Australian Government
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International Agricultural Research

Landcare in the Philippines

STORIES OF PEOPLE AND PLACES

Edited by Jenni Metcalfe

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Australian Centre for International
Agricultural Research
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- Department of Primary Industries & Fisheries – Queensland Government (DPIF)
- University of Queensland
- Barung Landcare Association
- Department of Natural Resources Mines and Energy – Queensland Government (DNRME)

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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.

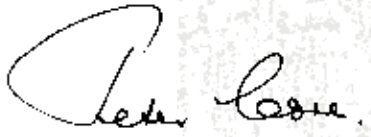
However, as some of the authors in this book explain, the research findings were not always widely adopted. Often the technologies were too expensive or too labour-intensive for poor farmers. Research agencies began to explore new avenues which built on a history of good research and strong relationships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



Peter Core
Director
Australian Centre for International Agricultural Research

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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*.

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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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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 Cooperacion 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 Cooperacion Internacional
Barangay	Each province in the Philippines is divided up into municipalities, which are again divided into local government units called *barangay*
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 *barangay* are a number of smaller villages or hamlets called *sitios,* and within *sitios* are even smaller villages called puroks
SALT	Sloping Agricultural Land Technology
SEARCA	SEAMEO Regional Center for Graduate Study and Research in Agriculture
Sitio	Within a *barangay* are a number of smaller villages or hamlets called *sitios*
UDP	Upland Development Program/Project

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section 1

LANDCARE PIONEERS

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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.

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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.

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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, AECI, 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.

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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.

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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.

A farm in Claveria showing contour hedgerows.

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 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).

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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.

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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.

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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.

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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.

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

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.

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.

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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 AECI, 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.

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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.

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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.

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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.

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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.

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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.

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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?

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- 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.

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

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

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.

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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.

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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.

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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

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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

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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

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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.

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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.

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

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.

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

Farmers in Ned establishing contours with an A-frame.

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.

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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

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Nursery establishment and training have been a feature of the AECI 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.

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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.

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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.

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section 2

FARMERS DRIVE LANDCARE

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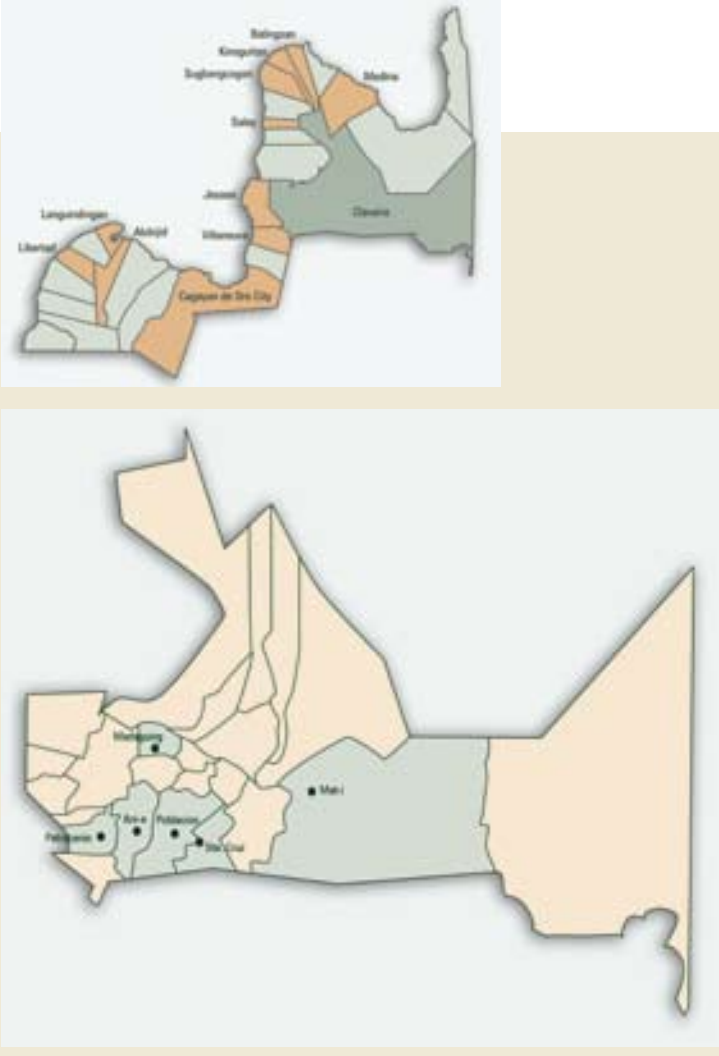
1. FARMERS SPREAD LANDCARE IN CLAVERIA



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 downsream. 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.

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Claveria — a typical landscape.

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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

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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 Janopolan 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.

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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.

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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 Madaguing. 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.

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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 Janopolan 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.

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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."

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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

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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.

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

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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,

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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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.

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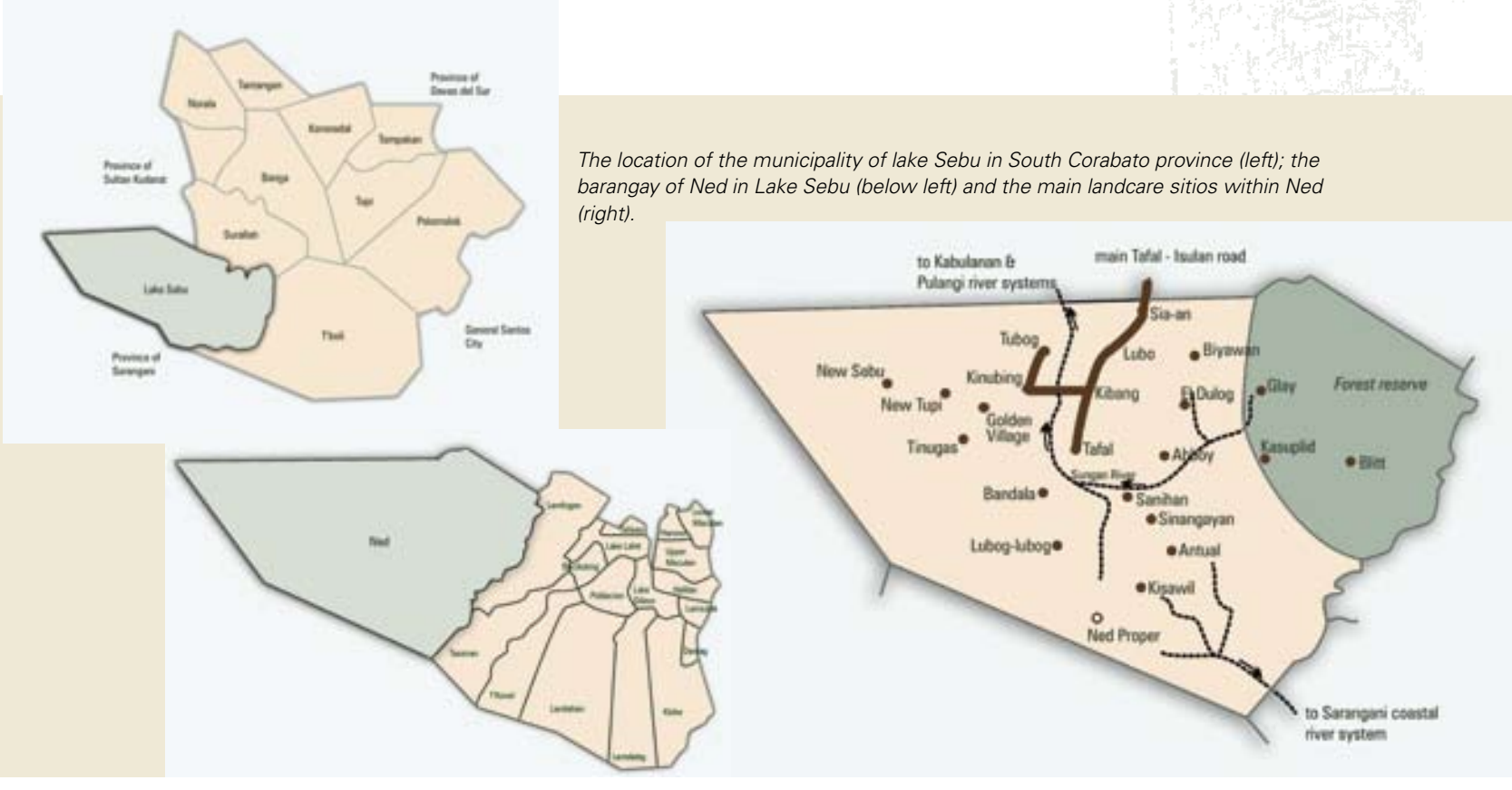
3. LANDCARE BRINGS NED FARMERS TOGETHER

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).

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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.

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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.

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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.

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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.

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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 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.

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.

Landcare farmer facilitators travelling in a remote part of Ned.

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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.

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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 steepland 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.

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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.

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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.

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