

## Chapter 7

### Scaling Up Landcare in Malitbog

#### 7.1. Introduction

Landcare was scaled up to the Municipality of Malitbog, Bukidnon Province in 1998, in response to the initial interest of farmers in NVS after a field visit to Claveria. ICRAF saw the opportunity to scale up Landcare directly through the municipal agricultural extension office. The goal was to promote wider use of NVS and agroforestry, and to test the landcare approach in another municipal context with less institutional support from ICRAF. This chapter describes the development of the Landcare Program in Malitbog, the second scaling up site. The sources of data are described and a profile of the municipality of Malitbog is given. The mode of scaling up, management and costs of implementation, and activities and impacts are presented. The perspectives held by different actors are also considered with a discussion of the factors that enhanced or limited the success of Landcare.

#### 7.2. Sources of Data

This case study was based on five main sources of data: (1) five focus groups; (2) farmer interviews; (3) key informant interviews with local government officials and the Landcare facilitator; (4) ICRAF database and project reports; and (5) local government profiles. The Landcare facilitator and technicians selected five landcare groups for focus group discussions (FGD) (see also Appendix 4.1). A total of 110 farmers were interviewed, of whom half were selected from participants in the FGDs and the rest were drawn from a list of landcare members in eight barangays.<sup>1</sup> Of these, 97 were men and 13 were women. The mean age of interviewed farmers was 42 and they were cultivating an average of two hectares, although the average land ownership was four hectares. Seven LGU informants were selected by the Municipal Agricultural Officer (MAO) based on their knowledge and involvement with Landcare activities, including the Vice-Mayor, Municipal Councillor

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<sup>1</sup> Every person with an odd number in the list of Landcare members was sampled. This is one type of systematic random sampling (May 1997).

**Table 7.1** Sources of data and methods of collection

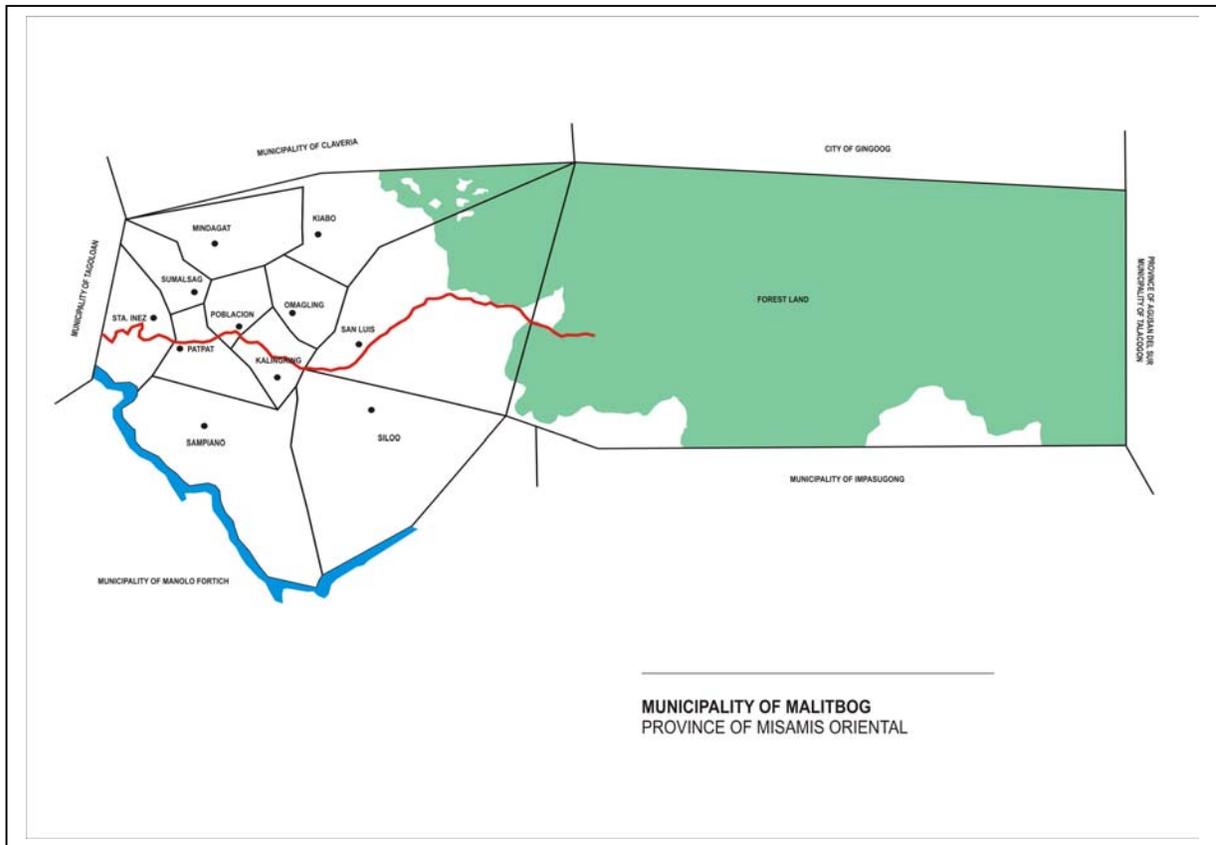
Data Sources	Methods of Data Collection				
	Number of interviewees/ Key informants	Date of Interview	Number of FGD Participants	Date of FGD	Documents Review
Mindagat Landcare	8	31.10.02 to 3.11.02			
Omagling Landcare	18	30.10.02	20	30.10.02 (P.M.)	
Siloo Landcare	6	31.10.02 to 03.11.02			
Kiabo Landcare	11	31.10.02 to 03.11.02	12	11.11.02	
Patpat Landcare	12	30.11.02	19	30.11.02 (A.M)	
Sta. Inez Landcare	6	31.10.02 to 03.11.02			
Kalingking Landcare	6	29.10.02	10	20.10.02	
San Migara Landcare	36	30.10.02 to 03.11.02	13	30.10.02	
<b>Total farmers</b>	<b>112</b>		<b>74</b>		
<b>LGU officials &amp; staff</b>	<b>7</b>	23.10.02 24.10.02			
<b>Facilitator</b>	<b>1</b>				
ICRAF Database & Project Reports					/
LGU Profile					/
<b>Total</b>	<b>120</b>		<b>74*</b>		

\*Half of FGD participants were also interviewed

(*kagawad*), Municipal Planning Officer, Local Government Operations Officer, agricultural technicians and the MAO herself. A total of 157 individuals were involved in the case study. FGDs and interviews were held from October to November 2002. Table 7.1 summarises the data sources and methods of data collection.

### 7.3. The Municipality of Malitbog

Malitbog is an interior municipality bounded on the north by the municipality of Claveria and on the west by Tagoloan, both of which in Misamis Oriental. On the south are the municipalities of Manolo Fortich and Impasugong in Bukidnon Province, while on the east is the municipality of Esperanza in Agusan del Sur Province (Figure 7.1). The municipal centre is about 40 kilometres from Cagayan de Oro City, the regional capital, and 120 kilometers from Malaybaly city, the provincial capital of Bukidnon.



**Figure 7.1** Municipality of Malitbog, Bukidnon, showing barangay boundaries  
 Source: ICRAF database, Claveria

### 7.3.1. Landscape, Population and Economy

Malitbog covers a total land area of 58,185 hectares, which is 7 per cent of the provincial total. Of this, 14 per cent or 7,670 hectares are classified as alienable and disposable (A&D), while 86 per cent or 50,515 hectares are public forestlands. The forestlands are subdivided into protection areas (31,246 hectares) and production areas (19, 269 hectares). It has three categories of vegetative cover, namely, forestlands (58 per cent), cultivated area (28 per cent), and grasslands (14 per cent) (Malitbog Municipal Government 2002).

The terrain includes mountains, gorges, and canyons with slopes ranging from 30 to 50 per cent and above (Malitbog Municipal Government 2002). It lies from 200 metres to 2,400 metres above sea level. There are 14 watershed units in Malitbog, which are tributaries of the Tagoloan and Pulangi rivers. Concessions within the public forestlands include the following: (1) Eco Ranch (FLGA 595), 45 hectares; (2) Timber License Agreement (TLA) of the Bukidnon Forest Incorporated (BFI), 17,260 hectares; (3) Integrated Social Forestry

(ISF), 1,168 hectares; and (5) Community-Based Forest Management Project (CBFMP), 2,245 hectares.

The municipality is divided into 11 barangays. The 1995 census registered a total population of 16,414 with a growth rate of 1.91 per cent and a population density of 28 persons per square kilometre. This makes it a less-densely populated municipality than either Claveria or Lantapan. In-migration started in the early 1970s with the rise of logging operations, and migrant Dumagats (lowlanders) opened up vast areas for agricultural production. However, there was considerable out-migration in the late 1970s when the logging concessions closed, making the barangays inaccessible. Insurgency problems exacerbated out-migration during that period. Bukidnon is the dominant dialect since both Higaonon and Bukidnon tribes are the dominant ethnic groups (70 per cent), followed by migrant groups including Cebuano (8 per cent), Boholano (3 per cent), and Camiguin (2 per cent) (Malitbog Municipal Government 2002). Roman Catholicism is the dominant religion. As of 1990, the literacy rate was recorded at 87 per cent for ages 10 and above.

Agriculture remains the main livelihood of the local residents. Sixty five per cent (4,983 hectares) of the A&D land is devoted to agricultural crop production (Judith Saguinhon pers. comm., 22 September 2004). Crops grown include banana, coconut, corn, root crops, rice, coffee, vegetables, and fruit trees such as lanzones and mango. The major income earner is banana, followed by coconut and corn. The municipality has insufficient production of staple foods like rice, as well as beef, eggs, and chicken meat.

### **7.3.3. Infrastructure and Communication Facilities**

The road network of Malitbog stretches to roughly 234 kilometres. Of this, only 10 kilometres are paved. Jeepney is the main transportation mode from and to Cagayan de Oro City, while hired trucks and modified motorcycles (*habal-habal*) are used to transport farm products. The Bukidnon Second Electric Cooperative II (BUSECO) supplies electricity but only 18 per cent of the households have access to electrification due to high installation cost in areas with scattered households. The LGU water system serves a total of 3,591 households.

#### 7.3.4. Local Governance

Malitbog was created as a fourth class municipality on June 25 1963. In 2000, the LGU received an annual budget of 25,600,000 pesos from central government. By 1997, the LGU had started to incorporate environmental programs in the local development agenda, reflected in a sign at the municipal entrance, which reads: “Plant a tree and be a millionaire”. Apart from personnel services, the LGU had a separate allocation for agricultural and environmental services (Table 7.2). In the 2003 municipal budget, 710,000 pesos were allocated for development projects including soil and water conservation activities. Environmental funds were intended for maintenance of community forests, clean and green programs, and support for the activities of the Environment and Natural Resource Committee (ENRC). In 2002, the LGU developed a Municipal Watershed Management Plan and enacted several environmental policies. It also accredited 22 people’s organisations (POs), which included 11 farmer groups.

**Table 7.2** Annual budget for agriculture and environmental management services, 1999-2003

Year	Agricultural Services (Philippine Peso)	Environmental Management Services (Philippine Peso)
1999	2,590,000	212,918
2000	Na	249,000
2001	Na	285,000
2002	5,845,000	285,000
2003	7,045,000	405,000

Source: Municipal Annual Accomplishment Reports

Na= data not available

#### 7.3.5. Local Institutions

The LGU and the Department of Education are the only permanent institutions in Malitbog. Farmers rely on cooperatives, traders, and financiers to finance crop production since there are no local banks or formal financing institutions available in the municipality. However, Malitbog has hosted several national and international projects. Similar to Lantapan, the Pilot Philippines Australia Extension Project (PPAEP) implemented its program on capacity building and extension from 1993 to 1996. From 1997 to 2003, the International Centre for Tropical Agriculture (CIAT) funded the Forages for Smallholders Project (FSP). The Local Government Support Project (LGSP) of the Canadian International Development Agency (CIDA) also assisted the LGU in developing its Municipal Watershed Management Plan in 2002.

#### **7.4. Background and Mode of Scaling Up**

In 1997, the municipal extension office in Malitbog had started to implement the Forages for Smallholders Project (FSP) funded by CIAT. The assigned technician of the FSP heard about ICRAF's on-going research on NVS and organised some farmers to visit ICRAF's work in Claveria. The goal was to expose the farmers to technical options for improved forage production. The positive response of farmers to NVS resulted in more organised cross-site visits by the municipal agricultural office. With this, ICRAF was encouraged to scale up the Landcare Program to Malitbog.

By early 1998, the ICRAF team in Claveria, comprising the Site Coordinator and two Landcare facilitators, headed to Malitbog to conduct a rapid appraisal and to discuss with the Municipal Agricultural Officer (MAO) the potential application of Landcare in Malitbog. For ICRAF's part, there was an opportunity to scale up Landcare directly through the municipal agricultural office. This was brought to the attention of the Mayor, who welcomed the idea. There was an informal agreement to pilot three barangays bordering Claveria, but this was shortly interrupted by the local government elections in May 1998. Discussions were pursued in the middle of 1998 once the newly elected Mayor, who was the wife of the former Mayor, had already settled in. Unlike in Lantapan, the political transition in Malitbog did not affect Landcare, as the new Mayor continued to pursue the programs of the former.

#### **7.5. Structure and Management of the Landcare Program**

ICRAF's site office in Claveria assumed administrative responsibility for the Landcare Program in Malitbog. A Landcare Facilitator who had worked with ICRAF since 1996 was assigned to Malitbog. On ICRAF's instruction, he was to work closely with technicians and barangay officials. The extension office, on the other hand, was expected to provide support to the Landcare facilitator, particularly in organising and conducting meetings and training sessions. This arrangement was informally agreed in that there was no memorandum of understanding (MOU) made to formalise the partnership. Confidence was easily established between the LGU and ICRAF due to mutual trust and respect of both parties.

The Landcare Facilitator established a good working relationship with the extension team by reporting weekly to the agricultural extension office. Later on, a volunteer facilitator, who was a graduate of Misamis Oriental College of Agricultural Technology (MOSCAT) in Claveria and a resident of Malitbog, joined the Landcare facilitator for 10 months.

Towards the last quarter of 1998, the Landcare Facilitator and technicians had begun to conduct training sessions on soil and water conservation in three pilot barangays, Kalingking, Mindagat, and San Luis. In February 1999, an orientation seminar on Landcare was organised by the MAO for other barangay captains, municipal officials, and technicians, followed by a consultation meeting with the Municipal Development Council (MDC) in August 1999. It was observed that participation of the agricultural technicians was more pronounced in Malitbog than in Claveria. The technicians involved in the FSP managed to combine their activities with Landcare, as both were seen to complement each other. This was possible due to the commitment and leadership of the MAO. She was hardworking and supportive of new innovations, and was actively involved with previous projects such as the PPAEP. She also had a good working relationship with the Mayor.

## **7.6. Activities and Impacts**

Most of the activities in Malitbog were patterned on Claveria. Cross-farm visits were the dominant dissemination strategy, followed by slide shows. The Landcare facilitator recorded a total of 43 cross-farm visits and 16 slide shows conducted from 1998 to 2002. Similar to Claveria and Lantapan, barangay captains and barangay *kagawads* who were chairing the committees on agriculture and environment were the main contacts for the Landcare facilitator and technicians. Group formation was quicker, usually following immediately after a training session.

### **7.6.1. Training Sessions and Cross-Farm Visits**

Cross-farm visits were normally part of a training session. Slide shows were also conducted in those barangays with electricity, while cross-farm visits were found to be more practical in remote areas with no electricity. From 1998 to 2002, 59 training sessions were implemented, including NVS establishment, asexual propagation, seed sowing, propagation of indigenous tree species, goat production, and hat and mat weaving. The

peak of training was in 2000 with 33 sessions held, of which 23 sessions (70 per cent) were on asexual propagation and seedling production of timber and fruit trees.

Just as in Claveria and Lantapan, the training sessions focused on practical hands-on exercises rather than classroom-type lectures. A cross-farm visit to Claveria was included in every training event, which was not the case in Lantapan because of its distance from Claveria. The facilitator and technicians organised the training sessions with support from barangay officials. The municipal government usually shouldered the expense for meals during training and cross-farm visits, while ICRAF provided transportation. A Landcare jeepney would normally transport the farmers from remote sitios to attend the cross-farm visits in Claveria.

#### **7.6.2. Group Formation and Development**

Technicians and barangay officials were actively involved in forming groups, in organising schedules, and in preparing meetings in the pilot barangays. Shortly after the formation of landcare groups in these barangays, the MAO helped in federating these groups at the municipal level, and the Malitbog Landcare Association (MLCA) was organised in December 1998. However, the MLCA was not registered with the Securities and Exchange Commission (SEC) until 2003. Even so, it functioned as an umbrella organisation for landcare chapters at the barangay level and sub-chapters at the sitio level, following the Claveria model.

The initial success of Landcare in the pilot barangays encouraged other barangay officials and technicians to launch Landcare in their respective barangays. By 2003, eight out of 11 barangays had participated the Landcare Program. The same activities were implemented in the new barangays. Fifty-one sitio landcare groups or sub-chapters were formed from 1998 to 2002 with a total membership of 958 farmers. Rapid group formation was observed from 1999 to 2000 but at a declining rate. This followed a similar pattern to training sessions and cross-farm visits. The Facilitator estimated that about 35 per cent of the groups had become inactive within a year of their formation, thus only 65 per cent of the total groups formed had remained functional in 2003. As in Claveria, the Landcare facilitator encouraged the groups to construct a multi-purpose nursery shed. In 1999, the

LGU initiated a farmers' competition for conservation farming, similar to the *paligsahan* in Claveria. From 2001, a total of seven groups had received small project grants from the Landcare Trust Fund that was coordinated from the ICRAF office in Claveria.

The structure of the MLCA was similar to that of the Claveria Landcare Association (CLCA). It linked the landcare sub-chapters to the LGU by representing them in municipal meetings with technicians and ICRAF. It also adopted the CLCA's approach in conducting monthly meetings, rotating the location and sponsorship of the monthly meetings in the barangays. The objective was the same, to build friendship and encourage interaction among farmers from different barangays. The barangay government sponsored the meals and the officials helped to prepare food, while ICRAF provided transportation for farmers attending the meetings. Just as in Claveria, the MLCA meetings engendered cooperation and improved the relationship of farmers, technicians, LGU officials, and ICRAF.

The monthly meetings were almost like an activity of barangay officials.<sup>2</sup> These meetings were run formally using parliamentary procedures, a standard procedure used by government officials in running formal meetings. In some barangays, this practice was decentralised to the sitio level. Monthly meetings of sub-chapters were also rotated around the sitios and the barangay government shared the costs of food. An interviewed farmer in Omagling said, "We were always excited with the meetings, because these were a social event for us, and we were happy to entertain our visitors".<sup>3</sup>

### **7.6.3. Impact of Activities on Technology Adoption**

ICRAF records show that six farmers had adopted contour hedgerows in the nine years prior to Landcare (1988-1997). A year after Landcare had started in 1998, 123 farmers had adopted NVS. As training for seedling production increased, the number of fruit and timber trees planted by farmers reached 27,266 in 2003. Farmers planted trees on farms as NVS enrichment, live fences along farm boundaries, randomly mixed with annual crops, or

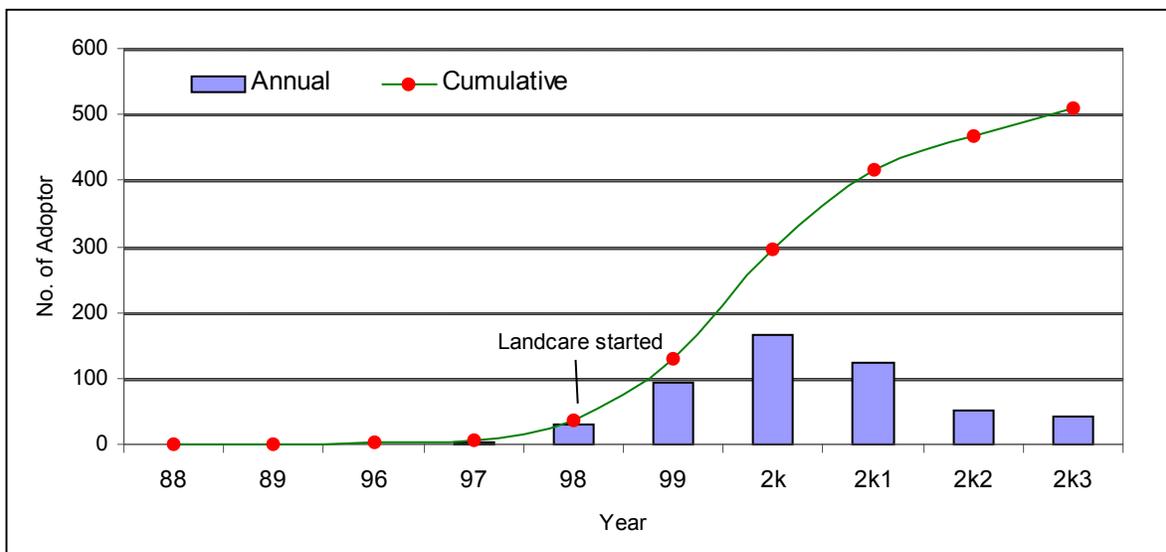
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<sup>2</sup> I observed two monthly meetings of the MLCA during the fieldwork in October and December 2002. Snacks and lunch were served and everyone appeared to be in a festive mood.

<sup>3</sup> Interview with Luciano Esconde, October 10, 2002, Omagling, Malitbog.

in small woodlots. Trees planted included *Eucalyptus spp.* and *Acacia spp.*, as well as durian, lanzones, and jackfruit. Again, this process was described as a step-wise adoption of agroforestry.

By 2003, the total number of farmers who had adopted NVS and agroforestry practices reached 510 (Figure 7.2), 99 per cent of whom had adopted during the Landcare Program, at the rate of 100 adopters per year. Similar to Claveria and Lantapan, adoption followed an S-shaped adoption curve, with an increasing rate of adoption from 1998 to 2000 and declining rate from 2001. The total number of adopters was equivalent to 16 per cent of farming households (3,274). Correspondingly, the area applied with conservation technologies increased to 390 hectares in late 2003 (8 barangays), equivalent to eight per cent of the total cultivated area in Malitbog.



**Figure 7.2** Annual and cumulative adoption of NVS and agroforestry practices, 1996-2003  
Source: ICRAF database, Claveria

In conjunction with the FSP, farmers also planted forage grasses and legumes in between the rows of trees. The forage grasses were used for feeding farm animals, particularly cattle, which were provided as part of the animal dispersal program of the LGU. As mentioned in the previous chapters, the effectiveness of NVS and agroforestry practices in terms of reducing soil erosion and enhancing productivity has been established from research and farmers' testimonies, but since the area applied with these technologies was

less than 10 per cent of the total cultivated area, the impacts on a landscape scale in Malitbog may be less significant.

### **7.7. Issues and Challenges Met**

Although the MAO reported that the total cropped area was 65 per cent of A&D lands, it was possible that many farmers were also cultivating public lands under the ISF or CBFM scheme. For instance, the San Migara landcare group was located in San Luis, the largest barangay with the largest area covered by the CBFM project. In 1999, there was tension between farmers and the management of BFI, which was planning to expand its concession to cover areas previously cultivated by farmers in public forestlands. BFI is a subsidiary of the Philippine Natural Resources Development Corporation, which was contracted to implement an industrial forest plantation in Bukidnon Province funded by the Government of New Zealand in 1990. The objective was to establish a 21,000 hectare plantation forest to provide an alternative wood resource to the depleting indigenous timber supply, and to remove exploitation pressures from remaining natural resources (Philcom 2003). At the time of this study, however, the expansion plan had not materialised, and the tension between BFI and farmers in the targeted area had calmed down.

This raised some concerns with an ICRAF senior staff member as to whether conservation technologies and formation of landcare groups were relevant to the conditions of Malitbog, and whether soil erosion was the real issue among farmers.<sup>4</sup> The staff member had an impression that Landcare may have been pushed too hard in communities that had priorities other than soil conservation. In this case tenure security negotiations may have been the key issue. Furthermore, the staff member emphasised the importance of knowing the relevance of Landcare from the perspective of farmers, rather than from the perspective of external agencies, and raised an important issue as to whether Landcare could be a tenure negotiation mechanism, given that farmers had insecure land rights. Because of this, the ICRAF program review team in 2002 made a comment that site characterisation and diagnosis should be done to reflect local realities.

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<sup>4</sup> Based on feedback from Meine Van-Noordwijk after a field visit to Malitbog in 2001.

However, the Landcare Facilitator argued that while land tenure was an important issue, soil conservation was a major concern because of low production and income.<sup>5</sup> Farmers were said to be keener on improving production for food and income than on negotiating about land tenure.<sup>6</sup>

The issue of low production and income was also associated with farm size and the availability of labour. Farmers typically cultivated small farms of 0.5-2.0 hectares, although they may have owned larger tracts of land. This was common in rural areas where farmers lacked draught animals and farm tools to cultivate all their land. Farmers complained of a lack of farm labour, especially those with younger children. It was also common for the older children to seek employment in neighbouring areas or in the city, leaving their parents on the farm. Hence, labour, capital, and production issues were central, whereas land tenure had receded in importance.

On the operational level, the Facilitator disclosed that mobility and maintaining effective communication was a continuing challenge because the households were scattered in large barangays. Although technicians and barangay officials gave support, the major task of facilitating and coordinating the activities remained with the ICRAF Landcare Facilitator.

## **7.8. Perspectives of Different Actors**

### **7.8.1. Farmers' Perspectives of Landcare**

Generally, farmers saw the relevance of Landcare to the biophysical conditions of Malitbog, where much of the land was steeply sloping. The most common perception was related to the relevance of NVS in minimising soil erosion, protecting the soil from degradation, and restoring denuded land. Two interviewed farmers in Kalingking mentioned that the name "Landcare" speaks for itself, while seven farmers in Kiabo said that Landcare was relevant to educating farmers about sustainable agriculture. Responses

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<sup>5</sup> Interview with Rionell Ellacer, 3 November 2003, ICRAF Office, Claveria.

<sup>6</sup> It is true that, in some contexts, the tenure situation can be serious enough to create conflict, as with the tribal groups in the Cordillera region in northern Luzon. The tribes in the Cordillera region fought with government authorities as their livelihood and control of ancestral land was threatened with the establishment of government development projects and commercial mining activities.

such as “increasing farm production and income” and “improving living conditions” also suggest the economic relevance of Landcare. Another set of perceptions had a more social orientation, that is, Landcare was about “taking care of the land”, and a “community improvement program” focusing on farmers. Thus, farmers’ responses encapsulated the environmental, economic, and social aspects of Landcare.

The results of FGDs and interviews did not point to Landcare as a mechanism for tenure negotiations. For instance, farmers in San Migara did not mention land tenure, although some questions were slanted towards tenure issues. As mentioned earlier, this could be because land tenure issues had not been serious enough to cause eviction of farmers in the area. Nonetheless, land tenure could have been an underlying concern even if farmers failed to mention it, and technology adoption could be partly motivated by a desire to strengthen implicit land claims.

Initially, farmers’ expectations from Landcare were more to do with learning the promoted technologies to reduce soil erosion, improve soil fertility, increase production and income, and improve living conditions. More practically, farmers also expected to receive free planting materials for fruit trees and forage grasses, and livelihood projects. The interest in tree farming could be partly attributed to the tree planting campaign of the municipal government before Landcare had started in 1998. Seventy eight per cent of the interviewed farmers concurred with the focus groups that they were confident to meet these expectations as they had already adopted the technologies, had planted trees, forages and legumes, and had acquired working animals and other planting materials. The others (22 per cent) were new members of landcare groups at the time of interview, but they also expressed similar expectations. Farmers believed that they were showing a good example in the community and had helped to maintain a healthy environment, indicating that they had developed a sense of pride in what they could do for the greater public good.

Table 7.3 summarises the impacts of Landcare activities as identified by farmers in interviews and FGDs. The benefits identified by farmers were varied, but the most dominant benefit was learning new technologies acquired through training and cross-farm visits, suggesting an improvement in farmers’ human capital. Some farmers also identified

**Table 7.3** Impacts of Landcare activities as identified by farmers in Malitbog

<b>Impacts of Landcare activities to</b>			
<b>Farms</b>	<b>Farmer</b>	<b>Family</b>	<b>Community</b>
Reduced soil erosion	Made farm work easier	Increased income	Healthy environment
Restored/Improved soil fertility	Gained new farming knowledge and skills	Supported family needs	Community development
Reduced farm inputs	Improved farming system	Improved living conditions	Happy community
Increased production	Self-fulfilment	Happy and healthy family	Supported the LGU's clean and green and watershed management program
	Improved personal relations	Education for children	Enhanced community cooperation
			Provided education to people
			Erosion-free farms

reduction of fertiliser input as a benefit, but the more direct benefits were the provision of free transportation during meetings and cross-farm visits, and the loan program of the LGU and the Landcare Trust Fund.

In interviews and FGDs, farmers were asked to identify the personal, group and community factors that enhanced or constrained the success of Landcare. The majority of interviewed farmers were personally encouraged to join a landcare group by the promoted technologies, consistent with farmers' responses in the focus groups. This was followed by effective facilitation and their perceptions of economic benefits. Interestingly, more than half of interviewed farmers had no personal constraints to participating in Landcare, even though many of them lived in remote sitios, while 30 per cent reported that poverty or lack of financial resources limited their involvement, as they needed to augment their farm income by working as farm labourers, leaving them with little time to participate in landcare activities. This explained why conflict of schedules between Landcare and personal activities was also identified as a limiting factor.

For 45 per cent of interviewees, unity and cooperation, regular meetings, the promoted technologies, effective leadership, effective facilitation, and systematic follow-up by technicians were seen to enhance the success of landcare groups. Conversely, the lack of cooperation, poor attendance at meetings, and ineffective leadership constrained success. Some farmers also mentioned that lack of financial resources to support activities

constrained group success, in that reliance on goodwill and personal contributions might not be sufficient. Farmers expressed the view that, although “giving” and “sharing” were deeply rooted in their culture, financial support could also make a difference. This issue was also apparent in Claveria.

At the community level, farmers identified that the success of Landcare was enhanced by (1) the support provided by the LGU and ICRAF, (2) the involvement of technicians, (3) the efforts of the MLCA, (4) the promoted technologies, and (5) cooperation. In addition, provision of livelihood projects (farm production assistance) by the LGU was said to promote success, followed by continuous training, facilitation, and moral support from local leaders. Farmers were also asked what would they like to continue doing. The dominant response was to continue learning new technologies through training and cross-farm visits, but regular facilitation from ICRAF and technicians, monthly meetings, planting of trees and forage grasses, and group formation were also mentioned.

In sum, the promoted technologies, facilitation, group unity, cooperation and leadership, and support from the LGU and ICRAF were seen by farmers to be the critical factors for success, suggesting that bonding social capital was as important as the desired external support. This was an expression of farmers’ recognition of their own social capital in the midst of poverty and isolation, in line with Narayan et al.’s (2000) findings that social capital is a homegrown solution among indigenous communities that have limited access to external resources.

### **7.8.2. LGU Perspectives of Landcare**

The LGU’s perceptions of Landcare were similar to those of farmers. These were (1) appropriate technologies, (2) soil erosion control, (3) improvement of soil fertility, and (4) caring for the land. Landcare was relevant to Malitbog because 90 per cent of households were dependent on farming and were cultivating steep land subject to severe erosion. In addition, the LGU informants saw the relevance of Landcare to the LGU itself, as it helped to implement their extension and watershed management program, which could have been given lower priority. Relatedly, the LGU’s expectations had more to do with what

Landcare could offer to help implement its watershed management program, and to advocate for local environmental management.

Nearly all interviewed technicians agreed that Landcare was an easy concept to assimilate but, given their regular tasks and limited travel funds, it was somewhat of a burden. Some concerns were raised that despite the support of the municipal government for Landcare, there was no specific budget allocated to fund Landcare activities. The 2003 annual investment plan contained a sizeable budget for agricultural services, including training in soil and conservation technologies, but this budget could not be directly accessed to fund Landcare activities. The use of these funds for Landcare activities needed to be negotiated from time to time. However, the technicians felt that, in general, the Landcare Program enabled the LGU to improve its extension program.

According to the LGU informants, the Landcare Program was addressing important issues that farmers were facing, including accelerated soil erosion, declining soil fertility, lack of social activities, and poverty. Institutionally, the LGU benefited in terms of agricultural extension and watershed management. The LGU informants were also seeing broader community benefits including improved soil fertility, increased environmental awareness, and improved human capital. At the time of fieldwork, the implementation of Municipal Ordinance No. 9 was underway through the LGU's loan program for corn production, where adopters of conservation technologies were given priority assistance. This Ordinance, that was passed in 1999 promoted the adoption of soil and water conservation through incentives in the form of technical assistance and livelihood support to adopters of conservation technologies.

The LGU informants felt that both the poor economic conditions of the people (90 per cent below the poverty threshold) and government decentralisation promoted success. The first point suggests an optimistic view of the poor, in line with the view of Narayan et al. (2000) that poverty engenders group participation because of the recognition that collective action can increase the voice of the poor in demanding effective public service and participation in decision-making. Additionally, the LGU's support at the municipal and barangay levels was seen as crucial to the success of Landcare, similar to farmers' response. Sustained

LGU support was seen to be in terms of policy, resource allocation, and monitoring. The barriers to further scaling up were seen to be in the inaccessibility of remote sitios, limitations in the current funding for training, and the unfavourable attitude of some farmers who were uncooperative because of the “dole out” syndrome promoted by government.

Ultimately, the LGU informants were convinced that a Landcare-type program would be appropriate for upland watershed development since it was a low-cost approach, which fostered greater community participation. They proposed three ways to ensure the sustainability of Landcare. First, incentives should be provided for participation and technology adoption, such as awards and recognition, livelihood assistance, extension services, and training. Second, funding for Landcare activities should be secured and continuously provided. Third, capacity-building programs should be implemented to improve the decision-making and planning skills of local officials, as well as the technical and social skills of technicians.

#### **7.9. Costs of Implementing the Landcare Program**

The municipal government incurred the costs for training and the technicians’ participation, while barangay governments shouldered the cost of food during meetings and other activities. On average, ICRAF’s direct annual costs amounted to 334,500 pesos, covering the salaries of the Landcare Facilitator (156,000 pesos), operating expenses, including petrol (89,000 pesos), and miscellaneous expenses (75,000 pesos). On the part of the LGU, the MAO reported that eight technicians were involved in Landcare activities. The technicians allocated two days per week for Landcare-related activities. The total cost of staff time (salary of the technicians) was estimated to be 384,000 pesos per year. The LGU’s budget for training and support for nursery activities was 60,000 pesos per year. In sum, the annual total costs incurred by the municipal government for Landcare were 444,000 pesos. The contribution of barangay governments for meals during meetings and support for other activities were not accounted, but were perceived substantial.

The annual direct costs incurred by ICRAF for Landcare in Malitbog was 14 per cent lower than the LGU's costs. Hence, from a financial perspective, the LGU had the capacity to implement a Landcare Program on its own, just as in Lantapan and Claveria. This view was supported by the majority of LGU informants who found the Landcare Program affordable given the current financial capacity of the LGU. The cost incurred by the LGU for Landcare was equivalent to seven per cent of the MAO's average annual budget (5,160,000 pesos) (see also Table 7.2). Thus at the minimum, the LGU needed to fund an additional seven per cent of the MAO's current budget to implement a Landcare Program. However, additional investments would be needed to train the technicians to acquire additional skills in relevant technologies, facilitation skills, participatory approaches, characterisation and diagnosis, and monitoring. Training for these skills however could not be easily accessed locally. The LGU would need to link up with external agencies, perhaps at the regional or national level to help them implement these trainings. These types of skills training and capacity building would be more important in scaling up the Landcare Program more widely. Investments to develop popularised extension materials such as farming guides and slide shows were also recommended.

### **7.10. Discussion**

The experience in Malitbog was seen by ICRAF as a second mode of scaling up, a low-input mode characterised by "integration" in the agricultural extension program. Involvement of technicians and LGU funding for meetings, training and cross-farm visits were key requirements in this mode. In the scaling up literature, "integration" is a commonly used strategy because, when carefully done, it promotes local ownership and engenders sustainability.

In retrospect, ICRAF was being responsive to the initial interest of farmers in NVS. ICRAF assumed that the expressed interest of farmers indicated a genuine demand and the perceived relevance of the Landcare Program, sufficient to obviate the need for a more detailed diagnosis and site characterisation. For ICRAF's part, NVS and agroforestry were relevant to the biophysical conditions of Malitbog. For the LGU, the Landcare Program could complement their extension and watershed management programs, and it also saw the relevance of Landcare to the majority of households farming on steep lands. The issue

of relevance is central in the scaling up literature, emphasising that a program should be relevant if it is to be scaled up successfully. In this case, scaling up was in the form of an “endogenous replication”, as described in Chapter 2, where the demand came from below and the partnership was informally established.

The political transition in Malitbog did not affect the implementation of Landcare since the transfer of power was continuously held in the hands of one political family. This carryover of political power was favourable to the Landcare Program, as in the case of Claveria. The political and administrative environments were stable with LGU officials continuously providing support to the Landcare Program. Thus, the three-way partnership between ICRAF, the LGU, and the farmers was more easily established than in Lantapan. The LGU officials also demonstrated a progressive attitude towards environmental governance, as seen in their budget for environmental programs (Table 7.2) and in formulating environmental policies. The involvement of the municipal agricultural extension team was in fact stronger in Malitbog than in Claveria. The MAO, who was dedicated and a strong advocate of Landcare, played a key role in building the LGU and ICRAF partnership. As discussed in Chapter 3, the attitudes and performance of government personnel are problematic since the government is unable to provide the pay and incentives to encourage improved performance. Hence, dedicated government personnel like the MAO of Malitbog are usually scarce. This case shows how the behaviour of individual actors within a given social structure can strongly influence outcomes including emergent structures.

The activities in Malitbog followed a similar pattern to Claveria, implemented in much the same manner as in Lantapan. Training sessions were almost the same. Rapid group formation was observed from 1999 to 2000 but at a declining rate. This followed a similar pattern to training sessions and cross-farm visits. Fifty-one landcare groups had been formed with a membership of 958 farmers. There had been no systematic assessment on the status of landcare groups, but the Landcare facilitator, based on his personal observations, estimated that about 65 per cent of the total groups formed had remained functional until 2003.

Clearly, the most practical benefit from Landcare was learning conservation technologies. The adoption data showed that farmers' uptake of technologies primarily occurred during the Landcare Program, rather than in the previous years of project intervention. The number of adopters increased from six farmers in 1997 to 510 in the middle of 2003. Impacts of adoption at the farm level were reduced soil erosion, gradual restoration of soil fertility, and improvement of production and income, but landscape scale impacts could not yet be demonstrated. The LGU informants were confident that the Landcare Program was able to address the issues of accelerated soil erosion, declining soil fertility, and poverty. Institutionally, they perceived that the LGU had benefited from Landcare in the area of agricultural extension and improved community participation in environmental governance. The MLCA helped to enhance the bonding social capital of landcare groups by organising and facilitating meetings at the sitio and barangay levels and was effective in building bridging social capital between the LGU and landcare groups. In sum, the immediate benefit from Landcare was improving human and social capital to implement conservation technologies and improve farming and livelihoods. Within a five-year timeframe (1998-2003) and considering the relatively low level of investment from an external agency (ICRAF), the impacts of Landcare were significant compared to previous projects that also promoted conservation technologies, such as the PPAEP.

The short history of research and development interventions in Malitbog, starting only in 1993, suggests that farmers may have been lacking in knowledge of new farming technologies and keen to learn. This helped to explain why farmers predominantly expected to learn new technologies from training and cross-farm visits, although their perceptions of Landcare were much broader, viewing it as a program that provided for a better future. Relatedly, farmers were personally encouraged to participate in Landcare by their own interest to learn the promoted technologies, although the facilitators and technicians convinced them to join a landcare group, which was also the case in Claveria. The consistency in farmers' responses could be explained in two ways. First, farmers were innately interested and were in dire need of new technologies, but the remoteness and poor accessibility of many sitios had isolated them from information and extension services. In poor, remote communities, people learn to innovate and change strategies in order to survive, but any new idea is generally welcomed (Narayan et al. 2000). In this case,

farmers found the opportunity to learn new technologies from the Landcare Program. Second, farmers' perceptions of the relevance of a promoted technology or innovation were central to their decision-making. As Rogers (1995) points out, the characteristics of an innovation determine the rate of adoption. Clearly, farmers recognised the relative advantage of the promoted technologies, hence were keen to learn how to implement them.

Interestingly, more than half of interviewed farmers felt no personal constraints to participating in Landcare activities, even though many of them lived in remote sitios, indicating a strong social bond. Most of the population (70 per cent) were members of the Higaonon and Bukidnon tribes. Deeply rooted in local culture, indigenous communities are often richer in solidarity and support mechanisms (Narayan et al. 2000; Uphoff et al. 1998). However, for others, poverty limited their involvement due to conflicting schedules between meetings and farming activities. Farmers considered group unity, cooperation, and leadership, and effective communication as critical success factors, suggesting that farmers recognised the importance of their own social solidarity. Conversely, the lack of cooperation and ineffective leadership were seen to limit success. Similar to individual constraints, farmers in groups also mentioned that lack of financial resources to support their activities was a limiting factor, suggesting the need to generate funding as a necessary foundation for sustainability. At the community level, support from the LGU and ICRAF, the MLCA efforts, the promoted technologies, and cooperation of members were considered as important factors for success.

Although farmers had a broad perspective of Landcare as a program providing for a better future, their perceptions of the relevance of Landcare, their expectations and the benefits gained, were all centred on the promoted technologies, implying the significant role of these technologies in the Landcare Program. However, the mere existence of these technologies did not ensure access to them. Farmers also considered facilitation from a Landcare facilitator and technicians and LGU support as critical. Thus the concerted efforts of the LGU and ICRAF promoted farmers' access to these technologies.

The LGU informants saw the poor economic conditions of the people and decentralised governance as the basic context in which Landcare flourished. This was similar to the view

of LGU informants in Claveria. The LGU informants agreed with farmers that support at the municipal and barangay levels were important. It was felt that policy support, financial allocation for training and other activities, and monitoring should be vigorously pursued to sustain the Landcare Program.

In summing up, the promoted technologies, the support provided by ICRAF and the LGU, the MLCA efforts, group cooperation, and group leadership were all important for the success of the Landcare Program. These factors were entrenched in the landcare approach, and were similar to the critical factors identified by farmers in Claveria and Lantapan.

For ICRAF, the Landcare Program in Malitbog was a low-input mode of scaling up, with fewer requirements from the sponsoring agency. From a purely financial perspective, the LGU had the capacity to implement the Landcare Program on its own, given that ICRAF's annual direct costs for Landcare in Malitbog was only a small proportion of the MAO's average annual budget (seven per cent).

As in Lantapan, the whole idea of the landcare approach was scaled up in Malitbog. Most of the activities were patterned after Claveria and were easily replicated because the conditions in Malitbog were closer to those in Claveria, especially in terms of political conditions. Thus, the landcare triangle as modelled in Claveria was more easily reproduced in Malitbog than in Lantapan.

### **7.11. Conclusion**

The Landcare Program was adopted in Malitbog, despite the low level of human and financial input from ICRAF, because the political situation was stable and the LGU through its agricultural extension office was at the forefront, substituting for the physical presence of ICRAF. However, the farmers' personal desire to learn new technologies due to a limited range of economic activities, and their existing social bonds were underlying factors for success. It could be said that Malitbog was a relatively pristine area in terms of project intervention, hence bridging social capital expressed in terms of organised networks and groups was relatively low compared to Claveria and Lantapan, but bonding social capital was high as farmers were culturally homogeneous and remotely located. In this case, the

initial stock of bonding social capital and the lack of bridging social capital were the basis for the collective action seen in Landcare, in that farmers were in search of social networks to access outside support.

Thus, the adoptability of the promoted technologies, the initial stock of social capital, the institutional support provided by the LGU, and the limited facilitation provided by ICRAF, were all critical to scaling up the Landcare Program in Malitbog.