVOLVES THE BROADER COMMUNITY

The previous sections of this book have highlighted the involvement in landcare of the early implementing agencies, as well as the farmers, landcare facilitators and government agencies. Landcare, however, being broad and community-based, obviously has support and involvement from a wide range of community organisations. These range from non-government organisations (NGOs) to the church and schools, and even private agribusiness. Through these groups landcare reaches many people. These groups also give landcare a strength and resilience through times when support from other major players may fluctuate. In the following chapters, various community partners tell their landcare stories.



Landcarers of the future.

1. UPLAND DEVELOPMENT PROGRAM (UDP) AND LANDCARE IN SOUTHERN MINDANAO

By *Benhur Viloría*

Current location: Davao City, Southern Mindanao, Philippines

Occupation: Sustainable agriculture coordinator of European Union funded Upland Development Program

Role in landcare: Supporter, partner, involved in training

Experience: Has a Bachelor of Science degree in inland fisheries from the University of Philippines and a Masters degree in rural extension development from the University of Southern Mindanao; previously worked with Southern Mindanao Agriculture Project and as manager of the Catanduanes Agricultural Support Program before joining UDP



Benhur Viloría.

Upland Development Program

The Upland Development Program focuses on the promotion of sustainable agriculture technologies to the marginal communities in the uplands of Southern Mindanao. UDP is working in six provinces in Southern Mindanao including: South Cotabato, Davao del Sur, Davao del Norte, Davao Oriental and Sarangani. We implement our projects in participatory partnerships with the local government units of these areas. Funds come mostly from the European Union but we also get support from local government units through staff salaries and personnel support. We involve the local community so the projects and activities can continue after UDP projects finish. We work with *barangay*, municipal and provincial governments. At the *barangay* level, we have institutionalised small groups of farmers known as *barangay* extension workers.

Landcare provides simple solutions

I personally got to know landcare when I visited Australia a decade ago and saw a program initiated by groups, families or communities to address their own degradation issues.

In late 2000, we were invited by ICRAF to visit landcare sites in Claveria and Lantapan. At first our managers were hesitant, but we justified our visit on the basis that landcare was using techniques that were less expensive or labour-intensive than establishing hedgerows or other similar technologies. My initial impression of landcare was that it was about implementing alternative soil and water conservation measures to deal with persistent problems of land degradation. Natural vegetative strips (NVS) are easy to establish compared to other technologies and also more palatable to farmers.

Visiting the landcare sites was an eye-opener for our managers. They saw inexpensive and simple technologies that could address our soil and water degradation concerns. This started the ball rolling. After a while, UDP made some formal agreements with ICRAF to form a partnership that involved hosting field tours for farmers and technicians.

Visiting the landcare sites was an eye-opener for our managers. They saw inexpensive and simple technologies that could address our soil and water degradation concerns.



UDP staff from southern Mindanao visiting a landcare site in Lantapan.

Landcare equals community participation

The big thing about landcare can be summed up in two words: community participation. Voluntary community participation is definitely the main ingredient of landcare's success. The initiative comes from the farmers rather than from agencies.

If landcare processes can be institutionalised at the *barangay* level, it will lead to more sustainable upland community development. One of the initiatives of the UDP is to help produce *barangay* development plans.

In our partnership with ICRAF to support landcare, we learnt a lot. A highlight is always bringing farmers to look at landcare sites. When they return home, they immediately implement what they have seen. The strong point of landcare is that it has been institutionalised at the farmer level. The farmers are developing their own initiatives and research into agroforestry and soil and water conservation. The UDP activities, on the other hand, tend to be driven by the requirements of the project or the funding. Perhaps if we had adopted the landcare approach earlier, we could have reinforced our community development processes.



Landcare activities in South Cotabato — above: a farmer establishing NVS in Ned using the cows-back method; below: a landcare group meeting.



The major strength of landcare as implemented by ICRAF is that it has already activated farmer groups and communities. They are able to lobby for support from the local government and feel more empowered by being part of landcare. We have not yet achieved this in UDP, although we are moving in that direction as we realise that the farmers are our major partners.

Landcare really encourages farmer participation when farmers can make their own decisions and at the same time communicate openly about their issues in the implementation of landcare.

Before partnering with ICRAF, our basic focus was on the technical aspects of soil and water conservation. But with the link to landcare, we have gained a 'social dimension' to community development and empowerment. Landcare has very effective farmer-training groups — farmers who are capable of doing their own programs and activities.

Spreading landcare

I am one of the advocates within UDP for replicating landcare in our projects. I am also advocating that landcare resource centres be set up in our project areas. Local governments would be a major partner in these centres. We are also looking beyond regional level initiatives to influence national natural resource management projects.

There are a number of local government units in places like Laak in Compostela Valley, Malalag in Davao del Sur, Malungon in Saranggani, and Tampakan and Tupi in South Cotabato. In these places, we see significant impacts from projects and from the partnership with ICRAF.

Budget constraints might stop some of this progress. Many of the local governments we are working with belong to the poorer provinces in the region. The second obstacle to the spread of landcare could be the participation of leaders. Changes in leadership occur at every election and this changes programs and priorities. Hopefully, UDP and the increasing consciousness about landcare will keep such pressing issues as sustainable agriculture and environment at the forefront of all leaders' minds. We are trying very hard to develop a culture towards resource management, hoping that this will be integrated in the programs or projects of our political leaders.

To make this happen, we are starting at the village level to develop communities that can lobby their officials and come up with resolutions for landcare and sustainable natural resource management. Secondly, at the municipal level, we are encouraging the incorporation of such resolutions into their respective five-year and annual development plans.

The importance of landcare

Our environment nourishes us all. If we destroy it, we are also ultimately destroying ourselves. We have to act before it is too late. Mindanao has not yet reached the environmental dilemma that currently faces Cebu — water shortages, denuded mountains and degraded land. In Mindanao, our resources are still quite abundant but degradation is creeping in fast. Forest denudation, loss of biodiversity and single cropping systems are affecting some of our most fragile ecosystems in the uplands.

Both UDP and landcare are sharing and teaching farmers about proper agricultural technologies for attaining additional income for the farmers and also helping our environment to heal itself. We know that with the present population explosion, people will eventually be occupying our fragile upland ecosystems. We should be taking care of our natural endowments to provide a better future for the next generation.

2. LANDCARE OFFERS A NEW APPROACH FOR NGO DEVELOPMENT PROJECTS

By Terry Tuason

Current location: Davao City, Davao del Norte, southern Mindanao, Philippines

Occupation: Farmer project manager, Catholic Relief Services (CRS)

Role in landcare: Support and promote the landcare approach and organise visits to landcare sites

Experience: Has a Bachelor of Science in Agriculture with a major in agronomy and Masters in Participatory Development; has worked for CRS since 2001, before that, he worked as an agricultural consultant and Deputy Director of the Kapwa Upliftment Foundation Inc.

Landcare provides a community focus

I first heard about the landcare approach when I visited Lantapan and Claveria in the late 1990s. It seemed to me then that we were already doing something similar, but not calling it landcare. For me, landcare is about a group of people (farmers or other sectors) really working as a group in an Integrated Area Development, which focuses on addressing environmental rehabilitation and natural resource management as a collaborative effort.

I liked the way landcare was adopted at the *barangay* level, where the community made its own policy (bottom-up approach) in terms of what they wanted in their own community. They first started on conservation farming because they want to increase their production by addressing the main problem of low



Terry Tuason (second from right) and Paul Hicks (CRS Mindanao manager, second from left) with farmer landcare members.



CRS project managers receive hands-on training in the techniques for establishing contour lines.

production due to severe soil erosion. It was all about people working together for their common good.

In 2001, our project began to support development efforts in four upland communities in different parts of southern Mindanao. We supported a four-month participatory rural appraisal to identify problems and develop plans for improving the social, economic, and environmental conditions in the project area. We encouraged our partners in this project to visit Claveria and Lantapan to see the landcare approach. I would certainly recommend landcare to other NGO partners as an approach that should be considered in any community-based natural resource management project.

Landcare makes development projects more relevant

Many NGOs have so-called community development works. However, these are often fairly limited. The technologies are based on the experiences from other areas or organisations, without studying the appropriateness of these technologies to a particular area. Each technology is generally site-specific, meaning it won't always work in different locations, often due to social aspects.

However, landcare offers a combination of research and extension. The extension is based on research (on-farm trials) and farmers are involved with the planning, implementation, monitoring and evaluation of the whole process of research and development. Putting the farmer in the role of the researcher means the farmer knows what he's doing and that it is based on facts and data. The results are more easily shared with other farmers because they share the same problems, speak the same language, and often have similar aspirations in life.

Terry's definition of landcare: Landcare is sustainable land use management, which addresses conservation farming with the main objective of putting money in the pockets of farmers. It has an ultimate goal of addressing a resource issue such as watershed management, taking care of the existing trees by assisting natural regeneration, riverbank stabilisation or land rehabilitation. It is based on people working together as a group to address common natural resource management issues.



Silt traps in an erosion trial being conducted on a landcare member's farm.

Approach more important than name

There are many challenges to the expansion of landcare. One is the use of the name itself. If people sometimes call landcare by another name but it has the same meaning, I don't think it matters. However, I think we need a common understanding of our goals and vision.

I do not want to be too ambitious, but I would be happy if, within the next three years, there is one *barangay* that is managing its own resources in a sustainable way — a situation in which the community is happy, and there are forest reserves, a good income, and the *barangay* and council are functioning well.

I think it's too ambitious to get municipal-wide support initially, so we should start from a small *barangay* or a sub-village where everybody knows what he or she is doing. If you have a good *barangay*, you have a good municipality, and if you have a good municipality, you will have a good province. This will take time, but I think this is the way to spread the landcare concept. Let the farmers be the main actors for any development, and the development organisations have the supporting parts.

Another link between landcare and NGOs

Ramon Ramirez is the Sustainable Integrated Area Development Officer with the Balay Mindanaw Foundation Inc. in Claveria.

In Claveria, we started with one *barangay*, Patrocinio, way back in 1987 and after three years expanded into five focus *barangays*. After another year or two, we expanded to 11 *barangays* and now we are working with 16.

When people in the community identify a particular issue, we work with them to strengthen their activities. This could be planning local development, for example. After they make their plan, we help them with matters like funding proposals. We also identify those agencies, like ICRAF, that could possibly be involved in the project. We help them to monitor and evaluate their projects and provide leadership training for community and organisational leaders.

As local agricultural officers cannot hope to cover the whole municipality, we train farmers to be able to help other farmers with soil conservation, animal health and so on. We aim to strengthen the whole community so that after about five years we can phase out our activities as the community becomes more independent.

Balay Mindanaw

Balay Mindanaw is a non-government organisation whose major program is sustainable integrated area development. Governance is a big component of this program and we work on local government planning with the community to identify priority areas. The *Barangay* Development Council, which represents the farmers, community groups and locally elected officials, is a key partner in our program. They are involved in developing livelihoods, infrastructure, agriculture, and the capacity of the community to participate in things like landcare.

There was no direct partnership established between Balay Mindanaw and landcare. The partnership was built through the different *barangays*. We helped in strengthening and supporting people's organisations including landcare in every *barangay*. In some priority *barangays*, the landcare groups managed the projects and involved us.

Landcare benefited the community through its livelihood programs and approach to conservation farming. Collaboration between our organisations was good because it meant a sharing of resources.

Ramon's definition of Landcare: Landcare is a group of people who have common vision in protecting the environment, controlling soil erosion and practising agroforestry.

Landcare has evolved over time. At first, it was only about technology, but now there is technology transfer from farmer to farmer. And it is a vehicle and venue for people participating in development. Landcare should not stop with the technology or research. We need to look at other aspects. Landcare will be strengthened with good leadership and partnerships with other organisations. Landcare needs to take a political stand on issues affecting people's livelihoods. They will only have a weak voice if they continue to operate at the local or *barangay* levels of government. If we want to sustain the program, people should invest in taking landcare to the municipal level.

I hope that landcare will spread to other municipalities as it matures as an organisation. Landcare can help with technologies, livelihood programs, securing land tenure for the land-poor farmers and strengthening the partnership with government units.

Mutual benefits from landcare partnerships with non-government organisations

- Joint promotion of simple, inexpensive technologies to farmers.
- Provides links with community participants in landcare.
- Joint promotion of activities to local governments and community leaders.
- Provides broader links to community development programs.
- Joint opportunities to incorporate activities into municipal and local government plans.
- Opportunities to combine research and extension efforts.
- Landcare can build on existing development projects.
- NGOs can use landcare for more rapid information and technology dissemination.
- Can each support community and farmer training activities.
- NGOs can help landcare to develop, implement and manage projects.

3. CONNECTING THE SPIRITUAL WITH THE ENVIRONMENT

By Father Carlito Clase

Current location: St Ignasius de Loyola Parish, Esperanza, Agusan del Sur, Mindanao

Occupation: Spiritual Director of the Province of Agusan del Sur

Role in landcare: Involved in the Basic Ecclesiastical Community, or in our local language, the '*Gagmay Kristohohanong Katilingban*', a holistic approach for bringing people closer to God

Experience: Has been working in the region for the past five years, focusing on agricultural activities during the last three years. Before then, he was the assistant parish priest for the municipality of Sibagat in Agusan del Sur with a focus on literacy and agricultural programs.



Father Carlito Clase (left) with Lantapan landcare facilitator, Gigi Boy.

Early landcare beginnings

As it's only a short time since we visited landcare in Lantapan (June 2003), there has not been much adoption of landcare yet. However, some farmers have already adopted technologies like contour ploughing. Many of the farmers have planted lemon grass in the strips instead of just the natural vegetation. Now they tell me that they have contracts within the municipality for this lemon grass, selling bunches for a peso each. Others used the '*balabag*' method of selling their lemon grass to restaurants specialising in roast chicken.

Some farmers are using felled timber, branches and whatever they can find to control erosion. Others have planted a variety of crops in the alleys such as peanuts, mungo, okra or any available short-term crops they can get hold of. This increases the diversity



The location of Esperanza in the province of Agusan del Sur.



Father Clase shows Ned landcare facilitator, Eldon Ruiz, the livestock facility for the Pag-laum 'Noah's Ark' project.

of crops on their farms and protects them against market fluctuations and also against pests and diseases.

They have incorporated long-term crops, such as indigenous or existing trees whose roots are able to provide enough hold to control erosion, onto their farms. Many indigenous people have planted sugarcane in the contours and they are now processing this to produce their own sugar.

The Pag-laum Project

We have many spiritually inclined people in our community, but we observed that they did not apply this to their daily existence. Our goal was to connect their spirituality to the physical aspects of their daily lives.

We believe that people can really be closer to God if they have a secure livelihood, full stomachs and a well-fed family. This is where the Pag-laum Project, from the Spanish word meaning 'hope', began. PAG-LAUM is an acronym where:

- P** stands for Poverty;
- A** for Alleviation;
- G** for Good governance;
- L** for Livelihood;
- A** for Agroforestry;
- U** for Unity; and
- M** for the Masses.

We try to involve all peoples and sectors of society within Esperanza in this program, regardless of whether they are Catholic or not. Seventy to 80% of our population are indigenous people from the Manobo, Banwaon and Higaonon tribes.

One of the big issues we have in this region is regular floods, and when this happens people go to the parish for food, medicine and other help. Floods may be caused by logging activities in the area.

Much of our locality is still lush with native forests and blessed with abundant natural resources. This is the main reason why I started this project, to conserve and protect what is left of our environment and prevent some of the floods from happening.

The Higaonon people live in the very heart of this forest, that they call their 'Holy Land', or their Sinacungan. It is a place of prayer to their Gods. According to Amba Manhubyanan, their Supreme Datu (or Chief), the management of the forests and the mountains is their responsibility, which is a gift from their God Libre. The Datu plays a major role in managing these ancestral lands, and no longer allows the entry of logging companies into the area since they are seen to bring so much hardship to the tribe.

Datu Amba and I discussed how we could help the tribe to continue sustainable practices and still have enough food to eat. This was the driving force that inspired us to do what we are now doing.

I found it quite easy to get assistance for flood victims from the various government agencies in the province. The local government unit first responded to our call for assistance. The Diocese of Butuan was another source of support by promoting our requests to the National Secretariat for Social Action (NASA). Relief goods, medicine, food and clothing were sent to flood victims. Our project started as a relief process providing things that flood victims needed.

Later, when Paul Hicks of Catholic Relief Services (CRS) visited the area, we looked at expanding our project beyond providing relief. The Bishop suggested that Esperanza serve as a model area for the other parishes as it covers both Agusan del Sur and Agusan del Norte provinces. These areas have the same issues and both have a focus on indigenous communities.

The first thing we did was to identify people's real needs and look at the characteristics of the area. Our strategy was then to divide the Parish into zones based on particular chapels. These were further broken down into *Gagmay Kristohanong Katilingban* or small Christian communities, which were again divided into family groupings at the *sitio* level. This strategy resulted in faster dissemination of religious teachings as well as of ways to deal with other issues and problems.

With this set-up, the small communities realised the importance of working together, which helped stop the 'dole-out' mentality that was prevalent with flood relief. It also strengthened the communities' resolve of working through communal activities and assisting each other. We call this 'lay empowerment'. We supported this by providing mechanisms wherein people could realise their own potential, rely on their own initiatives and look first at the resources they already have.

Connecting with landcare

Landcare certainly created quite a stir with the farmers who visited Lantapan in June 2003. The trip served as an 'eye and heart opener'. They saw the landcare initiatives in Lantapan and realised that they could adapt these for use in their own setting.

Since I was not able to join the farmers on this visit, they shared with me what they saw and learnt. In particular, they learnt various methods and technologies for minimising or stopping soil erosion on sloping land. I felt that they became more confident when they shared what they saw with me and their neighbouring farmers. I was inspired with what I heard from them and am looking forward to implementing the technologies here.

I feel that we can very well duplicate landcare in Esperanza. Considering that we still have an abundance of natural resources to protect, conserve and manage, the lessons from landcare are also applicable here.

There are several NGOs or agencies that focus on the sustainable management of natural resources in our diocese. But if I analyse their strategies, they just seem to 'unload' on us knowledge and technologies from outside the area. These are alien and out of context with the communities here.



Farmers from Esperanza visiting Lantapan.

In comparison, landcare motivates and encourages the local community to rely on the resources existing within its own area first and to look at its own strengths. Farmers are involved in doing their own research and participate in research conducted by ICRAF. This inspired our farmers.

Working in partnerships

CRS has provided us with the institutional and technical support for addressing food security, sustainable agricultural technologies and environmental management strategies. We have links with Tabang Mindanao, an NGO operating in the province, which has project officers based in the parish who focus on technology transfer initiatives. We are also linked with the National Secretariat for Social Action (NASA), through the Bishop. We are getting support from the various municipal and provincial level governments, and now we are also looking to the national government for possible support.



Indigenous people in the forest.

We have a number of issues concerning the entry of investors in the area involved in mining and commercial tree plantations. The church was instrumental in preventing such commercial operations from coming into the area and causing detrimental environmental impacts. Together with the Supreme Datu (Chief) of the tribe and the indigenous community, we were able to unite with the local government units and prevent such projects.

There is still an abundance of native flora and fauna in our areas and we are looking for true partnerships with local government to protect our environment and engage in development projects that won't destroy it. The local government officials listened and respected our voice and the voice of the people.

In Esperanza the local governments have carried out most of their promises. I am proactive with local governments and sit down with them during meetings. My constant presence is a reminder to them of their promises. I usually start with small projects that they can easily act upon and not with the big ones, which I know would be difficult for them budget-wise. I like to think I am 'conditioning' them and preparing them for bigger and more expensive projects in the days to come.

In our province, I have a strong partnership with Father Peter Walpole who is involved in the Environmental Science for Social Change (ESSC) group and has a good relationship with the governor. We have agreed that he will work at the provincial level with the governor to provide technical support for our activities.

We are also hoping to link formally with ICRAF and landcare. We think they could really assist us, as we are more or less beginners in landcare. It is good to know that I am not alone in this arena and that there are others who have the same vision of attaining a well-balanced environment, and in protecting and conserving what's left of it. We as Christians and as children of God should act as one civilized society in this gargantuan task of protecting and managing our environment.

Other links between landcare and the church

Pastor Rey Manggon

Pastor Rey Manggon is a Community Developer with Mindanao Baptist Rural Life Center and is also in charge of the Baptist Church's tree planting activities.

I first heard the word 'landcare' in 1999, when the program started here in Ned. We were promoting SALT (Sloping Agricultural Land Technology) at the time, but were happy that another institution was also promoting conservation practices on the sloping lands here in Ned. Landcare technology and SALT are almost the same. The natural vegetative strips (NVS) are another form of contour-farming with the purpose of conserving the soil, just as legume hedgerows do.

Mindanao Baptist Rural Life Center (MBRLC)

MBRLC is based in Bansalan, Davao del Sur in the southern Philippines and is very active in promoting conservation farming systems for upland farmers. MBRLC developed the Sloping Agricultural Land Technology (SALT), and promoted it throughout the Philippines. The centre is also involved in helping the indigenous people of the uplands.



*Rey Manggon,
Mindanao Baptist Rural
Life Center (MBRLC).*

Landcare and MBRLC have a very good partnership. We helped landcare members lay out their contours, and we provided seedling bags and seeds of forest trees to landcare group nurseries. We also ran training on poultry and livestock production as requested by some landcare groups and provided technical assistance with things like establishing legume hedgerows.

Many farmers have improved their living because they have adopted conservation technologies. Landcare is an effective tool for increasing adoption because it uses farmers to tell other farmers. Our project benefited from such a group approach. We also benefited from the techniques introduced by landcare, like high-value annual crop production. Likewise, landcare groups benefited from our contributions to their projects through training, advice and seeds.

Landcare needs to continue its activities to reach more farmers. And MBRLC and landcare need to maintain good communication and the linkages between their projects. Landcare is needed by a lot of people, especially those without farming know-how. Many farmers are short-sighted with their needs and do not look to the future. Landcare can help them, and especially the tribal groups.

Father Roger Caalim

When I heard about landcare, it was very clear what it meant because care of the land is really close to our hearts. In the Catholic Church we believe in caring for the land. At the Archdiocese level, we have a social action program that looks at caring for the land so that it is profitable and useful for farmers and the next generation. In our congregation, we have a program of justice and peace that includes maintaining the integrity of creation. There is a good link between landcare and these programs. Landcare has the technology that we need.

As the pastor of this parish, I would like landcare to extend its activities from Ned to the entire parish of Gapok Langgal Mission area to reach more farmers. Our leaders want to work to further promote the program.

The soil is fast eroding in those areas where there is no landcare. It is important that we educate our farmers because many of them are exhausting the land with their current activities.

They need training. Our church has a farming and livelihood ministry to help farmers in our parish. There have been some good responses from the farmers to this ministry, but they are not easily convinced unless they can see real benefits. What landcare has done in various sitios in Ned could provide such proof.

Landcare should do well as it is about giving a better future to the people. If farmers lose all the wealth of the land, they cannot produce corn or vegetables or rice. There is no life. That is how important I think landcare is.



Father Roger Caalim, the Parish priest of Gapok Langgal Mission, celebrating mass at Gapok Church.

Billy Paglinawan

I became involved in landcare because I saw it was a good program. The first activity I participated in was training in Claveria about land and water conservation, grafting and reforestation.

Before landcare started, there were no trees and our water source was going dry. With landcare we received training, organised a nursery and collected seeds of endangered tree species. We have about 60 members in two churches.



Billy Paglinawan, Pastor of Advent Christian Church at Mindgat, Malitbog, Bukindon.

We focus our landcare activities on nursery management. Our purpose is not only to plant timber and fruit trees but also to give tree seedlings to the members. We have planted rambutans, lanzones and mangosteens. All members must manage their nurseries because they need to plant a quarter of a hectare on their farms with trees.

Landcare in Church is not just about members, but about the whole community. We have a program on watershed development and water source preservation. Whenever there is illegal cutting of trees going on in the area, we report it to the *barangay*. There is a penalty for cutting down trees in the *barangay*. Firstly, the cut trees are confiscated and then the people who have cut the trees are brought before the Department of Environment and Natural Resources.

This year, we plan to continue to help in tree planting. We will put markers on big trees so that people will know not to cut them because they are part of the church's project.

It is good to see the ICRAF facilitator regularly as he inspires us to continue our efforts. The local government unit of Malitbog, through Mayor Dela Rosa, has also helped us and supports our efforts.

We are encouraging other churches in the nearby *barangays* like the Evangelical and Baptist churches to get involved in landcare. We are also considering running workshops about soil and water conservation, nursery management and seed collection for three other churches that are not currently involved in landcare.

I would like to thank ICRAF and landcare for all the information and technologies that have helped us and our community.

Church and landcare partner for mutual benefits

- Provides links between spiritual and physical needs.
- Links landcare to the wider community.
- Church parishes provide an opportunity for spreading landcare more widely.
- Landcare can inspire church members.
- Church leaders can help champion landcare to local government leaders.
- The landcare ethic can bring church members "closer to God".
- Both have a similar objective — to produce a brighter future for the people.

4. TAKING LANDCARE TO THE SCHOOLS

By Rubylyn Canda

Current location: *Barangay* Kibangay, Bukidnon, Central Mindanao, Philippines

Occupation: Technology and home economics teacher at Xavier de Kibangay High School

Role in landcare: Integrating landcare into the Xavier de Kibangay High School

Experience: Bachelor of Science majoring in education from Cagayan de Oro College; previously worked at the San Herminigildo Agro-Industrial School in *Barangay* Alanib and Bukidnon National High School in Malaybalay City



Rubylyn Canda.



The grounds of Xavier de Kibangay High School, planted with trees from the school landcare program.

Students understand the importance of the environment

Landcare has provided our students with a deeper understanding of the environment, its importance, protection and management. All of our students since 2000 have experienced landcare and I hope they will implement what they have learned when they take over their parents' land.

There have been improvements in the school grounds since landcare. Students have learnt to separate biodegradable waste from other wastes and compost it. They have also planted hundreds of seedlings around the school, which are now growing well. The growing trees provide shade during hot days and also serve as windbreaks. The first trees we planted have already been harvested and used in the construction of the school canteen.

Making landcare part of the curriculum

In the first year, landcare is presented in terms of backyard gardening and then actual tree-planting activities. In the second year, it involves the establishment of the FAITH Garden (Food Always In The Home). The third year is focused on ornamental gardening and the fourth year involves students in nursery establishment and seedling propagation.

We were and continue to be assisted by ICRAF facilitators to build landcare into the curriculum. Before landcare, we had some simple gardening and beautification activities, but they were not part of the curriculum. They were just one of the extra-curricular activities children could do for the school. Our activities on environmental protection, nurseries and contours started with the entry of landcare into the school program.

The school's administration reacted positively to landcare as it imparted both theoretical and practical knowledge to the students. We also looked at the school becoming a laboratory for learning, not only for the students but for the community and visitors as well.

Rubylyn (right) and students at Xavier de Kibangay High School engaged in landcare activities.



There are still many topics that could be included in our landcare program, but we realised that since this is an action learning process, it may take some time to develop the curriculum further. We are feeling our way through it and we modify the program as the need arises with new ideas.

Taking landcare beyond the school room

We hope that eventually we can run seminars and training events for the parents as well as the students. If we could have our way, such events would be run on their farms since students have limited school hours to learn everything. In this way, landcare could reach more of the community.

Some parents have been influenced by the students and have adopted landcare technologies. Others are not yet fully convinced. We need to continue the program in the school and at the same time increase landcare's presence in the communities with the parents by doing practical hands-on activities on their farms.

We could call for parents and teachers to join together to participate in training and seminars at the school. Then we could suggest that they gather in small groups on individual farms for more hands-on training activities in sustainable agriculture and environmental management.

Rubylyn's definition of landcare: For me landcare is about the protection of the environment, targeting people who do not pay attention to caring for it. Many people are engaged in destructive and abusive practices that do nothing to care for the environment.

Future of landcare in the school

To become independent of ICRAF's assistance, we would need to go to more extensive seminars and training in the topics included in the curriculum. This would eventually prepare us to take over and become independent in sustaining the program in the school. We would like facilitators to spend more time in honing our knowledge and that of our students in landcare, perhaps even over the weekends.

Material support is not enough to sustain the program. There should always be "learning by doing". Theoretical knowledge should be backed up by hands-on practical learning activities.

These activities are more important to the students and others as they “get their hands dirty” and experience the activities themselves.

Through landcare, we envision that the children will become proactive in caring for the environment and one day adopting landcare on their own farms.



More student landcare activities: vegetable production (above) and tree planting for beautification (below).



The benefits of integrating landcare into school programs

- Educates future generations about the benefits of conservation technologies.
- Provides the school with trees for shade and for use in constructing new school buildings.
- Adds a practical hands-on element to the curriculum.
- Can demonstrate landcare and conservation practices to the wider community.

Other links between landcare and schools

Sister Irene Cecile Torres

We are not experts in the field of landcare or agriculture. We feel we are very fortunate that landcare is here in Lantapan so we are able to partner with them. We believe we have the same goals and the same direction towards caring for all creation. We believe caring is the community's responsibility because creation is a gift to all and at the same time is the responsibility of all.

During the first year of our partnership with landcare, we were trying to identify the content that we would be teaching the students. We tried to do a general gardening module in that year and the next year we focused on ornamental plant propagation. In the third year we looked at vegetable gardening and in the fourth year we focused on nursery management and seedling propagation.

When implementing landcare in the school we wanted to apply the principle of learning by doing. Our students now have a different way of looking and caring for the environment. At the institutional level, landcare has helped us streamline our approaches to learning. When we started with landcare, we depended heavily on the landcare facilitators. However, now we are looking forward to being technically capable of teaching landcare modules by ourselves, and will hopefully also go out to extend this learning to the whole community. We long to be able to give training and seminars ourselves to the wider community.



Sister Irene Cecille Torres, Principal of Xavier de Kibangay High School.



Sister Irene hosts visitors from South Cotabato interested in the landcare in schools program.

Landcare has the potential to transform society. But people must learn within themselves, not from some external force. Once students have learnt the principles they will take them with them when they leave the school. One of the first students to be involved in the landcare initiative was Rhondee Yanga, who learnt to plant and care for tree seedlings when he was still in elementary grade. Now he is one of the model farmers in his village, and has harvested trees to help build his own house.

Joselita Molina

Landcare started here in Mat-I National High School in Claveria in 2000. The first activity was to produce seedlings, after which we learnt how to raise them — from the propagation of seeds to caring for the seedlings until they were ready for transplanting.

We have now planted more than 600 trees around the school to help control soil erosion on our hilly land and to act as a windbreak against the strong seasonal winds that occur in December.

The teachers and school principal support our activities. Whenever there is a landcare activity, they are always willing to assist with seminars, training, field trips and visits to landcare sites.

Landcare has a great future here. Landcare in our school has helped the people who wanted to plant timber trees and fruit trees as they now have somewhere to go for planting material.

In our regular subjects, we integrate the advantages of planting trees and the importance of having trees in our environment. We integrate landcare with other topics so students understand its usefulness.

We are planning to eventually develop a commercial nursery. But for now we have a small nursery where we raise seedlings for farmers and students. These seedlings are important for producing trees as a source of building materials and for planting along the river to control water flow.

5. BETTER BANANAS FROM LANDCARE TECHNIQUES

By Ric Abejuela

Current location: *Sitio Patag, Barangay Alanib, Lantapan, Central Mindanao, Philippines*

Occupation: President of the Mt Kitanglad Agri-Ventures Inc (MKAVI) banana company

Role in landcare: Has used landcare practices in banana plantation; involved in community landcare initiatives

Experience: Bachelor of Science (in Agriculture) from the University of the Philippines; has been involved in the banana industry in Davao City and Misamis Oriental for about 38 years; also involved in vegetable production, poultry, dairy, and shrimps



Ric Abejuela.

Producing the best export bananas

I am from Bukidnon, so when I was asked to set up a banana farm here at a high elevation with boulders and stones, I was coming back to my home country. But before I agreed to move out of retirement for the third time, I asked a British consultant if we could grow bananas here, and he said that we could. After just two years, we were exporting bananas to Japan and there was a high demand for our bananas, which were sweeter, had a better aroma and a longer shelf life than other bananas.

Using landcare techniques to grow bananas

When we first came here, there were a lot of negative perceptions from the community. People were saying that the company had come to grab the land or to destroy it. But, I am from here. Why would I destroy the land where I belong?

I used to have a very small farm in Davao where even the cogon or imperata grass would hardly grow. I applied a number of principles to my farm. The first rule I applied was no burning. The second was to put in contours and the third was mulching. Instead of burning the grass, I brought in rice hulls, corn cobs and coconut husks and spread these over my farm. These practices paid off in terms of both production and quality of produce. I have been involved in doing this type of 'landcare' activity for a very long time.

We grow our bananas here in Lantapan using the best possible environmental standards. We do this because I don't want to lose the soil that is producing the bananas and I don't want to lose the water in the soil. When we harvest our bananas we use the stems and leaves of the banana plants as mulch to help retain the water in the soil. We try not to waste anything.

We established contour lines on the slopes. Where the ravines were very deep and we could not plough the land and plant bananas, we planted trees. Right from the start, I told our people that we needed to preserve the soil by planting trees. Sometimes my colleagues asked why we were 'wasting' money planting trees, and I told them that trees hold the soil in place. While we can't avoid erosion completely, this has paid off and we have kept most of our topsoil. The birds and monkeys are also coming back.



Workers harvesting bananas at MKAVI.

When we first came here five years ago, the soil was very poor and could hardly grow any corn unless a lot of fertiliser or chicken dung was added. I had an expert come in and look at the soil. He found that it was clayey on top, which would seem good for holding water, but that less than two feet down it was very porous. This meant that if we added fertiliser to the base of plants, it would all be washed away in heavy rain. This is why we decided to put in drip irrigation that also supplied our banana trees with fertilisers. Mulching and drip irrigation mean the water and fertiliser can be applied slowly and are less likely to be washed away. We are able to provide our bananas with the exact water and fertilisers they need so they don't have that hungry or thirsty look.

We also plant legumes between some of the rows of banana trees to help provide the soil with more nutrients. We compost organic matter and use chicken dung to fertilise our soil. We apply about 35 tonnes of organic matter a hectare to our soil each year.

We try not to use chemicals to get rid of pests and diseases. We prohibit people from shooting birds and monkeys, as these animals can help control pests. We had a problem with the scanning beetle, which can do a lot of damage to the banana



Legumes are planted between the rows of bananas to help with soil fertility.

plants. At first we employed children to come in and pick them up one by one. They were happy to get some money and we were happy to reduce the beetle population. Then we found out that the African bull frogs eat these beetles, so we cultured these frogs and released them into critical areas.

We control the nematodes in the soil by cutting back our banana plants each year and replanting. This minimises the destructive soil organisms, like nematodes, by starving them and exposing them to sunlight.

Award recognises ecologically sound production processes

MKAVI received a special citation — the 2002 Golden Shell Award for Ecologically-Sound Production Processes. The Golden Shell Awards follow a strict selection process designed to weed out companies that do not meet its stringent standards. Overall efficiency in export, particularly total quality management, manufacturing, research and development, product quality, marketing and financial viability are considered.



A worker at MKAVI checks the plantation's irrigation control system.

Sharing the benefits with the community

We pay people who work here very well. We pay the people we rent the land from the highest amount per hectare in the province, more than the other companies renting land for sugarcane, corn or pineapple production.

We try to get involved with community meetings and do not restrict people from visiting our operations. So what if people copy what we do? That's for the benefit of our people and it is for the benefit of our country.

People here in the community are beginning to open their eyes. It has taken five years or more, but people are really beginning to change. They see what we are doing and they copy it.



Ric Abejuela in the MKAVI nursery.

The people who come and look at what we are doing see ravines that were once barren and now are planted. We are growing the best kind of bananas possible for export. Landcare and plantation development need to go hand in hand. As a Filipino, I have to share my knowledge with our people. We need to teach other innovations like landcare.

Ric's definition of landcare: Landcare starts with 'the guy upstairs'. God gave us this land to take care of for our people. We have to conserve the land and keep it fertile so the next generation can benefit. That's how I look at it.

MKAVI's community development projects

- Vegetable farm for workers and local community.
- Fish farm.
- Free dental and medical clinics provided to employees.
- Herbal gardens.
- Joint nutrition enhancement program with the local government unit.
- Landowners' welfare program.
- Sponsorship programs for different community projects (eg financial support for the construction of Lantapan Landcare Association's central office and nursery).

section 6



LANDCARE LOOKS TO THE FUTURE

This book captures many examples of how people, settlements and landscapes have changed as a result of landcare. However, getting hard data on these changes is difficult. This is important as the success of the Landcare Program will ultimately be judged not by individual stories, but by its success in improving farms and farmers' sustainability at broader community levels. Monitoring changes and evaluating impacts of the Landcare Program was the focus of a major study of Philippines Landcare, conducted at the three main landcare sites of Claveria, Lantapan and Ned, from July to December 2002.

The study was undertaken as part of the Philippines–Australia Landcare Project, funded by ACIAR and supervised by Rob Cramb from Australia and Zorina Culasero-Arellano from the Philippines. The study was the first major evaluation of landcare in the Philippines, and one of the most comprehensive studies of landcare done anywhere in the world. Rob's individual story follows and Zorina's story appears in Section Three. Results of the study appear in the boxes throughout Rob's story.



Landscapes in the Philippines, such as these fields in Claveria, have changed as a result of landcare.

1. EVALUATING LANDCARE

By Rob Cramb

Current location: Brisbane, Queensland, Australia

Occupation: Researcher, University of Queensland

Role in landcare: Involved in monitoring and evaluating landcare in the Philippines

Experience: Degrees in agricultural science and economics; has worked on agricultural development and land resource management in various parts of Southeast Asia



Rob Cramb (far left) with facilitators during a session to plan monitoring and evaluation processes.

Landcare brings adoption

There is no doubt that something significant has been happening at the landcare sites in Mindanao that has been difficult to achieve elsewhere in the Philippines. I was involved in earlier ACIAR research that examined projects all over the Philippines where there had been attempts to introduce soil conservation, especially contour hedgerows. And there were very few examples of widespread adoption beyond the project boundaries or after the project period.

While the landcare sites are still pilot projects in some sense, there has been a rapid increase in adoption of simple conservation measures, rapid formation of landcare groups, the generation of new activities, and evolution of new ideas and practices. Although this is still only happening on a minority of farms in any given municipality, it represents quite a high proportion of farmers and a significant area of the steeply sloping part of the landscape. This has rarely been encountered elsewhere in the Philippines, although there have been one or two other examples of projects, not called landcare, that have adopted similar principles and approaches, with similar success.

I think the key to it has been the practical technologies offered, the farmer-to-farmer orientated nature of the training provided, and the close follow-up by dedicated landcare facilitators. What we found is that farmers are very aware of soil erosion and land degradation, but are lacking simple practices they can adopt to deal with these issues. They might have even seen contour practices, but until you are actually trained in putting in a contour, there is a barrier to adoption. Training is the single most important factor explaining adoption. This training involved farmer adopters demonstrating what they had already done on their farms.



Farms contoured with NVS.



It was important for farmers to visit other farmers, sometimes in other municipalities, to see what they had done. This was then followed by short-term, one or two-day practical hands-on-training with a group of farmers who could then go back and help each other implement what they had learned. It was the contact with other farmers, the training and the facilitation that led to adoption, and to the formation of landcare groups that could help members to implement practices such as contour farming and develop plant nurseries.

Farmers training each other — one of the keys to landcare's success in the Philippines.



Adoption of conservation technologies

By Rob Cramb and Zorina Culasero-Arellano, Landcare Evaluation Reports 1–4, 2004

- The landcare program followed a similar pattern at the three sites. It trained farmers in soil conservation (especially NVS) and agroforestry, with a high degree of involvement of farmer-adopters in the training process, and it also worked towards the formation of landcare groups, linked in a landcare association.
- At all three sites (Claveria, Lantapan and Ned) both the adoption of the new techniques and the formation of landcare groups proceeded rapidly. This was partly due to the legacy of programs undertaken by ICRAF, SEARCA or other agencies before the ACIAR Landcare Project began.
- Between one- and two-thirds of farmers at each site were adopters of soil conservation technologies, affecting from 15 to 25% of the total farm area at the site.
- There was clear evidence that adoption had a significant impact on reducing soil erosion. The impact on farm incomes was less clear-cut and was likely to be primarily a function of the changed cropping practices implemented on the contoured farms, for example the planting of perennials with greater commercial value. The catchment-wide impacts remain to be investigated but are likely to prove significant.
- The rapid adoption was primarily due to the practical, farmer-based training provided, giving farmers the knowledge and skills they needed to implement a technology they considered useful. There was also evidence that many farmers learned the technology directly from neighbours who had previously undergone training. The personal follow-up provided by landcare facilitators was also very important.
- Adoption was positively associated with larger farms, more farm workers in the household, steeper slopes, full or part-ownership, full-time farming, maize farming (compared to farming tomato, potato, etc.), and landcare group membership. Factors such as age, education, gender, ethnicity, and place of origin were not generally important in explaining adoption.
- While adoption was positively associated with membership in a landcare group, landcare membership in itself was neither necessary nor sufficient to induce adoption. Many adopters were not landcare members, and not all landcare members were adopters.

Making evaluation work

I was involved in only a small component of the ACIAR project when it first started in 1999. We were monitoring and doing some evaluation, and the facilitators were keeping their own records, but we did not have the resources to initiate targeted surveys, or really think through all the data. We agreed that we needed something towards the end of the project that would be much more concentrated and intense, and ACIAR provided extra money for a six-month study at the end of 2002.

I now had half of my time allocated to this, and I worked with the facilitators and Zorina Culasero-Arellano to look at what data we had and what we still needed. We planned surveys and focus groups and I visited the Philippines three times during the six months. To work very closely with the Filipinos over that period was very exciting and we really worked well as a team.

I had my own ideas on surveys and other sorts of evaluation, but we sat around the table and made all those decisions collectively. To involve the facilitators and to see their potential as researchers as well as facilitators was very instructive to me. It became an action research project where we are all learning from each other.

Cattle breeding is a new livelihood opportunity being pursued by the Lantapan Landcare Association.



A key lesson from the monitoring and evaluation was not to collect too much data, particularly routine data that are difficult to use, but to carefully target the data collected to meet the needs of action research. Some data are useful for the groups themselves, some for the facilitators, and some for answering larger questions about what makes landcare work in different settings.

Differences between Filipino and Australian landcare

I think there are important differences between landcare in Australia and the Philippines. With landcare in Australia, the focus has been very much on forming community landcare groups and then allowing them to develop their own agendas and to access resources. Australian landcare has been about overcoming an individualistic approach to farming by landholders who are geographically dispersed. It has built on an extension approach that goes back some decades, with farm walks and other group extension activities. Landcare groups in Australia could access financial resources from the government, including funds to employ a facilitator. This facilitator needed to be skilled in working with groups and government rather than having technical expertise.

In the Philippines, superficially it's the same, in that landcare groups have been formed and facilitators are active. But local landcare groups have not had the barriers of distance or a lack of community interaction typical in rural Australia. Local Filipino communities easily form into landcare groups as they are already functioning as primary social groups.

Landcare facilitators still needed skills in how to relate to farmer groups and how to help them with their organisation, particularly once groups had formed. But the primary interest of the Filipino farmers was in the technical expertise of the facilitators, their links to good applied research organisations and their ability to access further information.

A distinctive feature of landcare groups in the Philippines is that they formed into municipal landcare associations, which don't exist in Australia. This meant they had some voice with local governments. It linked quite isolated groups of farmers and others into a wider network that they didn't have before. The Filipino culture emphasises close-knit networks and kinship in local communities, but those networks fall away very quickly

once you get beyond that local community. Across a *barangay* and especially across a municipality, it is unlikely that local communities are aware of who is out there, what they are thinking and what they are doing. The landcare associations created something new in that sense. Such an association doesn't have a rationale without the individual landcare groups, but the groups only really exist because the association has links to ICRAF or SEARCA, to the facilitators, to local government, and to technical expertise beyond this.

Water monitoring landcare meeting in Lantapan.



Landcare needs continued support

Landcare in the Philippines is still supported by the ACIAR project, ICRAF, SEARCA and AECL, but clearly that is not going to continue for more than a few years. ICRAF has indicated its intention to pull back from active involvement in extension to return to its focus on research and move on to other fields. Given that the value of landcare to the farmers is not so much that it linked them to each other, but that it linked them to a wider network, we should not be expecting them to become self-sufficient entities. That is not why they formed in the first place. They formed because of these new linkages with outside agencies, and perhaps because of a general deficiency in these remote upland areas of government services such as agricultural extension and applied research.

Local governments have limited resources to provide what farmers need. ICRAF, SEARCA and other agencies have been welcomed because they are filling this gap. So I don't see that the landcare groups and associations can survive by themselves, let alone continue to be replicated in other municipalities. I think what is needed is an organisation to take on some of the functions that ICRAF and other agencies have been providing. It has to be beyond the municipal level, because it has to deal with a range of municipalities and different provinces.

It also has to be outside government, because although it will work and cooperate with government, we have seen that local government is subject to short-term political cycles. There can

Landcare groups in the Philippines

*By Rob Cramb and Zorina Culasero-Arellano,
Landcare Evaluation Reports 1–4, 2004*

Farmers joined landcare groups primarily to access training, technical advice and assistance (for example, with planting materials), and to be part of a wider landcare association, linking them to people beyond their immediate community.

While soil conservation was a primary focus of landcare activities, farmers were more interested in accessing new livelihood opportunities, principally through planting fruit and timber species on their contoured farms. Linking adoption of conservation measures to these new opportunities was an effective strategy. The commitment and skills (technical and organisational) of the landcare facilitators at each site were crucial to the success of the landcare program.

Some landcare groups developed their own agendas, identifying new needs and organising activities to meet those needs, for example purchasing fertiliser for members, establishing a small drugstore or helping to form other groups. However, most groups became less active once members had contoured their farms or established a landcare nursery. Nevertheless, because group members were close neighbours or kin, they could readily re-activate the group if there was a perceived need. Some groups disbanded because of internal conflicts or external changes, such as the extensive leasing of land to banana plantations in Lantapan.

The personal qualities of the group leaders were a key factor in maintaining and expanding the group's activities, along with the degree of contact and support from landcare facilitators, including farmer-facilitators in Ned. The landcare associations, working on behalf of the local groups and in conjunction with the landcare facilitators, were influential in organising training and accessing outside resources, for example from local and provincial governments.

be times when government is very supportive of landcare, for example when a mayor takes it on and runs with it, but with a change of personnel, not only will landcare be forgotten, it will be actively opposed because it was associated with the previous incumbent.

Once landcare gets to provincial governments and beyond, it's getting too far removed from the local focus. However, you can't expect local governments or municipal landcare associations to continue to scale it up to other areas beyond their municipal boundaries.

The conclusion we have come to, based on what we have seen over these three or four years, is that we need a landcare foundation or a landcare agency. This would be made up of professional people, including the landcare facilitators, who would seek funding for their activities from various sources within the Philippines and beyond. They would be able to sell their services to government and non-government projects, which have funding and are looking for people with good technical and facilitation skills.

This landcare agency would link facilitators into an organisation that would continue to support the landcare associations and the farmer training groups. It would help them organise and link with other projects that are looking for training. This could be turned into an income generating process for the farmer trainers. It could also obtain funding for its activities from international aid organisations such as AusAID or the Ford Foundation.

The landcare agency could bring farmers together from various provinces. They could organise a landcare conference, train new facilitators and build on everything that has been learned so far. I don't see a long-term future for landcare without something like that happening, given the withdrawal of the international agencies and the vulnerable status of the landcare groups and associations.

I am reasonably confident about the future of landcare, given the establishment of such a landcare agency. I think there is a need for it and the people who will be involved are up to the task. There are several issues to consider: the initial set up, how to make up the board, accountability, and coordinating activities over widespread sites. I think it has a good chance, but it is by no means a straightforward success story.

Importance of ongoing support for landcare

By Rob Cramb and Zorina Culasero-Arellano, Landcare Evaluation Reports 1-4, 2004

The support of local government units (LGUs) at the *barangay* and municipal levels that was evident in Claveria was not found to the same degree at the other two sites, where there was either apathy or antipathy towards the landcare program. This did not appear to have hindered landcare activities and may in fact have encouraged farmer leaders to organise. However, the presence of a strong facilitating institution (ICRAF or SEARCA) was essential, offsetting the immediate need for partnership with LGUs. This suggests the need for a landcare agency of some sort to sustain landcare activities in the long term.

Efforts to extend the landcare program to other municipalities in Misamis Oriental and Bukidnon showed that, with support from the core sites (Claveria and Lantapan), rapid adoption of NVS technology could be achieved, with or without the formation of landcare groups, but that support from the municipal government was highly variable and generally weak, partly for political reasons and partly due to lack of human and other resources. This adds further support to the conclusion that there needs to be a landcare agency providing on-going support to landcare associations, and to local government units and other agencies interested in implementing a landcare approach.

A sign outside the headquarters of the Lantapan Landcare Association shows the increasing ownership of landcare.



2. CONCLUSION — LOOKING TO THE FUTURE

Landcare builds momentum

This book has told, through personal stories, the individual enthusiasm for landcare that exists in the Philippines. There are now many active and dynamic landcare groups among the 400 or more groups that started since the beginning of the landcare program. These groups are carrying out a wide range of activities and providing a variety of services to their local communities at *sitio*, *barangay* and municipal levels.

Active and successful landcare associations have formed in Claveria, Lantapan and Ned. For example, the Lantapan Landcare Association is currently establishing a small office, information centre, nursery, distribution facility and live-in training centre.



Landcare activities.



Farmer training groups are operating in many areas to provide direct farmer-to-farmer training, something which has proved to be one of the keys for improving adoption of conservation technologies. There is now a band of well-trained facilitators, landcare interns or volunteers, farmer facilitators and some local government personnel involved in landcare activities.

Various excellent training resources, such as books, pamphlets, a facilitator training manual, Waterwatch manual, CDs and slide sets, have been developed to support those involved in landcare. Innovative communication activities, such as the landcare radio program in Lantapan, have also been implemented.

A landcare trust fund was established in 1999 with a grant of \$US200 000 from the Spanish government through the AECI project to provide perpetual small grants to landcare groups. More than 45 local government units, national government agencies and non-government organisations are supporting landcare activities through direct funding, assistance with livelihood projects, landcare materials and the implementation of landcare ordinances. People from all sectors of the community are getting involved.

Broader support for the future of landcare

Landcare principles and processes have been taken beyond the initial program. For example, the European Union-funded upland development project for southern Mindanao, and the western Mindanao development project (funded by the International Foundation for Agricultural Development) are both applying landcare processes to their activities. Also integrating landcare into its activities is the small farm agribusiness development project (funded by the US Department of Agriculture and managed by Catholic Relief Services), which operates in western, southern and eastern Mindanao

Landcare networks are also being used to research and facilitate innovative new concepts. For example, ICRAF's RUPES (Rewarding Upland Poor for Environmental Services) program is analysing processes such as landcare for their potential to channel resources to the upland poor for environmental services such as watershed protection, biodiversity conservation and landscape amenity.

The Spanish Government, via its AECI agency, continues to provide support to the Philippines Landcare program through funding for additional project work, the ongoing Landcare Trust Fund and the new Landcare Foundation of the Philippines Inc. The Landcare Foundation is of particular interest. Formed in late 2003 to build on the Landcare Trust Fund, it has established a corporate entity with a Board of Trustees (some of whom have provided their stories for this book) and an aim to build landcare throughout the region. It has instituted four main programs for building institutional capacity, supporting sustainable livelihoods, generating and mobilising resources, and promoting landcare to the mainstream government and non-government agencies. Although largely drawing on the primary landcare resources of the Claveria and Lantapan areas, it has the potential to fulfil many of the functions of the landcare agency that Rob Cramb alluded to in the previous story.

Collaborating with the Landcare Foundation to build a robust landcare agency that can maintain and expand landcare activities throughout at least the southern Philippines will be the focus of a new project to be co-funded by ACIAR and AusAID in 2004 to 2007. The project will study the desired features of such an agency, establish it and test its performance in sustaining and scaling up landcare. It will also continue to support existing landcare institutions and activities, and build new landcare programs in other priority sites in Mindanao and the Visayas.

Given landcare's success, there is some confidence in its ability to deliver improved living standards and social institutions, and help communities to provide better environmental stewardship.

Many of the stories in this book have confirmed this, although they acknowledge the challenges that lie ahead. The future for landcare will not be easy or assured. However, the stories have also indicated the huge enthusiasm and diversity of opportunities and support that will help make this a little easier. We hope your stories can join with ours to spread landcare processes for the benefit of people and places in the Philippines and around the world.

The future beneficiaries of landcare.



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