

Chapter 8

Scaling Up Landcare in Manolo Fortich

8.1. Introduction

This chapter describes the implementation and adaptation of Landcare in the Municipality of Manolo Fortich, Bukidnon, the third scaling up site. Landcare was introduced to the municipal government in 1999, and was quickly adopted in the municipal Natural Resources Management and Development Plan (NRMDP). The municipal government initiated the Landcare Program in 2000, with minimal institutional and technical support from ICRAF. In this chapter, the sources of data are presented and a profile of Manolo Fortich is given. The mode of scaling up, activities and impacts, and issues encountered are discussed. The perspectives of different actors are also considered, followed by a discussion on expectations, benefits gained, and the factors that enhanced or limit the success of Landcare in Manolo Fortich.

8.2. Sources of Data

This case study was based on farmer interviews, key informant interviews, focus group discussions (FGDs), participant observation, and review of documentary evidence from ICRAF and the Local Government Unit (LGU). Mantibugao and Sankan landcare groups were selected as focus groups due to their accessibility from the main highway (see also Appendix 4.1). There were 12 farmers in the first focus group and 13 in the second. The total number of individually interviewed farmers was 38, of which 13 were also FGD participants and 25 were drawn from a list of landcare members in five barangays. Of the interviewed farmers, 23 were men and 15 were women. Their mean age was 45. Forty-eight per cent of interviewed farmers were members of three local organisations including Landcare while the remainder belonged to three or four other organisations (e.g., cooperatives). On average farmers cultivated one hectare, although the average landholding was two hectares. The ICRAF Landcare Facilitator identified five LGU informants based on their knowledge and involvement with Landcare, including the Municipal Planning Officer, the Municipal Agricultural Officer (MAO), the LGU Consultant, and two technicians. The incumbent Mayor of Manolo Fortich was also

interviewed during the second period of fieldwork in November 2003. The interviews and FGDs were conducted from November to December 2002. The total number of participants in the case study was 56.

8.3. The Municipality of Manolo Fortich

Manolo Fortich is the northern gateway to Bukidnon Province. It is 55 kilometres from the provincial capital, Malaybalay, and 35 kilometres from the commercial and trading centre, Cagayan de Oro City (Figure 8.1). The municipality is divided into 22 barangays. Manolo Fortich is popularly known as the country's pineapple capital, with the establishment of a large pineapple plantation by Del Monte Philippines Incorporated (DMPI) in the early 1950s.

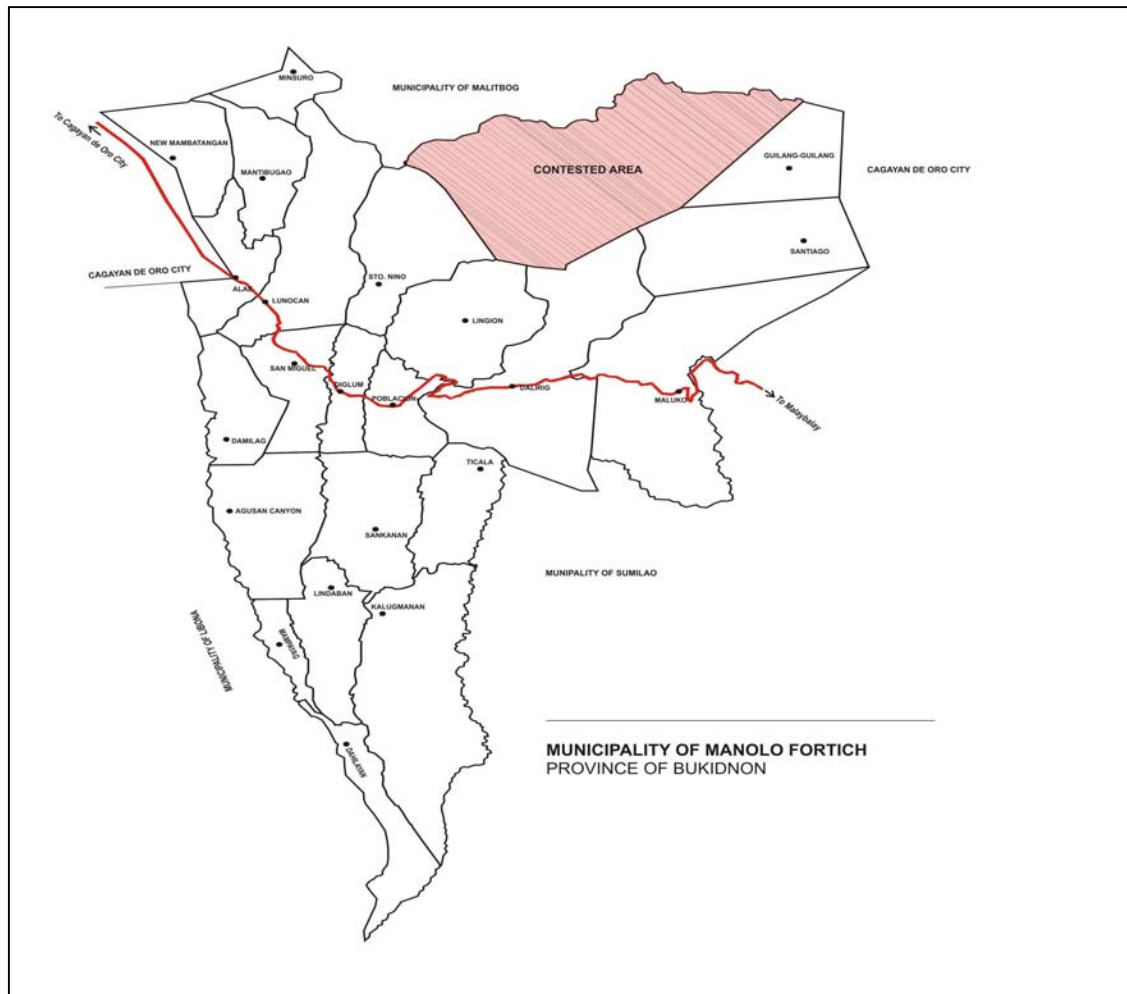


Figure 8.1 Municipality of Manolo Fortich, Bukidnon, showing barangay boundaries
Source: Municipal Government, Manolo Fortich

8.3.1. Landscape, Population and Economy

Manolo Fortich has a land area of 42,556 hectares. Of this, 30,358 hectares are classified as alienable and disposable (A&D) with 22,308 hectares for agriculture and agri-industrial uses. The remaining 12,197 hectares are classified as forestlands. The municipality lies at 257 to 1,979 metres above sea level. The landscape includes highland plateaus, deep canyons, rugged terrain, and gently rolling hills. The dominant soil type is Adtuyon clay (62 per cent), which was formed from residual soil of volcanic rock and pyroclastic materials. Other soil types are Alimodian, Faraon, and Jasaan clays, and mountain soils.

The National Statistics Office (NSO) recorded a total population of 67,400 residents in 1995, making Manolo Fortich the third most populated municipality in Bukidnon. The average annual growth was 1.91 per cent and the population density was 170 persons per sq. km. (Municipal Government of Manolo Fortich 2002). The total number of households was 3,782 with an average household size of five. There are three major ethnic groups, namely the indigenous Higa-onons and Talaandigs and the immigrant Cebuano-Boholanos. The latter migrated to Manolo Fortich to work in the pineapple plantation. Higa-onon and Talaandig tribes are concentrated in the upper elevations of the municipality, on the fringes of Mt. Kitanglad Range Natural Park (MKNRP).

Manolo Fortich is a growing centre for investment in agribusiness, eco-tourism, and real estate development. These developments are intertwined with environmental problems, including waste management, chemical and pesticide contamination, water and air pollution, soil erosion, and soil fertility decline. The farming systems include corn, cassava, rice, and pineapple production, and the rearing of livestock and poultry (Table 8.1). A significant portion of the forestlands is under pasture lease agreements. Pineapple production and cattle grazing are the oldest farming systems. Farmers also plant abaca, tomatoes, and fruit trees. Farm size ranges from three quarters to three hectares. The Bukidnon Forest Incorporated (BFI) established an industrial tree plantation covering 3,574 hectares in 1993. The ancestral domain area of the Higaonon tribe is about 3,000 hectares.

Table 8.1 Major crops planted in Manolo Fortich

Type of Crop	Area (ha)
Corn	3,882
Pineapple	5,265
Cassava	2,292
Rice	204
Annuals and permanent crops	2,285
Vegetables	277
Total	14,566

Source: MAO, 2003

DMPI employs the majority of professionals and agricultural labourers. Large farms for coffee, ornamental and cut flower production, and fruit tree orchards are another source of employment in addition to swine and poultry farms. The LGU, local banks, schools, and the service sector also employ professionals and labourers. Due to its proximity to Cagayan de Oro City, transportation and marketing facilities are always available. Credit and financing for agricultural production could be easily accessed from local banks and other private financing institutions.

8.3.2. Infrastructure and Communication Facilities

The 78 kilometre provincial road connects the 22 barangays, but most of these are gravelled roads. Overall, the road network is passable by all means of transportation even during the rainy season. Jeepneys and buses are the main transportation mode from Cagayan de Oro City, while motorcycles (*habal-habal*) are available within the municipality. The Bukidnon Second Electric Cooperative (BUSECO) supplies electricity for the 22 barangays, serving more than 50 per cent of the total households. Potable drinking water is supplied by the municipal water system, tapped from deep wells and springs. Local residents have access to local telephone lines, while postal services are provided by the LGU. A local radio station operates in Manolo Fortich. Traders and multi-purpose cooperatives provide post harvest facilities such as mechanical driers, rice mills, storage and warehouses, and threshers, while solar driers and multi-purpose pavements are usually provided by the LGU.

8.3.3. Local Governance

Manolo Fortich is one of the oldest municipalities in Bukidnon, having been declared in 1916. It is operating as a first class municipality with a total income of 53 million pesos in

2001. The LGU has 12 elected officials and a total workforce of 113 personnel. The *Sangguniang Bayan* enacted several environmental management policies, including the declaration of the municipality as a wildlife sanctuary in 1999. The LGU also developed its Comprehensive Land Use Plan, Ancestral Domain Management Plan, Natural Resource Management and Development Plan (NRMDP), Water Resource Management Plan, and the Municipal Watershed Protection and Development Plan (MWPDP), among others. There were 49 registered multipurpose cooperatives, and 15 peoples' organisations (POs) were accredited by the LGU in 2002.

8.3.4. Local Institutions

The municipality is endowed with various institutions such as the LGU, schools, and private financing institutions. However, the history of institutional interaction and project intervention relating to sustainable agriculture, forestry or natural resource management has been relatively short. The Department of Environment and Natural Resources (DENR) implemented the Integrated Social Forestry (ISF) Program in the early 1990s, but this was limited to a few demonstration sites. Hence farmers' exposure to, and knowledge of conservation farming and agroforestry were limited.

8.4. Background and Mode of Scaling Up

In 1999, ICRAF provided technical assistance to the municipal government of Manolo Fortich to develop its municipal NRMDP, a process akin to that in Lantapan. The NRM planning process was seen by ICRAF as a pathway for scaling up the Landcare Program from Lantapan to Manolo Fortich. The Mayor was quick in assimilating the idea of incorporating Landcare in the NRMDP because of his previous exposure to Australian Landcare since he had lived Australia before he was elected mayor of Manolo Fortich. He had no difficulty influencing the NRM Council about Landcare, a multi-sectoral body in charge of NRM planning. For ICRAF, it was an opportunity to test the scaling up mode that was used in Lantapan in another municipal context but, learning from the Lantapan experience, it was emphasised during the planning stage that the LGU had to manage the Landcare Program.

The NRMDP that was completed in 2000 had a strong Landcare focus. Four activities were integrated in the Landcare Program, namely Clean and Green, Water Watch, Micro-Catchment Watch, and Farming Systems Development. The Del Monte Philippines Inc. offered support for Landcare and initially allocated seed money for Landcare activities and appointed a company representative to the Landcare Program.

8.5. Management Structure

Under the NRMDP, the municipal agricultural office was to spearhead the Landcare Program while ICRAF was to provide training and technical backstopping. In February 2000, the Mayor designated one agricultural technician as municipal Landcare Coordinator under the supervision of the Municipal Agricultural Officer (MAO). He also encouraged the other technicians to get involved in Landcare activities and instructed the barangay captains to provide support. The Mayor wanted to build local capacity for facilitation, and instructed the Landcare Coordinator and barangay captains to identify two farmer leaders in each barangay who could volunteer to train as Landcare barangay facilitators. The Mayor participated in the International Landcare Conference in Melbourne in 2000, and recognised the critical role that local facilitators have played in the success of Australian Landcare. He thought that local facilitators would also be important to sustain Landcare in Manolo Fortich, especially in the event of changes in LGU leadership. Although the barangay facilitators were required to work closely with barangay officials, for supervisory purposes they were directly linked to the Landcare Coordinator. This was a modification of the sitio and barangay-based structure that was developed in the previous sites. Along with the support received from the private sector (DMPI), this was seen to be a major adaptation of the landcare approach that had evolved in Claveria.

For its part, ICRAF had to build the capacity of the extension team and the barangay facilitators in technical innovations and facilitation skills. As a scaling up site, the program was under the administrative responsibility of the ICRAF site office in Lantapan. The underlying goal was to implement a Landcare Program with less external support, and to test whether the landcare approach could work in another municipal setting. A Landcare Facilitator based in Lantapan was assigned to work one day a week, depending on the activities in Manolo Fortich, while I assumed managerial responsibility. This mode was a

marriage of the approaches used in Lantapan and Malitbog; in Lantapan, the NRM planning process was the main pathway for scaling up, whereas in Malitbog, the agricultural extension office was the main pathway. For ICRAF, this constituted the third mode of scaling up with much less requirement for technical and institutional support than in Malitbog.

8.6. Activities and Challenges

The start-up activity was a field visit of technicians and LGU officials to Lantapan. ICRAF then developed a three-phase training program for barangay facilitators and technicians. The first training that was held in May 2000 aimed to build awareness among barangay facilitators. Training topics included soil and water conservation and basic agroforestry practices, NVS, the landcare approach, facilitation, and teambuilding. The key outputs of the training were the action plans developed by barangay facilitators to initiate landcare activities in the barangays. There was no standard process employed to select the barangays that would start Landcare activities; a “first come, first served” rule was observed, to allow a certain level of “demand” to emerge at the barangay level. Once the barangay facilitators had the plan of activities, the Landcare Coordinator, particularly in conducting slide shows and training sessions, supported them. The Landcare Facilitator from ICRAF also provided intermittent support.

In June 2000, the LGU organised a Landcare Congress in conjunction with the celebration of the charter day of Manolo Fortich. The participants were farmers, DMPI staff, LGU personnel, and students. The activity featured slide shows, farmer testimonies, poster presentations, and tree planting. DMPI sponsored snacks and donated 1,500 seedlings for the tree planting activity in Diklum River, while ICRAF helped in preparing the program and the poster display.

The second and third phases of the capability-building program were held in November 2000 and June 2001, respectively. Barangay facilitators identified the training areas in concurrence with the recommended topics of the Landcare facilitator, which included complex agroforestry systems, criteria for prioritising rehabilitation projects, soil analysis, organisational management, and facilitation.

8.6.1. Slide Shows and Training Sessions

The Landcare Coordinator together with barangay facilitators developed the schedule for slide shows and training sessions. Similar to Claveria and Lantapan, a training session usually followed a slide show. ICRAF records show that 17 slide shows and 25 training sessions were conducted from 2000 to 2001 (Table 8.2). The training sessions included NVS establishment, nursery establishment and seedling production, soil analysis, and asexual propagation of fruit trees. Nursery establishment and seedling production had the highest training demand among farmers (16 sessions). There were no training sessions held in 2002, and only three sessions were held in 2003. The role of the ICRAF Landcare Facilitator was more that of a resource person in the slide shows and training sessions, while the barangay facilitators, the Landcare Coordinator, and some supportive barangay officials helped organise these activities.

Table 8.2 Total number of training sessions, 2000-2001

Type of Training	Number of Sessions	Number of Participants
NVS establishment	5	116
Nursery establishment and seedling production	16	466
Soil analysis	1	14
Capability building	3	93
Total	25	689

8.6.2. Group Formation and Decline: Issues at the Barangay Level

Group formation followed a training session at the barangay or sitio level. Barangay facilitators and the Landcare Coordinator helped form the groups, but sometimes barangay officials also helped organise the election of landcare officers. Eighteen landcare groups were formed from 2000 to 2001 with a membership of 281 farmers. This was only a small proportion of the total number of farmers who attended the training sessions (Table 8.2). Two plausible explanations can be drawn from this. First, farmers were more interested in new technologies than with landcare membership. Second, the training sessions were open to everyone hence farmers did not see the need for landcare membership to access information and training. The majority of landcare groups that had formed in 2000 were located in barangays near the municipal centre where farmers had more diverse livelihood options.

As in the other sites, landcare groups were formed around the establishment of nurseries. However, it was observed that the process of establishing nurseries was often short changed, and many of the nurseries were not properly constructed. For example, some nurseries were constructed near the barangay plaza and were not fenced. Although, these were highly visible to people and would have some demonstration effect, the seedlings were easily damaged by stray animals (e.g., chickens). The Landcare Facilitator from ICRAF saw three possible reasons to this. First, farmers wanted to establish nurseries quickly because of the potential income from the seedlings grown. Second, barangay facilitators felt the pressure to demonstrate quick results. Apparently the number of nurseries established was considered as an output indicator of barangay facilitators, though this was not in fact required. Third, the Landcare Coordinator had limited time to follow-up or supervise nursery activities since she was not relieved of her other tasks.

At some stage, barangay officials were actively helping to manage the nurseries, but this did not last long. The ICRAF Landcare Facilitator observed that there was poor coordination of activities to maintain the nurseries, resulting in poor seedling growth. This dissipated farmers' interest causing some of the groups to abandon the nurseries and eventually to disintegrate. In some cases, the lifespan of a group was associated with the lifespan of the nursery.

The ICRAF Landcare Facilitator also observed that some barangay officials were unsupportive of the efforts of barangay facilitators because they were not their personal choice. Apparently, the Mayor influenced the choice of barangay facilitators, and some barangay officials were only superficially supportive of the Mayor's choice to avoid conflict, a situation common in patron-client politics. Furthermore, the Facilitator observed that although the barangay officials and sitio leaders were aware of Landcare, their involvement was generally limited or non-existent. It was speculated that the barangay officials might have seen their involvement as unnecessary, since barangay facilitators were already entrusted to facilitate or coordinate landcare activities. The benefits of having trained barangay facilitators could have been far-reaching, but loss of a sense of ownership of and responsibility for the program on the part of barangay officials appeared to be a consequence. After the local elections in 2000, in which the incumbent mayor lost office to

a political rival, the Landcare Coordinator started to limit her time with landcare groups as the LGU was undergoing administrative changes. A consultant was assigned to the municipal agricultural office to develop a new agricultural development agenda, and some new technicians were hired. Even so, she argued that coordinating 18 landcare groups was becoming a burden since she was not relieved of her other duties. This created a gap between landcare groups and the Landcare Coordinator, and activities abruptly declined. ICRAF's limited institutional and technical input was seen to contribute to this problem. To resolve this, the Landcare Facilitator from ICRAF increased his time in Manolo Fortich and helped the Landcare Coordinator arrange training activities and follow-up the nurseries. However, this did not work due to the uncertainty of support from barangay and municipal officials. Finally, the Landcare Coordinator resigned. Thus, group activities technically stopped from the middle of 2001, though in the early part of 2003, two landcare groups revived their activities, this time with much effort from the ICRAF Landcare Facilitator.

8.6.3. Issues and Challenges Met at the Municipal Level

In 2000, the Mayor's commitment and systematic strategies were expected to build the foundations for successful implementation. However, the local government elections left the Landcare Program in an uncertain state. Similar to the Lantapan situation in 1998, the 2001 local elections bogged down the Landcare Program with implementation problems. The political tension continued as the outgoing Mayor filed a petition over the victory of the newly elected Mayor. Both politicians belonged to strong political families and had their own sources of patronage. The shift in political leadership also led to administrative changes, such as re-shuffling of existing staff, changing committee membership at the *Sangguniang Bayan*, and appointing new sectoral representatives to the Municipal Development Council (MDC). These changes created a vacuum for existing programs such as Landcare. As discussed in previous chapters, these kinds of changes were common after government elections. Any new leader, particularly, a political rival, comes with a new agenda and is distrustful of the outgoing leadership (Varela 1996). Nonetheless, the new Mayor had expressed support for Landcare, and formal meetings were held to orient the new officials about Landcare, supplemented with personal follow-up by the ICRAF Landcare Facilitator and myself. Despite these efforts, the process of re-launching

Landcare was found to be arduous and time-consuming, much harder than in the initial phase.¹

As part of the administrative changes, a locally hired Consultant to the LGU was designated by the new Mayor in October 2001 to advise on the implementation of Landcare. The LGU consultant expressed interest in Landcare and vowed to support it.² This situation placed the MAO in an awkward position because some decisions were no longer at his disposal, and the technicians were in a “wait and see” attitude to the plans of the Consultant. While the agricultural extension team was developing new plans, landcare activities were set aside, and landcare groups were beginning to lose their impetus. Eventually, the technicians dropped their tasks in Landcare due to their limited number and multiple responsibilities, and the lack of support from the new administration. The new agricultural development program that was completed in 2002 included promotion of soil and water conservation technologies, but it was unclear whether the Landcare initiative was to be continued. In an interview with the MAO in 2003, he mentioned that he will recommend Landcare as major activity of the newly set-up municipal Environment and Natural Resource Office (ENRO).³ He thought that it would be appropriate for the Landcare Program to be implemented by the municipal ENRO, as the objectives of Landcare were within the scope of this office. In the same interview, the LGU Consultant, who was newly appointed as assistant to the MAO, said that the technicians could serve as resource persons for the implementation of Landcare under the leadership of the municipal ENRO.

8.6.4. Impact of Activities on Technology Adoption

ICRAF records show that, in 2001, only seven farmers had adopted NVS, but 18 nurseries had been established, which produced more than 9,000 seedlings of timber trees. Farmers planted these trees along farm boundaries, in small woodlots, and with crops. The poor

¹ I had several meetings with the new Mayor and the members of the *Sangguniang Bayan* between August and December 2001.

² I had several meetings with the LGU Consultant between July and December 2001.

³ Interview with Ernesto Ducusin, 9 January 2003, LGU, Manolo Fortich

uptake of NVS was probably due to the relatively flat land in the barangays that had formed landcare groups. In Mantibugao, farmers were predominantly growing cassava and corn on flat to undulating farms. They found that timber and fruit trees could be easily incorporated into this system, and they were interested in the potential market for trees and tree products. When the groups in Mantibugao and Sankanán were revitalised in 2003, farmers planted more than 300 timber trees. The aggregate area planted with timber trees was about nine hectares (assuming a density of 1,000 timber trees per hectare). Although this was much lower compared to the previous sites, the number of trees planted on farms was relatively high given a one-year timeframe, the limited institutional support provided by ICRAF and the LGU, and comparing this to previous government efforts with the Integrated Social Forestry (ISF) project.

8.7. Perspectives of Different Actors

8.7.1. Farmers' Perspectives of Landcare

Results of interviews and focus groups revealed that farmers' perceptions of Landcare were varied, but the dominant perceptions were that Landcare (1) was a technology that prevents soil erosion and improves soil fertility, (2) was a program that improves family welfare and provides a better future, (3) involved caring for the land to improve production and the environment, and (4) was a form of watershed management. These multiple responses encompassed the technical, economic, social, and environmental aspects of Landcare.

Initially, farmers' expectations of Landcare were to help them improve their economic conditions, plant trees, and improve their farming systems. The other expectations had to do with improving the environment (e.g., clean air, cooler climate) and livelihood, and to access financial and technical support from ICRAF and the LGU. The combined responses in interviews and FGDs revealed that more than half the farmers did not meet their expectations. Some of the reasons cited were: (1) they had not received the seedlings; (2) they received little technical assistance; (3) their nursery was destroyed; (4) they had limited support and there was poor communication; (5) they had no farm; (6) there was a lack of follow-up and facilitation; and (6) there was a lack of financial support. These

reasons were mostly a function of institutional support, which was falling apart immediately after the change in LGU administration in 2001.

However, nearly half the interviewed farmers had met their objectives and attributed this to the trees they had planted. The focus groups concurred with nearly all the interviewed farmers that their main benefit from Landcare was in improving their knowledge in sloping-land agriculture and tree farming. Other benefits mentioned were anticipated rather than observed in the short term, including improved production and income and better economic and environmental conditions. This was consistent with the general view that agroforestry technologies take at least two to three years and often much longer before tangible benefits can possibly accrue from the planted trees (Bohringer 2001).

The promoted technologies, the motivation of barangay facilitators, and the efforts of the Landcare Coordinator encouraged farmers to participate. Nearly all interviewed farmers had no personal constraints to participation, except for conflict with other activities. Aside from farming, the majority of farmers had part-time jobs as labourers or were engaged in small business to augment household income. Within the group, cooperation, leadership, unity, and regular interaction with members were found to enhance success; hence, farmers identified cooperation and unity, effective group leadership, and strong LGU support as important factors for success. Incentives, constant communication, and livelihood projects were also seen to maintain group momentum, but support from barangay and municipal officials and consistent follow-up of technicians were found to be extremely valuable, especially during the infancy stage of landcare groups. Conversely, the lack of government support, poor communication and follow-up, poor leadership, and limited facilitation, constrained the development of Landcare. Ultimately, farmers expressed a strong need for technical and financial support from the LGU.

8.7.2. LGU Perspectives of Landcare

The LGU informants had a similar view to the farmers. Expressed in its idealistic form, they perceived Landcare as a group of people working together with a common purpose of restoring and maintaining healthy landscapes, providing mutual benefits, and meeting the goals of sustainable agriculture and watershed management. They thought that the

Landcare Program could significantly address soil erosion problems and poor production, and could contribute towards meeting broader community goals. However, the technicians disclosed that, although the promoted technologies were simple, implementation was very difficult because of the inconsistent support of the municipal government.

At the start, the LGU informants were expecting that, just like many foreign agencies, ICRAF would provide financial assistance to farmers and would link the LGU with national and foreign funding agencies. This was a common perception among local governments, as they have been used to projects of international donor agencies. They expected the Landcare Program to be beneficial for farmers, but they also thought that financial assistance would be necessary to sustain farmers' efforts. When the informants were asked how the LGU had benefited from Landcare, their response was straightforward, that is, Landcare had provided the LGU with appropriate technologies that met the objectives of food security and watershed management. None of the LGU informants mentioned any direct institutional benefit. This was consistent with the informants' responses regarding perceptions, expectations, and relevance of Landcare. Nonetheless, the LGU informants believed that broader community benefits could be gained, such as improvement in knowledge and awareness of environmental issues, leading to environmental improvements. The LGU informants added that if the Landcare Program had persisted despite its adversities, a transformation in farmers' attitudes and practices could be expected to form a new agricultural ethic in the immediate future.

The barriers towards progress were the lack of financial resources to support group activities and the limited human resources to conduct dissemination activities and to facilitate landcare groups. This, however, was not due to lack of financial resources per se, but because the LGU did not allocate funding for this purpose. According to the LGU informants, both financial and human resources were necessary requirements for implementing the Landcare Program. The absence of these resources would make Landcare difficult to implement. Further, the LGU informants said that political support from the Mayor and *Sangguniang Bayan* would be crucial for successful implementation. They identified training and continuous information and communication activities as

important factors for success and suggested that these should be pursued vigorously once municipal government support was secured.

In an interview, the incumbent Mayor was regretful about the short-lived existence of the Landcare Program.⁴ She said that she had wanted to continue implementing the Landcare Program, but the on-going protest over her victory caused political tensions, which shifted her focus and affected her priorities. She explained that her first year was devoted to strategic planning, administrative restructuring, and developing relationships to establish a healthy working environment within the LGU. She regretted that this had indiscriminately affected the implementation of some programs, such as Landcare. During the interview, she was hopeful that Landcare would be fully implemented with the creation of the municipal ENRO.

8.8. Costs of Implementing the Landcare Program

For ICRAF, the cost of implementing Landcare was due to the salaries and travelling expenses of the part-time Landcare Facilitator, as well as subsidies in training and cross-farm visits. The Landcare Facilitator provided 57 days of staff time in conducting slide shows, training sessions, and farm visits for a period of one year (2000-2001), which was equivalent to a salary of about 35,000 pesos. Travel and miscellaneous expenses were estimated to be 15,000 pesos, whereas seeds and farming guides were about 5,000 pesos. The total cost of training barangay facilitators was 40,600 pesos, which covered food, supplies and materials, and transportation expenses. Thus the direct cost incurred by ICRAF was only 95,600 pesos for one year. This was very low when compared to the annual budget of the municipal agricultural office. For its part, the LGU incurred the salary of the Landcare Coordinator and other costs for conducting training at the barangay level. However, these were hardly recognised as direct costs because the Landcare Coordinator was also performing other duties.

The combined costs incurred by ICRAF and the LGU were thus minimal compared to the annual municipal budget for agricultural development and personnel services. Hence, as in the case of the previous sites, the LGU had the financial capacity to implement a Landcare

⁴ Interview with Mayor Socorro Acosta, 20 November 2003, LGU, Manolo Fortich.

Program. All but one of the LGU informants agreed that the Landcare Program was affordable. However, it would need to be given priority, and funding would have to be allocated for human resource development (e.g., training for technicians and farmers) and improvement of extension materials. The technicians also voiced the need to increase their number and the budget for travelling allowance. In this case, additional funding would be needed, although the LGU could proceed by mainstreaming the goals and activities of Landcare in the extension program and re-aligning some funds into training and production of quality extension materials.

8.9. Discussion

The experience in Manolo Fortich was considered the third mode of scaling up, characterised by integration of Landcare into the municipal NRMDP. As defined by Uvin & Miller (1996), integration occurs when the program is incorporated into a bigger program and aggregation is the partial or full merger of activities or resources either from the same organisation or from two different organisations. This mode involved considerably less institutional support from ICRAF, but required correspondingly more support from the LGU. It combined the first two modes applied in Lantapan and Malitbog, which required interaction with local constituents (actively involved in local NRM planning) and direct involvement of the agricultural extension team. The arrangement was that the LGU had to manage the Landcare Program and ICRAF had to provide training for technicians and barangay facilitators, with only minimal direct input for group facilitation. A unique feature of this approach was the involvement of the business sector and the building of local capacity for landcare facilitation.

Initially, it was expected that the leadership and support of the Mayor in 2000 would have far-reaching results in terms of institutionalising the Landcare Program in the extension system, but this was interrupted by the local elections in May 2001. Leadership transition, administrative changes, and political tensions created a dilemma for the Landcare Program. Although the new LGU officials were appreciative of Landcare, and “ownership” was apparently not an issue, their willingness and commitment to take on the Landcare Program was unclear.

Most of the activities in 2000 were replications of the Landcare Program in Lantapan, but the initial activities were somewhat different, starting with a cross-farm visit and training of barangay facilitators. Groups were formed around the establishment of communal nurseries and training. Eighteen landcare groups were formed at the sitio level and federated at the municipal level, and the Manolo Fortich Landcare Association (MFLCA) was organised in October 2000. However, group activities started to decline and eventually dissipated after the local elections in 2001, partly due to the lack of follow up from the Landcare Coordinator and the lack of support of barangay officials. The emphasis on barangay facilitators and a Landcare Coordinator appeared to have undermined the potential contribution of sitio and barangay officials to sustain landcare activities. Although the aim was to adapt the landcare approach as modelled in Claveria, this approach was not maintained for long enough to succeed, primarily because of the lack of impetus from the municipal government.

Nonetheless, despite program adversities, farmers' uptake of technologies, particularly seedling production, was more rapid than in the pre-Landcare period. The most practical benefit identified by farmers was improving their knowledge of conservation technologies and tree farming, with perceived environmental and economic benefits. Farmers had established 14 nurseries using their own resources, except for the seeds provided by ICRAF for the training sessions, and had planted almost 9,000 seedlings of timber trees, which would be equivalent to nine hectares of tree plantation. This was low compared to the previous sites, but it should be considered that the landcare groups were barely one year when the local election interrupted the institution-building process. Given the short timeframe, it was difficult to assess the performance of landcare groups and the impacts of the adopted technologies. However, the costs incurred were low.

Both farmers and LGU informants saw the relevance of the Landcare Program mainly in terms of the technologies promoted to resolve soil degradation problems and improve farming practices. Landcare was thus viewed only in terms of the relevance of the promoted technologies to the biophysical and socioeconomic conditions of the farming population.

Farmers' expectations of Landcare were more to do with improving their economic conditions, although environmental benefits were also perceived. The LGU's expectations and identified benefits were more for the farmers and the broader community than for the LGU itself. This explained why the LGU informants did not see the relevance of Landcare to participatory local governance, nor was Landcare perceived to be relevant to the LGU at the institutional level. It appeared that the LGU was unclear about institutional benefits, although in saying that the Landcare Program "provided the LGU with technologies that meet the goals of food security and watershed management" there was an implication of benefit to the LGU.

Farmers were personally motivated to participate in landcare activities by barangay facilitators and officials, the ICRAF Landcare Facilitator, and the municipal Landcare Coordinator, but group attributes such as cooperation, volunteerism, and effective leadership were seen as important factors for success. Farmers maintained that technical and financial support from the LGU was much needed. The LGU informants supported this view and argued that support from political leaders would be crucial for success. Additionally, training and effective communication were said to be important.

Clearly, the lack of endorsement from the new Mayor, the changes in staffing structure and development priorities, and the limited institutional support from ICRAF inhibited the success of Landcare. However, the socio-economic conditions of Manolo Fortich should also be taken into account. As an agri-industrial hub, large-scale agribusiness dominated smallholder farming, giving farmers off-farm employment and livelihood options. For instance, if small farmers experience crop failure, they readily leave their farms to work in neighbouring swine and poultry farms or with DMPI, or else move to the nearby city to work. Long-term production and conservation goals seemed to be easily overtaken by immediate cash benefits available from off-farm employment. In rapidly growing rural economies, farmers tend to discount future conservation benefits when a wider range of livelihood options is available. In addition, it has to be considered that farmers may be lacking in knowledge and interest in conservation due to limited exposure to NRM interventions in the past, indicating a low-level of human capital. Relatedly, in urbanising communities such as Manolo Fortich, social solidarity appeared to be strained, as farmers

were preoccupied with individual livelihood activities. According to Narayan et al., interest-based living in urban areas is invariably accompanied by a shift in focus from collective gains to individual gains. Hence, people tend to belong to groups for individual income benefits rather than for community-wide benefits, making it difficult to sustain collective action.

For ICRAF's part, the Landcare Program in Manolo Fortich was a low cost initiative, a much lower-input mode of scaling up compared to Malitbog. ICRAF's direct annual cost was only a small proportion of the LGU budget for agricultural development. As a first class municipality, the LGU had the resources to implement a Landcare Program. However, additional funding for the current extension program would be needed; alternatively, the LGU could start with redefining the extension program to cover the objectives of Landcare and re-aligning some funds to support the activities of technicians and farmers. However, this alone would require commitment on the part of politicians and LGU administrators to take on a leadership role for Landcare.

Scaling up the whole idea of the landcare approach was envisaged, but only the promoted technologies, particularly seedling production, were easily adopted. The process of institution building and partnerships was found to be more difficult to replicate due to a myriad of factors as discussed. The triadic partnership as embodied in the landcare approach was weak and ineffective because of the individual circumstances of the three actors (LGU, ICRAF, farmers). In brief, the Landcare Program was prematurely undermined before it had fully taken off, and unless the current conditions are changed, the progress of Landcare is expected to be bleak.

8.10. Conclusion

The Landcare Program was not sustained in Manolo Fortich because the strategies of the key actors were not sufficiently aligned. The LGU's support was inconsistent due to changes in political leadership and a changing development agenda. ICRAF had limited input primarily due to a research goal to understand how Landcare could be initiated by the LGU with less external support. Trained farmers were not fully organised around shared interests and enabled to voice their demands, and may have been lacking in interest and

need for conservation technologies due to limited exposure to NRM interventions, flat lands, and availability of alternative livelihood options. Clearly, the Landcare Program was unlikely to be sustained where the actors were unable to play complementary roles, or where the landcare triangle was completely dysfunctional.