

# **LANDCARE IN BUKIDNON**

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# 1 INTRODUCTION

Landcare emerged in the mid-1980s in Australia and in the mid-1990s in the Philippines as an important strategy for developing collective action at the local level to deal with problems of agricultural land degradation. The Landcare approach centres on the formation of community Landcare groups, supported to varying degrees through partnerships with government and non-government agencies. Campbell defines a community Landcare group as “a group of people concerned about land degradation problems, who are interested in working together to do something positive for the long-term health of the land” (1994:31). Such groups identify problems at the local level and mobilise information, community effort, and finances to help improve the management of their soil, water, vegetation, and other natural resources. It is widely held that this is a more effective strategy for achieving adoption of sustainable farming practices than strategies involving government regulation or the top-down transfer of technology.

This report is one of four presenting the results of a participatory evaluation of the Landcare Program in Mindanao in the Southern Philippines. The evaluation study was undertaken in the final phase of a four-year action research project (1999-2003) funded by the Australian Centre for International Agricultural Research (ACIAR). The

focus of this report is the Municipality of Lantapan in the western part of Bukidnon Province in Central Mindanao. Two other reports examine the Landcare Program in Misamis Oriental Province in Northern Mindanao and South Cotabato Province in Southern Mindanao. A fourth report provides a comparative analysis of Landcare in the above three locations. In this introductory chapter the origins of the Philippines Landcare Program and the ACIAR Landcare Project are explained and the rationale and methodology of the evaluation study are outlined.

## THE LANDCARE PROGRAM

### Landcare in Australia and the Philippines

Landcare in Australia had its origins in four pilot community projects funded under the National Soil Conservation Program in 1984 (Cary and Webb 2000). The term “Landcare” itself was used in 1986 to describe a broad community-based program initiated by the Victorian state government to deal with a range of land degradation issues, including soil erosion and salinity. In 1988 the Australian Conservation Foundation and the National Farmers’ Federation proposed a National Land Management Program that would, among other things, provide funding for the establishment and development of community Landcare



*The provinces and core sites of the landcare program in Mindanao*



*Australian Landcare – a landcare group field day at Gympie in south east Queensland*



*Contour hedgerows at Claveria—site of the first Philippines landcare activities*



*A Claveria farm showing extensive use of natural vegetative strips (NVS)*

groups. The proposal received support from the Federal Government, which declared the 1990s the Decade of Landcare and launched the National Landcare Program in 1992. From 1996 the Landcare Program received additional funding from the A\$1.5 billion Natural Heritage Trust. By the end of the decade there were over 4,000 community Landcare groups across Australia, and about 38 per cent of broadacre and dairy farms had a representative who was a Landcare member (Alexander et al. 2000, Cary and Webb 2000). However, Cary and Webb comment that, “while community landcare and the wider landcare movement have raised awareness of resource management issues among the rural community, adoption of more sustainable farming practices has been slow” (2000:2).

Independently of the Australian Landcare Program, Landcare in the Philippines grew out of efforts to promote soil conservation innovations among farmers in the upland municipality of Claveria in Misamis Oriental, Northern Mindanao (Arcenas 2002, Sabio 2002). The Department of Agriculture (DA) began promoting contour hedgerows of shrub legumes in the early 1980s, in the form of the Sloping Agricultural Land Technology (SALT) package developed by the Mindanao Baptist Rural Life Centre (MBRLC). In 1987, the International Rice Research Institute (IRRI) in collaboration with the DA initiated a farmer-to-farmer training program in Claveria to enhance adoption. Six farmers were sent to Cebu for training in the methods of establishing contour hedgerows and, between 1987 and 1989, these six trained another 175 farmers in seven farmer-to-farmer training sessions. By 1992 up to 80 farmers had adopted the technology. The International Centre for Research in Agroforestry (ICRAF) took over the IRRI research site in Claveria in 1993 and proceeded to conduct field trials on contour hedgerow systems.

In 1996 ICRAF identified a low-cost farmer adaptation of contour hedgerows – the use of natural vegetative strips (NVS) as an alternative to the more complex and labour-intensive method of establishing and maintaining hedgerows of shrub legumes or forage grasses (Stark 2000, Mercado et al. 2001, Arcenas 2002, Sabio 2002). An extension team, termed the Contour Hedgerow Extension Team (CHET), comprising a farmer who had adopted NVS, a DA extension agent, and an ICRAF technician, was formed to promote the NVS technology (though eventually the DA ceased to be involved). The CHET worked initially with individual farmers in various *barangay* but the interest was such that group sessions were organised, involving 20-25 participants. At one of these group training sessions in 1996, 20 farmer leaders, at the suggestion of one of the ICRAF facilitators, decided to form a farmer organisation to promote the NVS contour hedgerow system within the



Claveria community. The organisation was named the Claveria Land Care Association (CLCA), the name “Landcare” being taken from a logo painted on the ICRAF vehicle used to transport farmers during field visits.

The CLCA, being a municipal-wide organisation, moved quickly to form local groups and recruit new members at the *barangay* level (chapters) and *sitio* level (sub-chapters) (Mercado et al. 2001, Arcenas 2002, Sabio 2002). ICRAF supported the CLCA in the conduct of training sessions and cross-farm visits, which were also used as a means of recruiting new members and forming chapters and sub-chapters. The recruitment drive initially raised suspicions among local government officials such as *barangay* captains who, as a consequence, were invited to become involved in meetings and other activities of the CLCA. This soon resulted in widespread support from local government units (LGUs), particularly at the *barangay* level, including financial contributions and even legislative backing for adoption of the NVS technology.

Thus the Landcare Program in Claveria had developed into a triangular partnership between the CLCA (a people’s organisation, working to encourage conservation farming among its members), ICRAF (an international non-government organisation, providing technical and logistic support and facilitation), and the LGUs (providing government resources and official support for the Association). As a result of this partnership, by early 2000 the CLCA had grown to include 16 chapters, 105 sub-chapters, and about 800 individual farmer-members. Adoption of NVS technology also increased dramatically, from about 75 ha in 1996 to more than 300 ha in 1999. Arcenas (2002) reports that all partners credit the farmer-to-farmer extension approach of the CLCA as the principal factor in this increased level of interest and adoption.

The success of Landcare in Claveria encouraged ICRAF in 1998 to introduce the approach at its Central Mindanao field site in the Municipality of Lantapan in Bukidnon (Fig. 1.1), and to seek external funding both to support the program and to evaluate its potential as a model for community-based natural resource management throughout the Philippine uplands. The Spanish Agency for International Cooperation (AECI) provided project support for Landcare activities in Claveria and Lantapan (as well as in the Visayas) from 1998. As mentioned above, the Australian Centre for International Agricultural Research (ACIAR) funded an action research project from 1999 to 2003 to augment and help evaluate the Landcare approach in these and other sites.

## The ACIAR Landcare Project

The ACIAR Landcare Project operated in Misamis Oriental (i.e., Claveria and extension sites), Bukidnon (i.e., Lantapan and extension sites), and a third province, South Cotabato in Southern Mindanao. Previous projects implemented in Barangay Ned in South Cotabato (Fig. 1.1) by the Southeast Asian Regional Centre for Agriculture (SEARCA) (including an earlier ACIAR-funded project) had sought to develop and promote conservation farming technologies, partly through the formation of farmer work-groups. Hence this site was readily included in the Landcare Program, providing a further opportunity to test the replicability of the Landcare approach as it had evolved in Claveria.

The principal aim of the ACIAR Landcare Project in the Philippines was to test the applicability of the Landcare approach as a tool to enhance the adoption of conservation practices suited to the needs of upland farming communities in Mindanao. The impact of Landcare implementation was to be evaluated in terms of

- the adoption of conservation practices (and the effect of these practices on natural resources), and
- the relevance of the approach as a model for local and regional extension services.

That is, the project was interested in the adoption of both *Landcare technologies* and *Landcare processes and institutions* (notably the formation and development of Landcare groups and networks).

The project provided resources and training for Landcare facilitators at each of the three sites, including the development of linkages with Landcare in Australia. In addition, the project funded a small monitoring and evaluation (M&E) component. Mid-way through the project it was realised that a more concentrated effort was needed to monitor and evaluate the Landcare approach, particularly through a comparative analysis of the three Landcare programs. Hence additional resources were allocated for an intensive six-month evaluation study in the second half of 2002. This report is one output of that study.

As in Australia (Campbell 1994, Lockie and Vanclay 1997, Cary and Webb 2000), Landcare in the Philippines means many things, making evaluation difficult. It is often taken to refer primarily to the adoption of “Landcare technologies”, especially the NVS version of contour farming promoted by ICRAF in Claveria. A feature of most conceptions of Landcare is the central role of community Landcare groups, as defined in the opening paragraph of this chapter. The wider Landcare Program in the three provinces includes the activities of these local groups and associations, as well as the efforts of local government units and agencies such

as ICRAF and SEARCA to promote Landcare – both Landcare technologies and Landcare groups. Then there is the ACIAR Landcare Project, which has sought to provide support to the on-going Landcare Program, especially in terms of evaluating its impact on adoption of conservation practices and its potential for wider application in Mindanao.

The approach of this evaluation study has been to focus on the Landcare Program in the three provinces, not on the ACIAR Landcare Project as such. In particular, it was agreed by the project partners to concentrate on two key indicators of impact – the adoption of conservation practices and the formation and development of Landcare groups. These impacts were seen to be critical to the achievement of the longer-term outcomes of rural poverty reduction and environmental conservation – in short, sustainable rural livelihoods.

### METHODS

#### The sustainable rural livelihoods framework

A major methodological advance in rural development research in recent years has been the recognition that rural households are not necessarily focused exclusively on increasing crop or livestock production and incomes (let alone on resource conservation), but undertake a range of activities, both on- and off-farm, depending on the resources to which they have access and the livelihood strategies they choose to pursue at any given time. This “sustainable rural livelihoods” approach is now widely advocated as a framework for evaluating and developing policies and programs at the micro level, particularly in terms of poverty reduction (Scoones 1998; Ellis 2000).

A livelihood is a means of earning a living. Within the livelihoods approach, “a livelihood comprises the assets (natural, physical, human, financial, and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household” (Ellis 2000:10). According to Scoones, “a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base” (1998:5).

Scoones outlines the essential components of livelihoods analysis as follows: “The key question to be asked in the analysis of sustainable livelihoods is – Given a particular *context* (of policy setting, politics, history, agroecology and socio-economic conditions), what combination of *livelihood resources* (different types of ‘capital’) result in the ability to follow what combination of *livelihood strategies* (agricultural

intensification [or] extensification, livelihood diversification, migration) with what *outcomes?*” (Scoones 1998: 3).

Ellis (2000) gives particular emphasis to the widespread strategy of rural livelihood diversification, which he defines as “the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living” (Ellis, 2000:15). Diversification includes on-farm diversification (as measured by the range of crop, livestock and other natural resource based activities undertaken) as well as diversification away from own-account farming to include off-farm and non-farm activities in the household’s portfolio.

The potential outcomes of these and other livelihood strategies are grouped by Ellis (2000) into:

- livelihood security (income level, income stability, seasonality, risk);
- environmental sustainability (soil and land quality, water, forests, biodiversity).

The rural livelihoods approach was used in this study as a framework to organise and analyse data relating to the diverse circumstances of farm households in the Landcare Program. It has the advantage that it explicitly places the adoption of Landcare practices and the formation of Landcare groups within the context of the livelihood resources and strategies of farm households and local communities, thus explicitly linking rural development and natural resource management.

#### Sources of data

The report is based on four main sources of data:

- project reports and statistics;
- interviews with project staff and other key informants;
- a questionnaire survey of farm households in one barangay;
- case studies of community Landcare groups.

Given the diversity of farmers’ circumstances both within and between barangay, it was decided to use the household survey to capture the variation in a north-south dimension (i.e., from lower to upper slope within a single barangay), and the case studies to capture the variation in an east-west dimension (i.e., from one end of the municipality to the other).

The barangay selected for the survey was Barangay Sungco, which is centrally located in the municipality and occupies a transect from the left bank of the Manupali River in the south to the buffer zone of the Mt Kitanglad Range Natural Park in the north (see maps in Chapter 2). This barangay

had responded well to the Landcare Program and was less affected by the agribusiness developments elsewhere in the municipality. The survey was conducted in August 2002. The aim was to assess the extent of adoption of conservation farming practices in the barangay and some of the factors associated with adoption, including the role of the Landcare Program. A stratified random sample of 104 households was drawn from all but one sitio in the barangay. Two research assistants administered a one-hour questionnaire to each selected household. Sixty per cent of the respondents had adopted contour farming measures and forty per cent had not. The analysis was largely structured around a comparison between adopters and non-adopters.

Case studies of 12 community Landcare groups were undertaken. The groups were selected to include the diversity of experiences in Lantapan. Hence there were four continuing groups, four disbanded groups, and four groups with particular characteristics (a female-headed group, a pre-existing group that had incorporated Landcare activities, a Landcare group that operated intermittently, and an indigenous community that practised Landcare without forming a Landcare group). A flexible schedule of open-ended questions was used to probe the informants about the development and impacts of their group.

## OUTLINE OF THE REPORT

The report first describes the context in which the Landcare Program was implemented, including the key physical, demographic, agroecological and institutional features of Lantapan Municipality (Chapter 2). The developments and impacts of the Landcare Program up to mid-2002 are described in Chapter 3, along with the perceptions of Landcare staff and municipal officers. The scaling up of Landcare to other parts of Bukidnon is also briefly reviewed. In Chapter 4 the results of the household survey in Barangay Sungco are presented, including factors affecting adoption of conservation practices, the overall extent of adoption, and perceptions of and involvement in Landcare groups. Chapter 5 analyses the 12 case studies of Landcare groups. Chapter 6 summarises the findings of the previous chapters and outlines some preliminary conclusions. Hence this chapter also serves as an executive summary.



*Delia Catacutan, joint author of the report and one of the early facilitators of landcare in Lantapan, talks to a group of farmers during a training workshop in Lantapan*