5 CASE STUDIES OF LANDCARE GROUPS

In this chapter case studies of nine community landcare groups are presented. The groups were selected based on (1) their relative accessibility from Kibang, the base of the Landcare Program as well as the main administrative and market centre in the barangay, and (2) their level of activity as perceived by the Landcare Facilitator. Table 1 shows the classification of the nine case-study groups.

The case studies were based on only a few focus group discussions and a larger number of key informant interviews, conducted from August to October 2002. There were 21 participants in focus group discussions (19 men and 2 women), and 60 key informants, including 51 landcare members, 8 local government officials, and the Landcare Facilitator for Ned. Greater emphasis was put on key informant interviews because of the limited number of personnel to conduct the studies and the distance between sites, making it difficult to organise group meetings.

A flexible schedule of open-ended questions was used to probe the informants about their perceptions of landcare, the history of their group, the factors promoting and inhibiting participation in the group, the development and current status of group activities, the benefits or impacts of these activities, and the prospects for the future.

***Table 5.1**. Classification of community landcare groups for case studies*

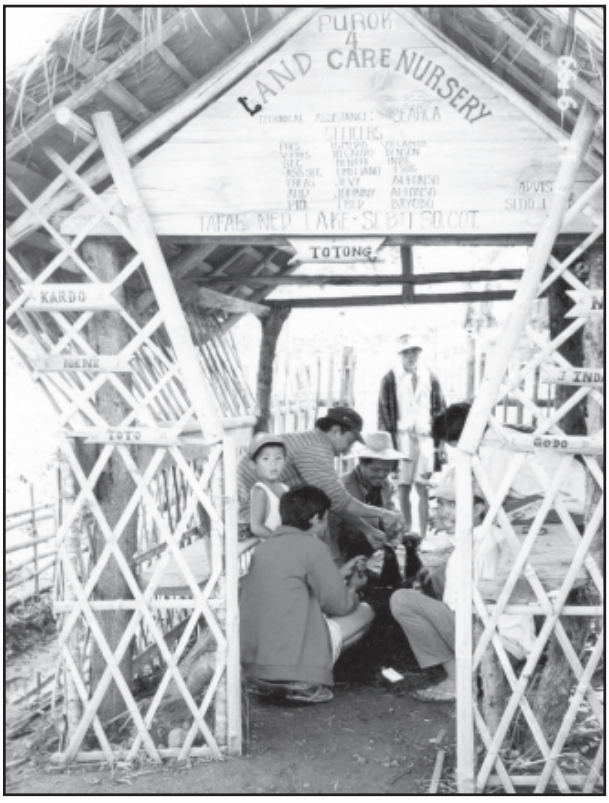
Accessibility	Level of Activity		
	High	Medium	Low
High	Tafal (Purok 4)	Kibang (Purok 1)	Lubo (Riverside)
Medium	New Tupi (Groups 1 & 2)	Abboy (Tribal)	Abboy (Ilonggo)
Low	New Cebu (Purok 1)	Bandala	Sinangayan

HIGH ACCESSIBILITY, HIGH ACTIVITY—THE TAFAL (PUROK 4) LANDCARE GROUP

Sitio Tafal was located at the centre of Barangay Ned and could be reached by motorcycle, or in one hour by foot from Sitio Kibang. Hence it was classified as a "high accessibility" site. According to a rapid appraisal conducted by the Landcare Project in 2000, it had 234 households with an average household size of 6. The population was dominated by Ilonggo (50 per cent), and included Cebuano, T'boli, and other groups. Farming was the main source of income, with maize and rice the major crops. Farms averaged 3-4 hectares and 80 per cent of them were owner-operated. Tafal was one of the sites where MBRLC was operating, hence conservation farming using leguminous hedgerows had been introduced and promoted.

The Tafal Landcare Group was formed in January 1999 through the initiative of the Landcare Facilitator. The focus was on the introduction of temperate vegetables or "high-valued annual crops". An initial membership of 30 farmers was recorded. The first activity of the group included the establishment of a demonstration farm for different vegetables such as cabbages, carrots, and other high-valued vegetables. Some members did not participate actively in the establishment and maintenance of the demonstration farm, so after the first harvest the group disintegrated. However, not all the members were discouraged and instead tried to organise themselves. Three groups were formed out of the original Tafal group. Tafal (Purok 4) was revived in September 1999 with seven members. Tafal (Puroks 1 and 3) and Tafal (Purok 2) were organised in January and June 2001, respectively, through the initiative of the local farmer-facilitator.

Tafal (Purok 4) Landcare Group was the most active landcare group among the case studies, confirming the high rating given to the group by the Landcare Facilitator (Table 5.1). The group's leader, Mr. Igmedio "Totong" Villamor, was also an active farmer-facilitator. Two group members were elected councillors in the 2002 Barangay Council election—one became Committee Chairman for Agriculture and the other for Health. However, there had been no significant increase in the membership of the group, which had eight members at the time of the study. This was due to a strict membership policy (e.g., the members of the group were



Tafal Purok 4 landcare group members gather in their specially constructed landcare nursery and meeting house

required to pay P20 as a membership fee) and the death or change of residence of some former members.

Since the group commenced its separate existence in 1999, it conducted regular meetings, scheduled for the last Tuesday of the month. It also organised regular group work (*dagyaw*), in the communal nursery, to construct a landcare "shelter shed" (used as a meeting place), and on other farms as a fundraising activity. The group developed policies regarding absences from meetings and group work. Members who had three consecutive absences were given a warning and thereafter expelled from the group. On the other hand, members who were not able to attend group work were required to pay a P50 fine. The group had also developed a policy regarding the relationship between members. This came about when one member made an irritating joke about another member, which almost caused the latter to withdraw from the group. The two members were called by the leader to settle the issue, then the group issued a policy on making inappropriate jokes about other members.

Group members had adopted conservation practices in their farms with minimal intervention from the Landcare Facilitator. The group had great influence on its members and in the community in terms of conservation farming because they helped each other in the establishment of contour farms and the group as a whole was making an effort to share what they had learned with neighbouring farmers and communities. Thus the group was also involved in extension activities, specifically through its leader. They had facilitated the formation of three landcare groups, namely Sinangayan, Luyong, and Kasuplid. They had also been involved in community work such as planting trees in the *sitio* plaza.

The group had undertaken two additional projects, namely a drugstore (Botica Sa Binhi) and fertiliser financing, the initial capital for which came from the contributions of individual members and the proceeds from working on other farms. The drugstore involved selling medicines to group members and the community at a reasonable price. It started in November 2001 with an initial capital of P1,000, which had increased to P7,000, including cash and stocks. The fertiliser-financing project started in January 2001 and sold fertiliser to members for P600/bag (much lower than the trader's price), payable after harvest. As of April 2002, the group had P4,000 cash and a stock of nine bags of fertiliser.

Landcare group formation in Tafal required time and the cooperation of members. As mentioned above, the original, large Tafal group disintegrated because of uncooperative members. That experience did not undermine the determination of the Purok 4 Landcare Group to pick up the pieces and build their own group. The farmers were motivated as a result of previous projects on contour farming. The leader of the group was an adopter of soil conservation technologies introduced in the area by MBRLC and SEARCA in the 1990s, particularly the planting of fruit trees. The awareness of the farmers was influenced by these previous projects and most of them joined the landcare group thinking they would learn better soil management technologies that could help them improve their farms (most of which were hilly) and increase their income. They were also expecting they could obtain material benefits from joining, such as the provision of seedlings. Though most of them had a positive perception of landcare from the beginning, there were some who had thought landcare was a "communist program". However, when they realised the benefits they could get from the program, they joined and became active members of the group.

Farmers said they were motivated to be actively involved in the group to learn new technologies and to improve conditions for themselves and their families. The group's activities were seen to be addressing the economic needs of the farmers through its various projects, as well as addressing their social needs. They could see something was happening to improve their condition through the fertiliser-financing project and the supply of cheaper medicines. Members also enjoyed working in the group and had developed a closer relationship with each other. The only thing informants mentioned that limited them from participating was the postponement or cancellation of planned activities.

Most members believed that the achievements of their group had been made possible because of the policies they had formulated and implemented, leading to better development of the group. The group had always focused on its vision and goals, which kept it moving forward. Members started with the goal of addressing the problem of soil erosion. When they had addressed that problem they moved on to address other issues like the need for cheaper medicines and capital for fertiliser. They had a plan to improve the housing of members by sourcing funds to buy a chainsaw, which the group could use to cut building materials. Group members believed they could continue to develop despite constraints such as negative feedback from outsiders and additional responsibilities of their members in other organisations.

The Tafal (Purok 4) Landcare Group was well advanced, largely due to good leadership and the cooperative attitude of its small number of members. Nevertheless, most informants indicated they still needed assistance from the government and other agencies in terms of facilitation and

supervision, more financial support, training and seminars to improve their knowledge, and improvement of the road condition for better marketing of their products.

HIGH ACCESSIBILLITY, MEDIUM ACTIVITY—THE KIBANG (PUROK 1) LANDCARE GROUP

Sitio Kibang was considered the effective centre of Barangay Ned because it was the location of the DAR Office, hence it was in the "high accessibility" category in Table 5.1. Based on the rapid appraisal conducted in April 2000, the *sitio* had 206 households with an average of seven members. The population was dominated by Ilonggo (80 per cent), with T'boli making up 15 per cent and Cebuano 5 per cent. The major source of livelihood was farming, with maize and upland rice the major crops. Some farmers also planted fruit trees, coffee, temperate vegetables, and peanuts. The average farm size was 3-4 hectares, with around 90 per cent of farms owner-operated.

Some of the people's organisations operating in the *sitio* included the Kibang Multipurpose Cooperative (KMCI) and the Barangay Ned Integrated Trainers' Association (BONITA). The Mindanao Baptist Rural Life Centre (MBRLC) and SEARCA were the two groups operating in the *sitio* with soil conservation as a major objective. Other government and religious organisations were also active in the *sitio*. These organisations worked together in the development of the farming skills of the community. SEARCA in particular worked in collaboration with both BONITA and MBRLC in the training of farmers.

Landcare group formation in Kibang was focused on areas where previous SEARCA projects had been implemented. A briefing about landcare was given by the Landcare Facilitator during the *sitio* assembly meeting held at the DAR Training Centre sometime in 1999. As a result, three landcare groups were formed on a staggered basis. Kibang Purok 1 and Kibang Purok 2 Landcare Groups were formed in April and November 2000, respectively, through the efforts of the group members themselves with the assistance of the Landcare Facilitator. Kibang Purok 3 Permaculture Landcare Group was organised in June 2002 through the efforts of the Landcare Facilitator.

Members of the Kibang landcare group receiving training in establishing high value vegetable crops

Kibang Purok 1 Landcare Group, the focus of this case study, had an initial membership of nine, which had increased to 13 by 2002. These 13 members included seven of the original members and 6 new members. The increase in membership was attributed by the farmers to their late realisation of the positive effects of landcare. Most of the members heard about landcare during the orientation conducted by the Landcare Facilitator, but others learned about it from members of the group. Most viewed landcare as an agricultural program about caring for the land and controlling soil erosion through establishment of contour farms, especially in hilly areas. All joined the group expecting to learn farming technologies. Others joined thinking that they could obtain benefits such as fruit and timber seedlings. A few joined for the sake of belonging to an organisation. Most of these expectations were met, as the farmers were able to form a group, learn contour farming technologies, and obtain seedlings that they had planted in their farms.

Based on the interviews conducted, the group was engaged in regular activities, particularly during its first year of operation, such as meetings, scheduled for every third Saturday, and group work. The group was able to establish a communal nursery and demonstration farm, and establish contour barriers on members' farms. Group members obtained seed potato as an output of the demonstration farm. The Landcare Facilitator categorised this group as one of "medium activity" because group activities had declined. However, members claimed that their group was still active because they continued to do some group work and were willing to attend if their leader requested.

Members stated that they were motivated to participate in landcare activities because of the training in farming technologies, provision of seedlings, and the conduct of group work. However, in reality the group held only three meetings in 2001 and none in 2002, though they still engaged in group work as needed. Lack of participation on the part of other members due to their other commitments, and lack of information about the group's activities, were the factors seen to be restraining members from participating in landcare activities.

Members interviewed believed that leadership was a key factor in the development of their landcare group, together with the constant supervision of a facilitator. In addition, group members should have determination and be able to understand each other to build up a group. Other factors

were the training of members and the application of the technologies learned. Establishing and implementing suitable policies were also seen as important to the development of the group. However, though the group developed a policy to expel members after three consecutive absences, this did not sustain the group's regular activities, particularly the meetings.

According to members, the benefits obtained from landcare included the provision of seedlings of fruit and timber trees, the technologies learned through training events and farm visits, the activities of the group itself, and improved communication skills, which helped them gain more friends. These benefits had improved their livelihood status and the additional manpower provided by members made their farm activities easier and faster. Most members expected they would get more income from establishing contour barriers in their farms and planting fruit and timber trees. Their vision was to improve their economic condition so they could send their children to school.

Since most members of the group had already established contour barriers on their farms and had planted fruit trees, the initial objectives of the group had been attained. The adoption of conservation practices by non-members who observed the farming practices of the group members indicated the positive influence of the group on the wider farming community in Kibang. Most of the members expressed interest in continuing the regular activities of the group such as meetings and group work. However, they believed that for them to continue the development of landcare activities in their area, they needed support from government and other agencies in the form of technical support through training, improvement of the road condition for easy marketing of their products, and access to financial capital for farm inputs and facilities.

Members of a Lubo landcare group working together to bag seeds for nursery propagation

HIGH ACCESSIBILITY, LOW ACTIVITY—THE LUBO RIVERSIDE LANDCARE GROUP

Sitio Lubo, located close to the border between South Cotabato and Sultan Kudarat, was a 45-minute walk from Kibang, or a 15-20 minute motorcycle ride. It had a population of 450 households with an average household size of 6 and was dominated by Ilonggo (75 per cent), with some T'boli (5 per cent) and a small percentage of Cebuano and other ethnic groups. Farming was the common source of livelihood. Most of the farmers (70 per cent) owned their land, more than 10 per cent were tenants, and others were mortgagees. The average farm size was 3 hectares, planted mostly with maize and upland rice. Other crops were coffee, vegetables, bananas, peanuts, fruit trees, coconut, and root crops.

The *sitio* was a base for a number of government, non-government, and people's organisations that aimed to improve farmers' livelihoods. These included two landcare groups, the Lubo Centro Landcare Group and the Lubo Riverside Landcare Group. The former was organised in July 1999 through the efforts of the Landcare Facilitator. It had an initial membership of 13, which gradually declined to six because some members did not own their land, others were engaged in small business, and others formed the Lubo Riverside group. This latter group was formed in November 2000 through the farmer-facilitator assigned to the area, who was also an original member of the Lubo Centro group. Some members of the original group decided to form another group because of the distance of their houses from Lubo Centro, where most activities of the original group were conducted.

This case study of the Lubo Riverside Landcare Group involved separate interviews with the six members of the group listed in the records of the Landcare Facilitator. The Facilitator categorised this group as one with "low activity" despite its accessibility. The informants had different opinions about the status of their group—one said the group was still active while others said they had had no activity in 2002. Three of the informants even said they were not aware of their membership in the group. One farmer stated that one of his farm activities had been reported by the farmer-facilitator as part of the group's accomplishments though it was his own project.

Most of the respondents joined the group because of the expected benefits they could get, such as technologies to develop their farms and the provision of seedlings. They perceived landcare as a program on soil conservation that could help farmers and provide them with inputs such as seedlings. Based on the interviews conducted, the group

had been involved in activities like nursery establishment, from which seedlings were distributed to members.

As mentioned, only three of the six respondents were actually members of the landcare group. They identified group work and cross-site visits as factors enhancing members' involvement in landcare activities. They felt landcare could be enhanced through unity among members, understanding each other, and the availability of material benefits. Factors limiting involvement were non-adoption of conservation technology by members and absences from regular meetings. Hence the factors limiting further development of landcare in Lubo were the small number of adopters in the area and the absence of regular landcare activities.

Though the group had few activities the members were able to enumerate the benefits they had obtained from joining the group, such as seedlings of fruit and timber trees and farming technologies they had learned through training and seminars. In addition, the members also reported that due to the organisation of the group they were able to express their ideas and needs better. Some felt that if they continued their landcare activities, in the future they would not have to buy fruit anymore once the trees they had planted bore fruit. This would increase their farm income, give them better living conditions, and enable them to send their children to school.

The members were still hoping that their group could remain functional five or more years into the future if they could continue their previous regular activities such as meetings and group work. They expressed the need for more farming technologies through training, financial and material support for their farms, and better group understanding.

MEDIUM ACCESSIBILITY, HIGH ACTIVITY—THE NEW TUPI LANDCARE GROUPS (1 & 2)

Sitio New Tupi was named after the municipality of Tupi in the lowlands of South Cotabato from where most of the residents migrated in the 1970s. In 2000 the *sitio* had 137 households with an average household size of 7.5. Residents were mostly migrants belonging to the Ilonggo and Cebuano groups. The *sitio* could be reached from Kibang by motorcycle during the dry season or by a three-hour journey on foot. Jeepneys coming from Isulan also reached New Tupi. Average farm size was four hectares and 80 per cent of the farms had titles in the form of CLOA issued by DAR. Farming was the main source of income, with maize the major crop. Other crops included coffee, temperate vegetables, and fruit trees. Some residents worked as hired labourers for an additional source of income. A number of government, non-government, and people's organisations were present in the *sitio*, assisting the community to improve their socio-economic condition through training and seminars. These included the Barangay Council, the New Tupi Multipurpose Cooperative, the Civilian Volunteer Organisation, religious and educational organisations, and two landcare groups, one having developed out of the other.

New Tupi 1 Landcare Group

New Tupi 1, established in the first quarter of 1999 through the efforts of the Landcare Facilitator with the assistance of the DAR office, was one of the first landcare groups organised in Ned. The Landcare Facilitator introduced the Landcare Program during a meeting of the New Tupi Multipurpose Cooperative. This led to the formation of the group with an initial membership of 10, which subsequently increased to 11. The group worked together to establish a nursery and contour barriers on members' farms. Other than group work, members had regular meetings and implemented income-generating projects such as pig-raising. The activities of the group were supported by a farmer-facilitator assigned to the area. The farmer-facilitator relayed to farmers the technologies promoted by the Landcare Facilitator. He was also the one to monitor the group's activities, advise the farmers about farming activities, and make reports and submit them to the Landcare Facilitator.

Most informants from this group viewed landcare as a farming technology. Others saw it as caring for the land or as a continuation of the NAIDP. To learn farming technology through training and to receive material benefits were their main reasons for joining the group. Those who did not join at the outset wanted to observe first and see what the project was really about. Informants identified group unity shown through group work and the technologies learned as the major motivating factors for joining in landcare activities. Other factors included the vision of the group and the availability of benefits. On the other hand, conflicting schedules between farm activities, landcare activities, and activities of other organisations were a constraint to their involvement. Lack of members' participation or cooperation, and the postponement of some activities had a negative effect on the involvement of members in landcare activities. In response to the issue of non-attendance at group activities, the group established a policy that consecutive absences would lead to expulsion from the group.

Despite the limited number of female members in the group, most informants believed that male and female members of the community had equal opportunities in landcare.

However, women's contribution was said to be limited to planning and lighter tasks, excluding activities requiring hard physical work.

The members considered themselves an active group though they had had no group activities since June 2002. The farmer-facilitator assigned to the area, who was also a member of the group, ran (unsuccessfully) for the ***B***arangay Council in the elections of May 2002 hence was not able to continue facilitating the group. In any case, SEARCA withdrew its financial support for the position in June 2002 to test what would happen to the group in the absence of intervention from a farmer-facilitator. Despite the discontinuance of their regular group activities members still attended group activities when necessary. Thus although the group was not as active as during its first few years, its members believed that the group would remain united and continue to progress.

The benefits of landcare membership were identified as the farming technologies they had learned through training and cross-site visits, the organisation of the community resulting in beneficial group activities, and the seedlings provided to them through the Landcare Program. All these had enabled them to improve their farms, through adoption of contour barriers and especially by planting fruit and timber trees. They had also had an impact on the farms of non-members in the community, many of whom had adopted contour measures.

With regard to the future development of landcare groups in New Tupi, informants identified key factors as group unity and cooperation, a close relationship among members as expressed through group work, respect and understanding between members, an absence of personal interests, and regular meetings. In contrast, poor leadership, busy schedules of members, the lack or postponement of group activities, and the lack of a plan were factors which would limit the development of the group.

New Tupi 2 Landcare Group

New Tupi 2 Landcare Group was organised in November 2000 with an initial membership of nine, through the initiative of a member of the New Tupi 1 group, Mr. Eduardo Pancito. The group subsequently recruited new members but the total membership remained the same because some members died and others migrated. Unlike other groups that had broken up into smaller groups, the reason for the formation of a second group in New Tupi was not the distance between members' residences but the vision of the one member to reach out to other farmers to encourage farm development.

Members perceived landcare as a program about farming and caring for the land. Most of them joined the program because of the benefits they expected to obtain, such as seedlings and the technology they could learn. Working together as an expression of group unity was one of the key factors that motivated informants to participate in landcare activities. Like other groups, the factor that limited members' involvement in landcare activities was the non-attendance of some members of the group.

The Landcare Facilitator considered this group to be one of "high activity", though difficult for him to visit because not very accessible. This accorded with the perceptions of group members. They cited the activities of the group, including regular monthly meetings (conducted every last Sunday), group work organised according to need, and income-generating projects such as pig-raising and fertiliser-financing. The proceeds of the pig-raising were used to buy fertiliser which was loaned to members, with payment in kind after harvest.

The group considered it had had a beneficial impact on the community, especially in conserving natural resources by adopting conservation farming. Every member of the group had planted fruit and timber trees that would eventually help in alleviating poverty and improving their livelihood. This group had members who had not adopted conservation measures, considered to be "irregular members". However, they were involved in other landcare activities. The group had no female members but most informants felt that male and female members of the community could have equal opportunities in landcare.

The development of the New Tupi 2 group was said to be enhanced by the democratic approach of its leader, meaning that members showed respect for other members' ideas and the group prepared and implemented plans together. This kind of leadership helped create group unity, which resulted in activities such as meetings, group work, and income-generating projects. Members also stated that their support for their leader contributed to the development of their group, along with the proper implementation of group policies. The main limiting factors were the personal problems of members and the migration of some members, resulting in decline in membership.

The benefits of landcare were the technologies learned through training events, the supply of seedlings, and the organisation of the group. They gained friends who made their work easier and faster because of additional manpower, and they acquired knowledge about conservation farming technologies that they applied in the development of their farms. Their needs were additional training to learn more technologies, and the improvement

of the road condition. They considered they needed the knowledge to improve their production and a good road to have a better market for their products.

The group members saw their group as one with continuous activities and one which could stand on its own, especially with regard to financing farm activities through their income-generating projects. They also believed that there would be an increase in membership after neighbours observed the improvement in members' farms. As a consequence, their livelihoods would be improved and they would be able to send their children to school.

MEDIUM ACCESSIBILITY, MEDIUM ACTIVITY—THE ABBOY TRIBAL LANDCARE GROUP

Abboy was one of the few *sitio* in Barangay Ned dominated by T'boli (60 per cent), though the population was still mixed with Ilonggo (30 per cent) and Cebuano (10 per cent). The *sitio* had 100 households with an average of 5 members. The average landholding was 3 hectares. Sixty per cent of holdings were owner-operated, 30 per cent operated by tenants, and 10 per cent by mortgagees. Farming was the main occupation, with maize, upland rice, and peanuts the major crops. The *sitio* was classified as of "medium accessibility": it was a two-hour journey on foot from Kibang, passing through Sitio Tafal, and like most *sitio* in Barangay Ned, it could be reached by motorcycle during dry weather. A number of organisations had projects in the *sitio* to assist the farmers in improving their livelihood. These included the *sitio* council, a water users' association, DAR, MBRLC, and Landcare, the last two promoting activities to do with farming and soil conservation.

The first landcare group in Abboy was formed through the efforts of the Landcare Facilitator in May 2000 with an initial membership of 14 farmers. However, this group was dissolved after some time due to the distance between the residences of members. From the original Abboy Landcare Group, three landcare groups were formed—Abboy Tribal, Abboy Ilonggo, and Abboy Makatin Landcare Groups. The first two groups were selected as case studies, Abboy Tribal as a "medium activity" group and Abboy Ilonggo as a "low activity" group. Both groups had influenced the Abboy community in the conservation of natural resources because of the contour farms the members had established, and which they encouraged other farmers to adopt.

Abboy Tribal Landcare Group was the only case study of a purely indigenous group. It was formed in October 2000 through the initiative of Mr. Villamor of Tafal, one of the farmer-facilitators employed by SEARCA, from whom the informants first heard about landcare. The group had an initial membership of 19, which it had maintained. Most of the group members were former members of the original Abboy Landcare Group.

The informants identified their group as active. Since its establishment, its members had been busy participating in group activities, including regular meetings, income-generating projects such as peanut production, establishment of a demonstration farm, and group work in their communal nursery, building a shelter shed, and assisting members in the development of individual farms. The members of the group had attained one of their major goals, which was to buy a chainsaw. They planned to develop a landcare cooperative to improve their economic status.

In conducting these activities, the group had encountered problems in convincing some members to adopt contour farming because the land was mortgaged or share-cropped. Another problem was lack of participation of some members because of their busy schedule on their own farms. To address these problems, the group approached the members concerned and tried to settle the issues. They continued encouraging non-adopter members and they set policies regarding attendance at group activities—members were required to pay P25 if they did not attend group work and those who were absent for three consecutive meetings were excluded from the group. The group did not have women members. Members felt that men and women did not have equal roles in landcare because women could not do hard work such as slashing, ploughing, and hauling.

Most of the informants had had a positive perception of landcare from the beginning, encouraging them to join the group. One member initially thought landcare was a "communist" program because of the coming and going of different people to meet with the farmers. However, his perception changed over time and he joined the group after observing that it was a good program. Members joined because of their perception that landcare could support them in the development of their farms, help them plant permanent crops, and alleviate poverty in the area. Most of them indicated that the opportunity to receive material benefits was a major reason for joining, together with the farming technologies taught. These expectations had already been realised.

According to most informants, the development of landcare in Abboy was enhanced by the vision of the group, which allowed them to develop income-generating projects. This vision also helped them to be united and to understand each other. Good leadership and the policies developed also played a major role in group development, as well as the assistance and support given to the group. Members reported that the farmer-facilitator had assisted them

through monitoring of the group's activities, sharing technologies learned from seminars and training like grafting and proper transplanting of seedlings, encouraging the farmers to adopt contour farming and to plant more trees, and providing advice to individual members. On the other hand, the factor that most limited the development of landcare in the *sitio* was the unavailability of community members to attend activities because of work in their farms and obligations in other organisations.

Factors that encouraged members' involvement in landcare activities were the material benefits and other support provided, and good leadership. However, members who did not own their farms felt restricted from participating in landcare activities, particularly the establishment of contour barriers. In some cases the negative attitude of other members also affected participation in group activities.

The perceived benefits of landcare membership included the provision of seedlings and the technologies learned through training and cross-site visits. This enabled members to develop their farms through contour farming, which helped preserve the soil and improve their livelihood. Members saw their farms in the future with the fruit trees already bearing and requiring less work because of the permanent crops. Others saw their farms as becoming small forests with increased bird-life. At the same time they saw their families becoming better off, with better housing, their children attending school, and better infrastructure in the *sitio*, such as a school, electricity, and accessibility to four-wheeled vehicles. They envisaged that these outcomes would result from the increased income of the members from the permanent crops they had planted. Most informants identified access to planting materials and more livelihood projects as the support needed for their group to continue and improve its operation. They anticipated a progressive landcare group in the future with more income-generating projects and better farm facilities.

MEDIUM ACCESSIBILITY, LOW ACTIVITY—THE ABBOY ILONGGO LANDCARE GROUP

Just like Abboy Tribal Landcare Group, the Ilonggo group was part of the original Abboy Landcare Group that separated in 2001 because of the difficulty in working with a large number of members, especially in arranging group work. The new group consisted of members belonging to the same extended family who were close neighbours. Since the houses of members were close to each other they were able to arrange regular activities. The group did not have women members but some informants believed that women had an equal role in landcare, though they lacked the strength to be involved in activities that required hard work such as ploughing and slashing.

During its initial stage, the members were busy with group activities, meeting every last Saturday of the month and undertaking group work in their nursery, constructing a shelter shed, and developing the farms of members. However, these activities were not continued. This was said to be because of poor leadership (their leader had a pessimistic and apathetic attitude), poor adoption of the technology, and poor attendance of members in landcare activities, despite a policy of imposing P50 fines on members who did not participate in group work.

Most of the informants joined the group because of their perception that landcare was a program about conservation farming from which they would learn practices to restore soil fertility and which would provide other benefits such as seedlings. They also believed that through landcare the economic condition of the people in the uplands would be improved. They reported that the farmer-facilitator was the one who helped the group in its activities. Specifically, the farmer-facilitator visited the individual farms of members twice a month and encouraged them to continue their activities and ignore the broken promises of the government and other institutions. Their involvement in group activities was motivated by the benefits they could obtain and the technologies they could learn, while lack of activities and poor leadership were the factors limiting their involvement.

Development of landcare In Abboy was seen to be enhanced by benefits for the community such as seedlings, technology, and more livelihood opportunities. Group unity and a vision for success would also enhance the development of landcare groups. However, in practice, lack of regular activities, poor leadership, and broken promises of the institutions concerned limited landcare development in the *sitio*.

Though the group had stopped its operation, informants enumerated the benefits they had obtained from landcare as training and cross-site visits, which had helped them learn farming technologies, and the provision of seedlings. Moreover, all informants expressed a positive outlook about their farm, their family, and the landcare group. Their farms would be improved because soil fertility was restored, the trees planted had become established, and some trees would bear fruit. These improvements would lead to increased income, helping them to meet the needs of their families and send their children to school. Improvements experienced by individual families would affect the community as a whole. The informants expressed interest in reviving their group through reorganisation. They

envisaged their group with more members and income-generating projects. For the group to fulfil its aspirations, the members needed more training in crop production, especially high-value crops, and provision of planting materials.

LOW ACCESSIBILITY, HIGH ACTIVITY—THE NEW CEBU (PUROK 1) LANDCARE GROUP

Sitio New Cebu was named after Cebu City because half its population was Cebuano. Most other inhabitants were Ilonggo, and there were some Manobo and others. The *sitio* had 300 households with an average household size of seven. It was four hours from Kibang by foot and could also be reached on horseback. During drier months motorcycles or jeepneys coming from Isulan via Lambak in Sultan Kudarat passed through the *sitio*. Farming was the main occupation of all the *sitio* residents. Farms averaged four hectares and almost all were owner-operated, whether held by CLOA (60 per cent) or purchased (30 per cent). Maize, upland rice, and peanuts were the most common crops; a few farmers also planted root crops and coffee.

Two landcare groups were formed in Sitio New Cebu. The first group was organised as a result of an orientation to the Landcare Program given by the Landcare Facilitator during a cooperative meeting that was attended by 30 farmers. In March 1999, a week after the orientation, the group was organised with an initial membership of nine. This was reduced to eight when one member transferred to another location. Another group was formed in November 2000 through the initiative of the farmers themselves, but this group did not last and was functional for only a few months.

The first group was categorised by the Landcare Facilitator as one with "high activity", which accorded with the rating given it by key informants. Up to June 2002 the group had regular activities, such as meetings, group work in its communal nursery and in the farms of members, and an income-generating project. In addition the group had also established policies requiring members to adopt contour farming, to plant trees every quarter, to establish a nursery, and to be active in landcare-related activities. The tree-planting and other landcare-related activities of the group helped improve the environment of Sitio New Cebu and this motivated other farmers to join. However, since June 2002 the group had not conducted any landcare activities. This was because the farmer-facilitator had stopped visiting the area, having finished his engagement with SEARCA, and the farmers were busy working on their individual farms.

Informants perceived landcare as a program to protect the soil against degradation through adoption of conservation farming technologies. They joined the group because they expected to learn farming technologies through training and to receive material benefits. They also expected the technologies adopted would have an impact on the families of individual members. In their view their expectations were met in that they were able to benefit from the farming technology, which they learned through training and cross-site visits, and the provision of seedlings. Hence they were educated about conservation farming and so were able to develop their farms.

Informants felt that the most important factor contributing to involvement in landcare activities was the aspiration of members to have more knowledge about farming technology, followed by group unity and the perception that landcare is a good program. Further development of landcare in the area would be enhanced by group unity and a close relationship among members, as expressed through group work and understanding of each other. The availability of materials and other benefits were also identified as enhancing factors. Factors limiting involvement of members in landcare were the busy schedule of members in their farms and the lack of organised landcare activities. Likewise, the development of landcare was seen to be restricted by the busy schedule of other community members in their farms and in other organisations. In addition, non-adoption of farming technology and lack of information were also said to limit the development of landcare.

Although the group had had no activities since June 2002, they were planning to revive their group. The members hoped their group would continue to exist and grow, with more income-generating projects. They also hoped to convince more farmers in the community to adopt conservation farming. To attain these goals, they would keep on maintaining the trees planted, then continue planting more trees and contouring more farms. They believed that, through this, soil loss would be reduced and their fruit trees would eventually bear fruit, which would increase farm incomes, help improve the well-being of their families and community, and enable them to send their children to school. To fulfil this plan they needed further support from government and non-government organisations, including

continual monitoring of their activities, financial and technical support to improve their farming, and improvement of the road condition for better marketing of their products.

LOW ACCESSIBILITY, MEDIUM ACTIVITY—THE BANDALA LANDCARE GROUP

Bandala was one of the remotest *sitio* in which the Landcare Program operated. It was at least four hours from Kibang by foot and could also be reached on horseback. The *sitio* had 43 households with an average of five members. The population comprised Ilonggo (35 per cent), Cebuano (25 per cent), T'boli (15 per cent), and other groups (25 per cent). Their occupation was exclusively farming. The average landholding was three hectares, and 90 per cent of holdings were owner-operated. The major crops were maize, upland rice, and peanuts. Due to the remoteness of the area and the small number of households, the only organisations operating in the *sitio* were religious organisations and Landcare.

The first landcare group in Bandala was formed in June 1999 after a farm demonstration of different vegetable crops conducted by the Landcare Facilitator. The group had an initial membership of 23 farmers but was reorganised into three groups because of the distance between members' homes. Two of the three groups ceased functioning. The remaining group had only three members of whom two were from the same household. According to the categorisation of the Landcare Facilitator the group was "moderately active". The members themselves regarded their group as active. Though the group did not conduct meetings (as they mostly belonged to one family), they did engage in some group work in their nursery and the farms of members. They had also had some demonstration farm activities when the larger group was still functional. In this group, men and women were said to be given equal opportunities, though women could only do those activities that did not require hard work.

Members interviewed joined the group to learn how to take care of and maintain their farms because they saw landcare as a program for sustainable agriculture that would help them develop their farms. They expected that from joining the group they could learn more farming technologies and be able to maintain their land. In their view these expectations had been met.

They were encouraged to be involved because of the benefits they realised, such as new technologies and fruit tree seedlings, together with the experience they gained from the landcare activities. Prior to the breakup of the original group, distance was one of the factors limiting the involvement of members. The difficulty of implementing the technologies was also a problem. Members felt landcare group formation in Bandala would be enhanced if there was greater unity among community members and more vision and determination. There was a need to develop people's interest in the program.

Landcare members expected that the benefits obtained through group membership would allow them to have better living conditions, particularly when their fruit trees were bearing, enabling them to send their children to school. However, they needed support from the government and other institutions in the form of a better health program and improvement of the road condition for better marketing of their products. They aspired for the group to increase in membership and remain functional for the next five or more years. They planned to convince more farmers to join the group and to share the conservation farming technology with other members of the community.

LOW ACCESSIBILITY, LOW ACTIVITY—THE SINANGAYAN ILONGGO LANDCARE GROUP

Sitio Sinangayan was one of the Tafal (Purok 4) Landcare Group's extension areas. The *sitio* could be reached on horseback or in three hours by foot from Sitio Kibang, placing it in the "low accessibility" category. In 2000 there was a total of 63 households in Sinangayan with an average of six members. There was an equal proportion of Ilonggo and T'boli. All of the lands in the *sitio* were owned by the residents, who held Certificates of Land Ownership Award (CLOA) issued by DAR. Farming was the main source of income and the average farm size was three hectares, with maize the major crop. Some farmers planted peanuts, banana, coffee, and upland rice in addition to maize. MBRLC, DAR and SEARCA all operated in the *sitio*. These organisations were considered to have contributed to the development of livelihoods in the community through the enhancement of farming skills.

Two landcare groups were formed in the *sitio*—the Sinangayan Ilonggo and the Sinangayan Tribal Landcare Groups. The Sinangayan Ilonggo group, the focus of this case study, was organised in June 2000 through the initiative of the Tafal (Purok 4) Landcare Group, particularly through its president, Mr. Igmedio Villamor. It had an initial membership of four, subsequently reduced to three. The three members included the president and a new member, Mr. Renato Indic, who was a farmer-facilitator and at the same time a member of the Tafal (Purok 4) Landcare Group. Two of the original members who were now inactive were interviewed as key informants together with the president.

The Sinangayan Tribal Landcare Group was organised in September 2001 through the facilitation of Mr. Indic. It had an initial membership of 10 but the group had ceased to exist because, as reported by the Landcare Facilitator, its members did not stay continuously in the area.

Most of the Sinangayan Ilonggo Landcare Group members heard about landcare in 1999 when they were invited by Mr. Villamor to his house in Tafal. He informed them about landcare and farm development and the benefits they could obtain. They were encouraged to join the Tafal Landcare Group but refused because Sinangayan was quite far from Tafal. Instead, they formed their own group in Sinangayan under the guidance of the Tafal group.

Informants saw landcare as a program about farming technology and soil conservation. Most of them joined the group because they expected to learn more about farm development and receive fruit and timber seedlings that they could plant in their farms. These initial expectations were met in that they were able to plant fruit and timber trees, attended training about farm technologies, and contoured their farms. They acknowledged the assistance provided by Mr. Villamor and Mr. Indic in teaching them nursery management, contour establishment, and other farming technologies. However, one informant complained that Mr. Indic, the group's farmer-facilitator, never visited him nor provided advice.

At first the group held meetings every last Friday of the month and conducted various activities such as establishing a communal nursery, constructing a shelter shed, and working together on the farms of its members. The formation of the group assisted the members to implement conservation measures more easily through the additional manpower provided by other members of the group. Other members of the community also established contour farms, having been influenced by seeing the contour farms established by group members. Initially the members participated actively, especially when establishing their nursery and the shelter shed. However, group activities started to decline and finally ceased in July 2002, hence its "low activity" classification in Table 5.1.

The factors identified as enhancing the development of the landcare group in Sinangayan were projects such as constructing the shelter shed, the group's determination and vision, and the interest of members in the benefits that could be obtained. Members' participation was motivated by receiving benefits such as seedlings, and a desire to improve conditions for their families, especially to send their children to school. On the other hand, the factors limiting the development of landcare in the area were said to be the attitude of their leader in dealing with members, weak leadership, uncooperative members, weak implementation of policies, and the other commitments of members. Members were often discouraged from participating because of their busy schedule and the poor leadership. Some felt the leader lacked leadership skills, was not up-to-date with members' activities, and sometimes did not attend landcare activities himself.

Thus the group encountered problems with the attendance of members. Policies were formulated to address this issue, including that members who were absent on three consecutive occasions would be expelled from the group. However, this was not able to improve the group or even keep the group together. Two of the four original members withdrew because they were not able to participate in group activities. Group activities continued to decline and finally ceased altogether. The informants considered their group inactive as they had no landcare activities. Despite the inactive status of the group, the leader was still interested and believed the group could be revived. However, others felt that the revival of the group's activities would depend on how well the leader managed and facilitated the group.

Nevertheless, most of the informants saw themselves having better living conditions in the future because their farms would be improved, the trees they had planted would bear fruit, and their income would increase. They believed that they would escape from poverty as a result of their activities in landcare, specifically the planting of fruit trees. They would just visit their tree farms from time to time rather than working continuously as now. In brief, they saw a more developed Sinangayan with more people in the future. For them to fulfil this vision they identified the need for support from government and other agencies, including fruit tree seedlings, training in farming technologies, and facilitation to reorganise the landcare group. All the informants expressed an interest to revive the landcare group by organising a meeting to discuss the problems and make a plan to attain the group's goals and increase membership.

6 SUMMARY AND CONCLUSION

This report has presented the results of a study to evaluate the impact of the Landcare Program in Barangay Ned and its relevance as a model for local and regional extension services in the uplands of South Cotabato. The study focused on two key indicators of impact—the adoption of conservation practices and the formation and development of landcare groups. These impacts were seen to be critical to the achievement of the longer-term outcomes of rural poverty reduction and environmental conservation. The study drew on three sources of data, collected and analysed during July-December 2002: (1) project reports and statistics and interviews with project staff and other key informants; (2) a two-stage questionnaire survey of 313 farm households; and (3) nine case studies of community landcare groups. The sustainable rural livelihoods approach was used as a framework to organise and analyse data relating to the diverse circumstances of farm households in the Landcare Program. It has the advantage that it places the adoption of landcare practices and the formation of landcare groups within the context of the livelihood resources and strategies of farm households and local communities, thus explicitly linking rural development and natural resource management. Following Scoones (1998) and Ellis (2000), the key research question in the analysis of sustainable rural livelihoods is: "Given a particular *context*, what combination of *livelihood resources* results in the ability to follow what combination of *livelihood strategies* with what *outcomes* for both livelihood security and environmental sustainability?" This chapter summarises the main findings of the study and outlines some provisional conclusions as a basis for further discussion.

THE CONTEXT

Barangay Ned, though part of Lake Sebu Muncipality, was an atypical *barangay*, given its size and relative isolation from the municipal centre, and was on the way to becoming a municipality in its own right. It encompassed an area of over 41,000 ha, comprising the Ned Settlement Area (22,000 ha) and the Tasaday Reservation (19,000 ha). In 2000 it had a total population of nearly 15,000, grouped into 30 *sitio*. The population density in the settlement area averaged around 65 persons per sq. km, but was higher in the northern half of the area, which had primitive road access.

Baranagy Ned was established in 1962, but poor accessibility and lack of security hindered development until the early 1980s. It was originally part of the T'boli homelands but, from the 1980s, Ilonggo and other settlers moved in an acquired land, leaving the T'boli in the minority. In the 1990s the Department of Agrarian Reform (DAR) allocated titles to 5,575 beneficiaries occupying 16,700 ha, or 75 per cent of the settlement area. DAR also took responsibility for coordinating rural development in Ned, and contracted SEARCA in 1992 to implement the Ned Agro-Industrial Development Project (NAIDP), which included a component promoting conservation farming.

The climate in Ned was characterised by abundant rainfall (averaging 2,200 mm) uniformly distributed throughout the year, high levels of humidity and cloudiness, and moderate temperatures (averaging 21°C) due to an average elevation of 900 m. Hence continuous cultivation was feasible and a wide range of tropical and temperate crops could be grown. The terrain was rolling to mountainous, with dominant slopes of 12-40 per cent. The soils were predominantly neutral to acidic sandy-loams with a clay B horizon, of low to moderate fertility, and highly susceptible to erosion. Permanent cropland accounted for about 14,000 ha (64 per cent of the settlement area), including maize (8,000 ha), rice (2,000 ha), and other crops (4,000 ha). Grassland accounted for about 2,750 ha (12 per cent), and forest land (mainly degraded forest with small pockets of primary forest) for perhaps 4,500 ha (20 per cent).

Sitio Kibang, site of the DAR office in the northern part of Barangay Ned, was located roughly 110 km from Koronadal, the capital of South Cotabato, and just over 60 km from Isulan in Sultan Kudarat, the nearest market centre. Access was via a former logging road, which became impassable after heavy rain. Large trucks, jeepneys, and motorcycles plied this route, but transportation was limited to motorcycles when road conditions deteriorated. Maize, the main commodity produced, was sold to traders in Kibang or directly to Isulan, where prices were 30-40 per cent higher. Likewise, fertiliser, the main farm input used, was purchased from local traders or in Isulan, with a similar price differential. The margins largely reflected the high transport costs.

The remote location and inaccessibility of the *barangay* had hampered the development of infrastructure and services. Hence the population was without telephones or electricity (apart from the few with their own generators). Only six *sitio* had piped water. There were nine health centres, 12 elementary schools, and two high schools. Marketing services were provided by a few private traders and small shopkeepers. There were six functioning cooperatives in the northern *sitio*, three of which dealt with farm produce as well as consumables. Short-term seasonal credit was available for farm inputs, at interest rates of 5-25 per cent per month, as well as for consumption needs. Larger and longer-term capital requirements were often financed by mortgaging land.

Employment was largely confined to agriculture, whether on- or off-farm; there was little non-farm employment in

the *barangay*. While most farmers had titles to their land (Certificates of Land Ownership Award), issued by DAR in the 1990s, the tenure situation was complex and dynamic. Despite a ten-year restriction on the sale of CLOA, informal transactions had taken place and were accepted in the community. Some landowners had rented part or all of their land to tenants under a share-cropping arrangement. In other cases the land was mortgaged, with the mortgagee, the mortgagor, or a tenant farming the land. Hence a significant proportion of farmers were not owner-operators.

Though shifting cultivation of rice was once dominant, by the 1990s the farming systems of both indigenous and migrant farmers involved continuous cultivation of maize and (to a lesser degree) upland rice. Use of hybrid maize seed and inorganic fertiliser was increasing. The typical cropping pattern involved two croppings per year, with upland rice or maize cultivated in the first cropping and maize in the second. Maize was mainly cultivated for sale, while upland rice was mainly cultivated for home consumption, though maize was also consumed as a staple.

Neither maize nor upland rice cultivation involved the use of soil conservation measures until NAIDP's introduction of contour hedgerows or Sloping Agricultural Land Technology (SALT) in the mid-1990s, which over 100 farmers had at least partially adopted. An on-farm research project (ACIAR Project 9220) also contributed to awareness of improved practices for steeplands. The Mindanao Baptist Rural Life Centre (MBRLC) established a presence in some of the more remote *sitio* and also promoted adoption of SALT.

The difficult marketing environment had limited agricultural diversification. Taro, peanuts, and beans were cultivated to a limited extent. Bananas were grown extensively, but only for the local market. Limited development of bunded rice fields had occurred along stream margins. Tree crops such as coffee, cocoa, and fruit trees had been planted on a limited scale. Many households raised *carabao*, horses, and chickens, while pigs and goats were raised by a smaller number of households.

Barangay Ned thus provided a unique challenge for the Landcare Program. On the one hand, the site imposed severe limitations. The rural landscape had undergone rapid transformation due to the combined effects of shifting cultivation, logging, and land clearance, exposing the soil to severe degradation. Increasing population density and isolation from markets dictated a farming system based on continuous cultivation of cereals, especially maize, which served as the only cash crop and increasingly as a substitute staple for rice. Farmers were poor, with little education, mostly lacking in experience of this upland environment, and not highly organised, relying on face-to-face contacts in small clan groupings and local neighbourhoods for support. Though aware of soil erosion they lacked the knowledge and means to combat it. On the other hand, the site's considerable agricultural potential, the dynamism characteristic of a frontier settler society, and the relative lack of previous intervention by agencies providing agricultural research and extension, meant the Landcare Program could expect to make a significant impact.

THE LANDCARE PROGRAM

The Landcare Program was well placed to build on the conservation farming component of the NAIDP and the on-farm research of ACIAR Project 9220. As the implementing agency for both projects, SEARCA could provide institutional continuity for the Landcare Program, including first-hand awareness of the successes and failures of the previous efforts. Most important, the Landcare Facilitator had five years experience working for Project 9220, developing and testing new farming practices with farmers and researchers. Thus the legacy of the two previous projects was that:

- the Facilitator had considerable locally-validated technical expertise, as well as credibility in the farming community;
- there was already a pool of farmers around Kibang who had adopted contour hedgerows, experimented with alternative annual and perennial crops, and learned the benefits of working and learning together in small groups; and
- there was experience in working with part-time, paid farmer-trainers.

As part of the larger ACIAR Landcare Project, the Ned Landcare Program brought two new emphases—the promotion of natural vegetative strips (NVS) as a simpler, lower-cost alternative to legume hedgerows, and the formation of community landcare groups (as well as a Landcare Association and Landcare Advisory Group). Apart from the emphasis on groups, the Landcare Program was primarily a program of extension and training in technical aspects of farm development, including conservation measures and the establishment of new crops. Initially the Program emphasised the temperate vegetable crops that Project 9220 had trialed, but as problems of pest management and marketing emerged, and as previously planted fruit trees began to bear, the emphasis shifted to perennials—first coffee, then increasingly durian and other fruit trees. Farmers' interest in acquiring planting materials and technical knowledge for crop diversification was used as the "hook" to encourage both adoption of conservation

measures and membership of landcare groups. This strategy was highly successful—many landcare groups were formed and most landcare members established contour barriers on their farms.

There was rapid formation of landcare groups over the first three years of the Landcare Program, but at a declining rate. Whereas the Landcare Facilitator had initiated most of the groups formed in the first 12-18 months of the project, the appointment of part-time farmer-facilitators in mid-2000 meant that they took most responsibility for forming and supporting groups from that time, working as intermediaries between the Landcare Facilitator and the groups. Farmers also formed groups on their own, and in some cases helped neighbouring groups to get established. The growth in total Landcare membership followed a similar path to the total number of groups, meaning there was no overall growth in the size of groups. Larger *sitio*-level groups tended to break up into smaller *purok*-level groups, reducing the costs to members of participation in meetings and group work, though some of these groups lacked leadership and lost momentum. Security problems in the south of the *barangay* disrupted some groups.

There was a steady rate of adoption of contour barriers by landcare group members—about 50 ha a year. In most cases group activities (such as meetings and group work) declined once most members had been helped to implement contour barriers. The ongoing interest in fruit tree production was largely met through establishment of individual rather than group nurseries, though Landcare membership provided access to group training events and assistance from facilitators. However, a few groups had developed sufficient momentum to move beyond the initial focus on conservation farming, developing their own projects to meet the needs of members for cheaper farm inputs and medicines.

The training provided to landcare groups appeared to decline over time, which may have been one reason for the general decline in group activity. The training was mainly technical, dealing with contour farming, vegetable production, and propagation and establishment of perennials, though there was an increase in the number of training events dealing with group organisation and facilitation.

The Ned Landcare Association (NLCA), formed in 1999, comprised the leader of each landcare group as well as the Landcare Facilitator and staff of DAR and MBRLC. It was an active association, no doubt helped by the involvement of the Facilitator. It met quarterly to exchange information, planned and organised *barangay*-wide landcare activities, and took initiatives on behalf of the landcare groups, securing grants and loans for nursery materials and seeds. A Landcare Advisory Group was established but probably added little to the informal linkages developed by the Landcare Facilitator. Other institutions provided minimal support, though the MBRLC collaborated closely with the Landcare Program.

Linkages with local government units (LGU) were relatively weak. Officers of the Barangay Council gave little attention to Landcare, though more recently there were moves by landcare leaders to get representation on the Council, and the Landcare Association had secured a grant from the Council. As Barangay Ned was remote from the municipal LGU, the mayor and other officials knew little about the Landcare Program. Though officials felt that landcare activities complemented the goals of the LGU and had apparently been very effective in Ned, there was some concern that landcare technologies were too costly for most farmers and that the program was distributing publicly-funded planting materials in an inequitable way, favouring landcare members. However, they felt that to implement

The changing nature of the Ned landscape

Ned landcare groups continue to work together to conserve their soils and improve their livelihoods

the Landcare Program uniformly throughout Lake Sebu would require financial and technical capability that the LGU currently lacked.

This perception may have been well founded, given that the total costs of implementing the Landcare Program in Barangay Ned were around P610,000 ($A17,500) per year, including salaries and allowances of landcare facilitators (59 per cent), non-salary expenditure such as transportation and supplies (33 per cent), and inputs for farmers (8 per cent). If the Program were to be implemented throughout Lake Sebu Municipality, perhaps twice this figure would be required, given that Barangay Ned accounted for almost half the population in the municipality. However, a lower-cost option may be to mobilise existing agricultural technicians through training, institutional support, and additional travel allowances.

IMPACTS OF THE PROGRAM: THE FARM SURVEY

Based on the household survey, over a third of farmers in Barangay Ned (38 per cent) had adopted conservation measures (vegetative barriers, physical barriers, and/or tree planting), affecting about 16 per cent of the total cultivated area. In most cases the adopted measures were considered effective in controlling erosion and had been maintained or expanded. Further expansion of vegetative or physical barriers on adopters' farms was slow, but expansion of tree planting, especially fruit trees, was underway. There was evidence that diffusion of conservation practices to additional farmers was still occurring.

The primary reasons for adopting (or planning to adopt) conservation measures were to control erosion and restore soil fertility. Prospective adopters were also hoping to receive benefits from the Landcare Program, especially fruit tree seedlings. The main reasons for not yet adopting were the lack of time or interest, the perceived difficulty of maintaining contour hedgerows, and lack of ownership rights to the land.

A comparison between adopters and non-adopters suggested that age, education, gender, place of origin, farming experience in the region, availability of family labour for farm work, engagement in off-farm employment, and accessibility to the market centre and to extension personnel were not in themselves major factors in the adoption decision. Farmers with larger farms who owned part or all of their farms were more likely to be adopters, though the relationship between farm size, tenure and adoption was quite complex.

Non-adopters seemed as aware of soil erosion as adopters. The main difference between adopters and non-adopters was that more of the former had acquired knowledge of conservation measures, mostly within the previous eight years. This had occurred primarily through formal training events arranged by SEARCA and other agencies, and through observation of other farms.

Farmers' perceptions of trends within their farming operations gave some insight into the impact of adopting conservation measures. Adoption was associated with

Ned landcare members enjoy their success with the landcare facilitator and visitors from Australian landcare

relatively favourable net trends in maize yield (though not in total maize output), soil loss, soil fertility, use of fertiliser, forage supply, and the planting of fruit trees. However, adoption was also associated with an increased workload for men and did not result in a clear trend in farm cash income.

The Landcare Program was widely known and about 25 per cent of the farmers surveyed were members of a landcare group. Landcare membership was positively associated with adoption (51 per cent of adopters were landcare members compared with only 8 per cent of non-adopters). However, membership in itself was neither necessary nor sufficient to induce adoption of conservation practices—almost half the adopters were not landcare members and over 20 per cent of landcare members were not adopters. This suggests that extension and training, and observation of neighbouring farms, were more influential in encouraging farmers to adopt conservation measures than landcare membership per se. Landcare members were more likely to have participated in formal training and cross-farm visits, however in some cases this would have preceded rather than followed the formation or joining of a landcare group.

The main reasons for joining a landcare group were economic—to learn about farm technologies and receive benefits such as tree seedlings. Secondary reasons were social in nature—to have a group of friends and attend meetings. Where problems were encountered they centred on misunderstandings, poor communication, lack of participation, and disunity within the group, all related to lack of leadership or regular contact with a facilitator. In some cases this had led to members dropping out or the group disbanding. Non-members generally felt they were too busy to join or that there was no point as they were not landowners.

IMPACTS OF THE PROGRAM: THE CASE STUDIES

Case studies were conducted of nine community landcare groups, selected to represent different levels of activity and accessibility. The cases displayed a wide diversity of experiences, but with some common themes. The communities (*sitio*) in which the landcare groups were located ranged in size from 40 to 450 households. In general, the more accessible communities had larger populations, except for New Cebu, a relatively remote community with 300 households. Most communities comprised a mixture of ethnic groups, with immigrant Ilonggo populations dominating. Only Abboy had an indigenous (i.e., T'boli) majority, though T'boli were present in other communities in significant numbers. Farms were reported to average three to four hectares, consistent with the survey results. The incidence of tenancy varied from 10 per cent to 30-40 per cent, also consistent with the survey. Maize was the dominant crop throughout, with farmers in some communities planting upland rice, peanuts, vegetables, coffee, or fruit trees. Local government organisation was not particularly effective, especially in the more remote communities, but other organisations were present, including groups like MBRLC. Some communities had active multipurpose cooperatives.

There was a general pattern in the formation and evolution of the case study groups. The Landcare Facilitator conducted an information campaign in 1999, even before the formal commencement of the ACIAR Landcare Project, utilising networks established during the NAIDP and ACIAR 9220 projects and the regular meetings of the cooperatives. There was generally a quick response to this campaign, with groups of up to 30 members forming in a number of *sitio* (though even at this stage the membership comprised a minority of the community). However, these groups found difficulty in operating, largely due to their size and the distance between members' houses and farms. Hence group work was hard to organise and the incentive for shirking was high. The groups then decided to sub-divide or merely dissolved. Smaller groups, based on neighbourhoods or *purok*, were formed. In the case of Kibang this had occurred from the outset. Membership mostly ranged from three to 13, with the Abboy Tribal group the largest at 19. The effectiveness of the groups was enhanced by the smaller and more localised membership, e.g., the Tafal (Purok 4) Landcare Group, with a membership of only seven, included a farmer-facilitator and two newly-elected members of the Barangay Council and was the most active group in the program. However, some of the smaller groups also ceased functioning, apparently lacking the leadership or degree of cooperation needed to sustain their activities. Apart from the groups formed directly or indirectly through the efforts of the Landcare Facilitator, other groups were formed as a result of the activities of the part-time farmer-facilitators employed by the Landcare Program, and the Tafal (Purok 4) group itself established three groups in other *sitio*, though they were not very strong. Regardless of the mode of formation, membership of the groups remained low; Kibang (Purok 1) grew from nine to 13 members but most other groups did not increase in size and some declined.

Initial perceptions of the Landcare Program were mostly quite accurate. Farmers saw it as a program promoting improved soil management through contour farming and the introduction of new, potentially more valuable crops than maize—first temperate vegetables, then, when these proved difficult to grow and market, fruit trees. These two

components were intentionally linked in the Landcare Program, with establishment of vegetative contour barriers (hedgerows or natural vegetative strips) a prerequisite to disbursement of planting materials for new crops. Farmers closer to Kibang saw landcare as a continuation of the preceding projects, which had also emphasised contour hedgerows. A few were suspicious of the small group meetings and the coming and going of outsiders, regarding landcare as a "communist" program, but the activities of group members soon allayed their fears. Based on their perceptions, members were motivated to join a landcare group as a way to learn contour farming and nursery techniques, and to receive planting materials. Most saw that developing their farms with conservation measures and perennial crops would raise their incomes in the long term and thus improve their level of living, enabling them to send their children to school and make other improvements to their living conditions. Some were also motivated directly by the perceived benefits of working together in groups.

Most of the case study groups embarked on a similar range of activities, no doubt influenced by the advice of the Landcare Facilitator and the farmer-facilitators. Officers were appointed; monthly meetings were held; members engaged in group work (*dagyaw*) on each others' farms to establish contour barriers and perform other tasks; they constructed a communal nursery to propagate hedgerow species, vegetable crops, and fruit and timber seedlings; and they constructed a community shelter shed, also used for group meetings. Most groups, having completed these activities, became less active, though informants argued they could easily reactivate their group if required. The more active groups went on to organise additional income-generating projects, which included:

- hiring themselves out for farm work, growing and selling peanuts, and raising pigs for sale, all to raise funds for the group;
- pooling these group resources to buy fertiliser, which was then provided to members on credit at cheaper prices than in the market; and
- establishing a local store for cheaper medicines.

Some also engaged in community work such as planting trees in the *sitio* plaza or promoting landcare to other *sitio*. However, in most groups, even the relatively "active" ones, activities had dropped off since mid-2002. This was partly due to the termination of some farmer-facilitators, and partly to a general loss of impetus, especially where no new projects had been initiated. Yet, as noted above, even "inactive" groups claimed they could mobilise at short notice if needed.

The participation of members was a key issue for all groups. The factors identified by informants as encouraging participation, hence group development, were: good leadership (meaning a positive attitude, active involvement, and a democratic approach to group management); regular support from a farmer-facilitator; maintaining good relations within the group; establishing clear goals; organising successful group activities, including group work and cross-site visits; and developing new projects once the initial goals had been met. Most case-study groups consisted mainly or entirely of men. Their view was that women could participate in and benefit from landcare activities, but not in heavy physical work such as ploughing, contouring, slashing, and hauling. Hence women's involvement was confined to meetings and lighter tasks, perhaps including nursery work.

The major obstacles to participation were said to be due to: members being too busy in their farms or in other organisations; planned activities being postponed or cancelled; a lack of leadership or poor support from the farmer-facilitator; and declining need once members' farms were developed. In some cases members did not participate in farm development activities because they were tenants or mortgagees. Lack of participation or absenteeism was itself seen as an obstacle to participation as other members became discouraged or resentful, precipitating a downward spiral in group activity.

Most groups established rules to deal with lack of participation in activities, typically including a P25-50 fine for absences and a "three strike" rule, with expulsion from the group as the ultimate penalty. Tafal (Purok 4) had made a rule prohibiting negative remarks about members, and New Cebu had policies requiring members to adopt contour farming, to plant trees every quarter, to establish a nursery, and to be active in landcare-related activities. Such policies and rules were considered effective in the "active" groups but ineffective or even counter-productive in the "less active" groups, some members withdrawing because of the pressure of their other commitments.

Three broad impacts or benefits of the Landcare Program were identified:

- Farmers acquired knowledge of conservation farming, specifically contour hedgerows or natural vegetative strips, and were assisted to implement these measures on their farms.
- Farmers learned nursery techniques and were provided with planting materials for fruit and other tree species.

- Landcare groups were formed, making for easier organisation of the local community to achieve collective benefits.

In most cases this third category included group work to develop members' farms, as summarised under the first and second categories, but the more active and successful groups emphasised the wider benefits of promoting closer working relations in the community, including a new ability to express issues and needs and an ability to identify and develop new projects which went beyond farm development. The first two impacts were regarded as important even in cases where the group had ceased functioning; in fact, farmers may have realised these benefits even without participating in a landcare group. The third impact was clearly contingent on the formation and continuing viability of the group.

The future that farmers envisaged, and to which they aspired, was remarkably similar across the case studies. It was seen to be highly dependent on the contour farming and tree-planting strategy. Through this, the soil (even the natural ecosystem as a whole) would be conserved, on-farm work requirements reduced, and household incomes increased. This would improve their level of living, enabling them to educate their children and invest in other improvements to their community. Most informants hoped to maintain or revive their landcare group as part of this strategy (though a desire to please the interviewer in this respect may be surmised). However, even the most active groups identified the need for external assistance, including that provided by the Landcare Program or other non-government organisations (group facilitation and supervision, farmer training, and supply of planting materials) and infrastructure development provided by government agencies (more and better roads, schools, and healthcare facilities).

LANDCARE AND LIVELIHOODS

From a sustainable livelihoods perspective, the farming community in Ned was severely lacking in access to physical, financial, human, and social capital, and as a consequence was rapidly depleting its natural capital. The dominant livelihood strategy from the early 1980s had been one of migration into the Ned Settlement Area, extensification through land clearing, followed by intensification of the farming system, with very little opportunity for on- or off-farm diversification. For indigenous farmers, the opening up of their lands to logging and settlement had also necessitated a strategy of agricultural intensification. The main institution mediating access to resources had been DAR, allocating equal-sized lots to agrarian reform beneficiaries. However, informal land and capital markets developed, leading to a rapidly growing inequality in access to land. The result was differential livelihood outcomes for different classes of farm household, especially owners and tenants. Though outcomes varied, for many households livelihood security was not assured and environmental sustainability was also under threat. Hence there was a ready interest in the Landcare Program's twin emphasis on soil conservation and developing new livelihood activities.

Building on previous project experience in Ned, the Landcare Program became an important new element in the farmers' institutional environment, particularly in the form of the resident Landcare Facilitator, whose commitment, skills, and local reputation were crucial to the Program's success. The Program targeted:

- the training of farmers in soil conservation (especially NVS) and agroforestry, with a high degree of involvement of farmer-adopters in the training process; and
- the formation of landcare groups, linked in a landcare association.

In other words, the Program focused on building human capital (in the form of knowledge and skills to implement soil conservation measures and other farm improvements) and social capital (both within and between local groups). The Program provided little in the form of financial capital, though planting materials were an important input. In evaluating the Program it is important to assess the relative importance of these different forms of capital investment, and their interrelationships.

The evidence suggests that the enhancement of human capital was the key to the rapid adoption of soil conservation measures. While adoption was positively associated with farm size and ownership, the main distinguishing feature of adopters was their exposure to training. The practical, farmer-to-farmer nature of this training was the key to its effectiveness, combined with the relative simplicity and effectiveness of the contour farming technology promoted. While soil conservation was a primary focus of landcare training activities, farmers were at least as interested in accessing new livelihood opportunities, principally through planting fruit and timber species in their contoured farms. Linking adoption of conservation measures to these new opportunities was an effective strategy.

The building of social capital was apparently of secondary importance in the short term but was likely to be important to the long-term sustainability of the Program. Though formation of landcare groups assisted members to learn about and implement conservation practices, membership of a landcare group in itself was neither necessary nor sufficient to induce adoption of these practices—many adopters were not landcare members and not all landcare members were adopters. Those farmers who joined landcare groups did so primarily to access training, technical advice, and assistance (e.g., with planting materials), that is, to augment their human and financial capital.

It is true that many farmers learned the conservation practices directly from their neighbours, suggesting a spillover effect of landcare membership. Moreover, some landcare groups developed a dynamism of their own, identifying new needs and organising activities to meet those needs. In these cases the social capital created through the Landcare Program had enhanced farmers' capacity to address a range of livelihood issues. However, most groups became less active once members had been assisted to contour their farms. Some groups disbanded because of internal conflicts or external changes. The personal qualities of the group leader were a key factor in maintaining and expanding the group's activities, along with the degree of contact and support from landcare facilitators (including farmer-facilitators). Thus the social capital created was not always durable and needed on-going maintenance. Nevertheless, some members of apparently defunct groups suggested that because group members were close neighbours or kin, they could readily re-activate the group if there was a perceived need.

The Landcare Association, working on behalf of the local groups and in conjunction with the Landcare Facilitator, was influential in organising training and accessing outside resources, e.g., from local and provincial government. This may represent a more important form of social capital in the long run, though the Association clearly depended on viable local groups for its membership. The support of local government units (LGUs) at the *barangay* and municipal levels that was evident in the Claveria Landcare Program was not found to the same degree in Ned. This did not appear to have hindered landcare activities and may in fact have encouraged the Association leaders to organise, including the mobilisation of political support. However, the presence of a strong facilitating institution (SEARCA) was essential, offsetting the immediate need for partnership with LGUs.

The outcomes of the Landcare Program for both livelihood security and environmental sustainability were not easy to establish. There was clear evidence that adoption of the recommended conservation practices had a significant impact on reducing soil erosion, hence on maintaining farmers' natural capital. The catchment-wide impacts remain to be investigated. Although these wider impacts are likely to have been positive, with only 16 per cent of the total cultivated area under conservation measures the total impact would not have been great. The impact on farm incomes was not obvious in the short term and was likely to be primarily a function of the changed cropping practices implemented on the contoured farms, that is, the diversification of livelihood activities. The full realisation of these livelihood benefits will depend to a large degree on continuing investment in physical capital in the form of improved transport infrastructure, something that is beyond the scope of the Landcare Program.

6

Summary and conclusion

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