

Collective action to which markets? AT SAL in the Philippines

Delia Catacutan, Manuel Bertomeu, Lyndon Arbes, Caroline Duque, and Novie Butra

*The Agroforestry Tree Seeds Association of Lantapan (ATSAL) in Bukidnon province, southern Philippines was organized in 1998, facilitated by the World Agroforestry Centre (ICRAF). Farmers were trained on germplasm collection, processing and marketing of agroforestry tree seeds and seedlings. AT SAL has been marketing various tree seeds and seedlings with apparent success. It also provided training on seed collection and nursery management to farmers, government technicians, and workers from non-government organizations (NGOs). This paper reports on the initial results of an on-going study to assess the effectiveness of AT SAL's marketing strategy, including group dynamics, and the issues and challenges the group face. It was found that during the first two years, AT SAL's market share of greatly demanded timber tree species, e.g., *Maesopsis eminii* increased significantly, thus helping to disseminate widely these important species among farmers. ICRAF's technical back-up was an advantage, increasing the Association's market credibility. Subsequently, AT SAL extended its market to the central Philippines, but failed to meet the demand of seeds due to organizational limitations. Market competition exists, where a non-member was able to take a large market share than was the group. Nonetheless, AT SAL has established its name as a viable community-based seed and seedling producer, maintaining a stronghold in local and regional markets. Collective action is important for smallholders to break in, and gain market access, but is unlikely to sustain without effective leadership and on-going facilitation, thus requiring expenditures on "repairs and maintenance" through continuous technical and leadership training for the collective, and technical back-up and facilitation by an intermediary. Finally, organizing smallholder collective action is essentially an arduous task, requiring the supporting agency to hold a firm grasp of market realities, to invest in the maintenance of social capital, to provide continuous technical back-up, and to ascertain the conditions that make collective action succeed.*

Keywords: collective action, niche marketing, agroforestry seeds

1. INTRODUCTION

MARKETING THROUGH COLLECTIVE ACTION

Collective action is seen in many community-level efforts in agriculture and natural resource management—from technology dissemination, promotion and protection of resource rights, and accessing information of new technologies, credit and marketing. In its ability to enhance social capital, collective action can wield, albeit, the limited power of smallholders to access better markets of farm products. This occurs through a process of building common objectives which identify the group, and of magnifying the voice of individuals via the collective (Knox-McCulloch et al. 1998). However, collective actions vary in form and use-- their effectiveness depends on idiosyncratic behaviors of individuals forming it (Anderson et al. 1997), and the circumstances external to them. Knox-McCulloch et al. (1998) add that different forms of collective action and social capital are needed depending on whether risks are idiosyncratic or covariate.

The context in which small-scale community collective for marketing takes place, and the direction of their actions generally emanate from the economic and social benefits that members can obtain

from their investments (Swallow et al. 2001). Farmers are persuaded to organize themselves when there are opportunities to improve their farms and the economic welfare of their family. Their participation and contribution is often relative to the benefit they can get from collective good. They work together to produce mutual benefit for the group when the return is sufficient enough to cover their individual costs. All these involve high levels of trust, commitment and cooperation, which form the basis of social capital (Meinzen-Dick et al. 2004; Knox-McCulloch et al. 1998). Viewed in these terms, collective action is a positive consequence of social capital.

However, conflicts within the collective often arise since the distribution of responsibilities and collective benefits is not always equal. Even if bounded by a shared goal the competition of individual and common interests is still prevalent in any collective (Ostrom 1990; Swallow et al. 2001). Because members can further act their individual interest easily, they sometimes tend to devote few resources for their common interest. This competition is akin to that of a free market where members maximize self-interest for personal economic benefit (Olson 1971). Olson (1971) further mentioned that some members who see no incentive to actively cooperate, takes advantage of other members by making them carry most of the tasks. Leaders often bear a large part of these costs because they have the resources and capabilities. Members with no resources on the other hand, opt for the free rider strategy where they benefit the collective good with little contribution. Because of this, reaching the limits of compatibility within the collective is possible, which may result to its collapse. Thus, effective feedback and communication among members is very important to repair, maintain or enhance collective actions.

Marketing mobilized within the smallest political units (e.g. villages) stimulates the most collective action, often with only ten to twenty members (Swallow et al. 2001). The barriers in mobilizing labor and access to resources for profitable group actions, which are of great concern, are easily addressed because of the relative cohesion of members in the collective. While other groups work to scale up, some are only interested in small number of members for better coordination (Schumacher 1973) and for substantial portions of economic benefits received. Maintaining small groups reduces externalities, and facilitates better feedback and interactions within. However, not all successful marketing collectives take place at this very local level (Meinzen-Dick et al. 2004). It varies depending on the scope of the marketing program, but the bigger the group, the greater it needs external mediation.

Collective marketing facilitates meeting market demand, reduces the costs of getting the products to the market and also improves the bargaining power of farmers (Johnson et al. 2002; Knox-McCulloch 1998; Agarwal 1994). This implies competitive advantage for farmers, but collective marketing is not likely to be enough to allow smallholders to fully take advantage of market breaks. There are other important considerations. Being attentive to market signals and opportunities is one important consideration, and this is something external organizations can do best for collective action, because they can easily link farmers to wider economic networks (Swallow et al. 2001).

Internal behaviors and relationships of individual members are important, but external support networks are also keys for success. External organizations, like governments and non-government organizations (NGOs) can assist collective actions through policy, technology and institutional innovations. They help build the technical and business skills of farmers, which in turn improves their competitiveness. However, a World Bank review revealed that external organizations can also hinder the growth of collective action (Hussi et al. 1993). In some cases, they act as filters or barriers from outside entities perceived to be detrimental while also blocking useful contacts.

Overall, the success and sustainability of collective marketing is a function of not only the supply and demand of produce, but also the coordinated actions of individual members and the support from external organizations. Other important determinants for its success include clearly bounded goals, clear set of rules and obligations, monitoring, commercial activities, mechanism for conflict management, self-reliance and autonomy, and institutional structure and governance among others (Stockbridge et al. 2003; Ostrom 1990).

DEMAND FOR QUALITY GERMPLASM OF AGROFORESTRY TREE SPECIES

The Philippines is one of the most deforested countries of the tropical world. In the early 1900s, 70 percent of its land area (or 21 million ha) was covered with forests (Garrity et al. 1993; Liu et al. 1993). However, at present only about 6 million hectares of forested land remain (FMB 2004). Thus, in the last century alone, the Philippines lost almost 15 million hectares of tropical forests. Extensive reforestation efforts began in the early 1970s with the implementation of numerous programs and projects through government-driven social forestry programs. However, as discussed by Garrity (1993) and Pasicolan (1997), after more than three decades of support, government-sponsored reforestation has largely been ineffective and inefficient. Today, as deforestation and environmental degradation show no signs of abating, all sectors of the society still agree that reforestation should remain a national goal. However, decision-makers seem to have reached an impasse, as there is no consensus on how to support tree planting. With the current external debt of US\$ 67.6 billion, and in view of past results, borrowing money to plant trees is apparently not a good option.

Since long ago, farmers have been spontaneously integrating trees in their farming systems, in a process called “agroforestation” (or the development of agroforestry systems). This process has been well documented in different parts of the country (Garrity and Agustin 1995; Pasicolan et al. 1996; Gomez et al. 1998), and simple observation shows that it certainly is an on-going and continuous process in many of the Philippine islands. Rather than being driven by government programs, successful tree cultivation by smallholder farmers have emerged as a result of 1) access to, or availability of germplasm; 2) dissemination of knowledge and information on tree farming; and 3) strong market demand for tree products.

This paper focuses on the first of these three factors, e.g., enhancing access to quality tree germplasm. In many parts of the country, the lack of quality germplasm of various agroforestry tree species limits the widespread adoption and the productivity of agroforestry, and therefore needs immediate attention if reforestation goals through “agroforestation” are to be met. With more than 20 million marginal upland farmers and more than 20 percent of the country’s land area covered by degraded grasslands dominated by *Imperata* grasslands, and X million hectares of agroforestry (or mixed farming systems), demand for quality germplasm of various tree species is great.

In the Philippines, the bulk of tree seeds produced is used by individuals farmers, industrial forest plantations, NGOs and national government agencies involved in reforestation and local government units with municipal-level tree planting programs. Other users of tree seeds, though in smaller amounts, include universities and research institutes. As government agencies and some leading NGOs have recently set ambitious targets for reforestation (DENR 1998; Haribon 2005), and as farmers are gradually transforming large areas of grasslands into productive agroforestry systems (due

to strong market demand for tree commodities), there has been a large and increasing demand for seed and seedlings of a diverse range of tree species (mainly fruit and timber trees)¹.

Traditionally, the formal seed sector (government forestry centers or large private companies) have been producing and distributing most of the seeds used in reforestation. These plantations have been instrumental in the production and dissemination of seeds of few economically-important fruit and timber species. For instance, in Bohol province, in central Philippines, mahogany (*Swietenia macrophylla*), a quality timber tree, has been introduced to most of the municipalities from seeds or seedlings originating from a government reforestation site established in the 1970s in a central location of the island. However, as the majority of smallholder farmers do not have access to the formal seed sector (Carandang et al. 2006), decentralized, farmer-managed system for seed production and distribution, is key to expand a viable network of seed producers that can sustain the agroforestation process by disseminating quality seeds in a given locality. Hence, at the local level, supply of quality germplasm can be available from various sources, including individual farmers/producers, and smallholders organized into “collectives” to access certain types of markets. According to Agarwal (1994), collective action of smallholders can act to strengthen their bargaining power to occupy a niche in the market place.

In the Philippines, our experience with the Agroforestry Tree Seed Association of Lantapan (ATSAL), in Bukidnon province, shows that smallholder farmers are not just active tree planters but they also produce, exchange among themselves, and supply to various users (such as the government and NGOs), large amounts of tree seeds for tree planting activities. Decentralized systems of tree seed production and distribution is central to scale-up tree planting in degraded marginal lands. However, farmers who have formed into “collectives” are often faced with organizational drawbacks. Complex group dynamics, ineffective leadership, and lack of business skills are recurring issues, which limit their potential share in the market, paving the demise of collective action.

This paper draws on the experiences of ATSAL. An on-going study is undertaken to draw on lessons and implications for research regarding collective action of smallholders to improve their access to markets of agroforestry seeds and seedlings, so as to diffuse quality planting materials of agroforestry tree species, with the ultimate goal of expanding adoption and improving the productivity of agroforestry systems.

¹ It is almost impossible to accurately estimate national tree seed demand in a given year as it will need to know reliable estimates of many variables which vary widely such as the specie, planting system, planting density, target area (by the government and private institutions), survival rate, etc. But to show the economic importance of tree seed and seedling production we may have a simple, conservative estimate: If we assume the government objective is to reforest an average of 20,000 ha per year (according to available statistics the average reforested area between 1972 and 2003 by the government and the private sector has been 52,150 ha per year), with 2,500 trees per ha and considering a 20% mortality, we would need 60 M trees. With an average price per seedling for forest trees ranging from 3 to 5 PhP per seedling: this would be 3,5 Million \$ to 5.7 M \$ (THIS IS ONLY FOR GOVERNMENT REFORESTATION)

2. THE CASE OF ATSAL IN THE MANUPALI WATERSHED, BUKIDNON PROVINCE IN THE SOUTHERN PHILIPPINES

BACKGROUND

Since 1994, the World Agroforestry Centre (ICRAF) was leading the biodiversity consortium of the USAID-funded Sustainable Agriculture and Natural Resource Management-Collaborative Research Support Project (SANREM-CRSP) in the Philippines. The project site was Lantapan, an upland municipality that was wholly contained in the Manupali watershed, Bukidnon province, in the southern Philippines.² Lantapan is characterized by high-rainfall, high elevation (average 600 masl), steep slopes, and nutrient-poor soils. It is bordered by the left bank of the Manupali River on the south, and a major protected area, the Mt. Kitanglad Range Natural Park (MKNRP) on the north. Several sub-watersheds drain from Mt. Kitanglad Range across the extensively cultivated lands to the Manupali River. The river runs into a network of irrigation canals operated by the Manupali River Irrigation System (MANRIS) (Catacutan 2005; Coxhead & Buenavista 2001).

Given the unique conditions of Lantapan, ICRAF's research focused on developing technical and institutional innovations for integrated watershed management, with emphasis on understanding the elements of a social contract between bufferzone communities and other stakeholders concerned with the protection of the resources of MKNRP (Catacutan 2005; Garrity et al. 2002). On-farm trials were set up to evaluate the growth performance of various agroforestry tree species across different landscape positions in the watershed (Table 1). As part of a participatory research strategy, farmer-cooperators were involved in the selection of tree species to be tested, and were trained on seed collection and processing, seedling production techniques and nursery establishment.

Table 1-Tree species evaluated in Lantapan (1998)

Scientific name	Common name
<i>Acacia aulacocarpa</i>	Aulacocarpa
<i>Acacia auriculiformis</i>	Auriculiformis
<i>Acacia crassicarpa</i>	Crassicarpa
<i>Acacia mangium</i>	Mangium
<i>Albizia lebbekoides</i>	Black wattle
<i>Eucalyptus deglupta</i>	Bagras
<i>Eucalyptus pellita</i>	Pellita
<i>Eucalyptus robusta</i>	Robusta
<i>Eucalyptus torelliana</i>	Torelliana
<i>Eucalyptus urophylla</i>	Urophylla
<i>Gmelina arborea</i>	Gmelina
<i>Grevillea robusta</i>	Grevillea
<i>Mesopsis eminii</i>	Musizi

²The southern part of the Philippines is 'Mindanao', the second largest island comprising several regions.

In about a year of working with farmers in nurseries and on farms to enhance the diversity and improve the management of tree-based production systems, it became obvious that there were limited seeds or planting materials available to farmers. Commonly, small quantities of seeds of locally-grown trees were collected by, and exchanged among few farmers, and few others purchased seed or seedlings within and outside of Lantapan (Koffa and Garrity 2001). Furthermore, proper seed collection and handling methods were unknown to farmers. A case study conducted by Koffa and Roshetko (1999) to assess the seed collection, processing and diffusion practices of farmers in Lantapan found the major knowledge gaps in standardized methods for seed collection. For instance, most farmers were collecting seeds from only 1-5 trees, a practice that may reduce, in the short or medium term, the productivity due to inbreeding (Koffa and Garrity 2001). The findings of this study were presented in a workshop attended by fifteen (15) farmer-cooperators (from the on-farm trials) and local seed collectors with an interest in learning about seed technology. After the workshop, the farmers decided, with facilitation from ICRAF, to organize themselves into an association of seed producers that is now known as ATSAL (Koffa and Garrity 2001).

ATSAL'S OBJECTIVES AND ORGANIZATIONAL STRUCTURE

ATSAL was organized to serve as a unifying body that harnesses collective will, skills, talents and efforts in meeting five key objectives: 1) to collect and process quality tree seeds to meet household requirements for tree farming and for the markets; 2) to establish, develop and manage tree nurseries and plantations efficiently and cost-effectively; 3) to harvest, process and market trees and tree products and to provide wood for home consumption; 4) to train other farmers in Lantapan and beyond with proper collection and handling of tree seeds, and the establishment of, and management of tree nurseries and plantations; and 5) to conserve steeply-sloping farmlands through the application of low-cost, efficient soil erosion control measures, employing the independent or combined effects of grasses, shrubs and trees.

Within one year, ATSAL's membership increased from 15 to 40 farmers, and was mostly males (95 percent), with 46 percent belonging to the 44 years and below age bracket, followed by above the 45 years age bracket (36 per cent) (see Table 2). Thirty-six (36) percent of ATSAL members were low-land migrants (Visayan), while 28 percent belonged to the indigenous Talaandig tribe, and the remainder belonging to mixed ethnic groups. Furthermore, more than half (54 percent) of members have attended elementary education, whose major source of income is farming (82 percent). When farmers were asked on the reasons for their participation in ATSAL, the most common response (45 percent) was to gain more knowledge about tree farming, followed by their interest to increase household income (see Table 3). It was interesting to note that the least response was to learn to market seeds and trees. Perhaps, some members were interested of tree seeds only for their own use, or were simply not keen on marketing seeds.

Table 2-Socio-economic profile of ATSAL members ($N=39$)

Age	Age bracket (percentage)		
	29-44 yrs	45-59 yrs	60-75 yrs
	46	36	18
Ethnicity	Groups (percentage)		
	Talaandig	Visayan	Others
	28	36	36
Gender	Female (percentage)		Male (percentage)
	5		95
Education	Level (percentage)		
	Elementary	High School	College
	54	16	30
Employment	Farmer (percentage)	Private Employee (percentage)	Government Employee (percentage)
	82	3	15
Farm size	Hectare range (percentage)		
	Below 3 has	3-6 has	Above 6 has
	54.2	31.4	14.2
Land tenure	Owned (percentage)	Rented (percentage)	Others (percentage)
	70	10	20

Table 3-Reasons for joining ATSAL in Lantapan, Bukidnon ($N=39$)

Reasons	Percentage
To gain additional knowledge on tree farming	45
To increase farm income	21
To gain additional knowledge on soil and water conservation technologies	9
To help strengthen the group	5
To protect the environment by planting trees	5
Encouraged by the cooperation in group activities (e.g. tree planting)	5
To learn how to collect seeds	5
To learn how to propagate seedlings	2.5
To learn how to market trees	2.5

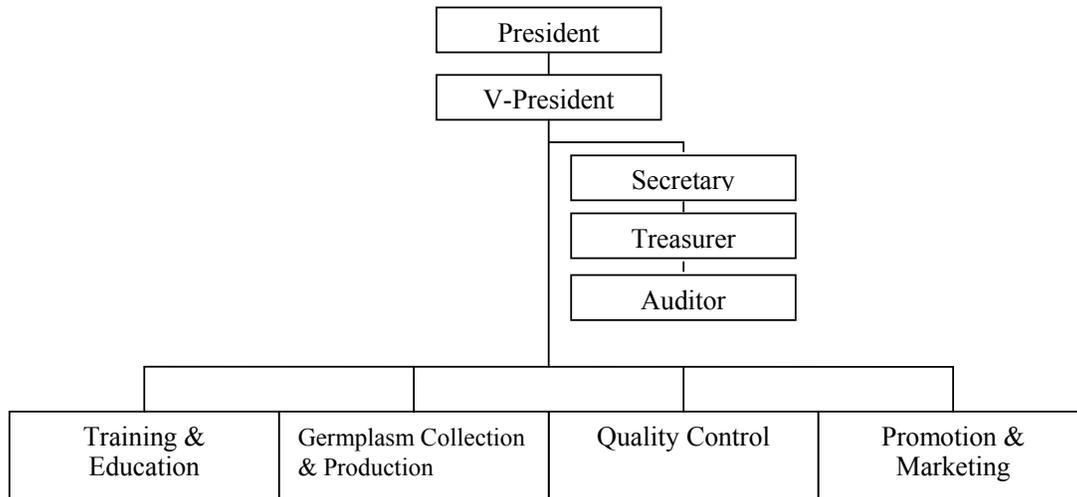
Majority of ATSAL members were land owners (70 percent), of which, 54 percent have less than three hectares of land (see also Table 2). Portions of these farms were planted with different fruit and timber tree species (see Table 4) arranged in blocks or aligned on contours and on farm boundaries.

Table 4-Fruit and timber trees planted by ATSAL in Lantapan, Bukidnon (2003)

Timber Trees		Fruit Trees
<i>Exotic Species</i>	<i>Indigenous Species</i>	
Bagras (<i>Eucalyptus deglupta</i>)	Agoho (<i>Casuarina equisetifolia</i>)	Durian (<i>Durio zibenthis</i>)
Camaldolensis (<i>Eucalyptus camaldolensis</i>)	Apitong (<i>Dipterocarpus spp</i>)	Lanzones (<i>Lansium domesticum</i>)
Pellita (<i>Eucalyptus pellita</i>)	Lauan (<i>Shorea contorta</i>)	Rambutan (<i>Nephelium lappaceum</i>)
Robusta (<i>Eucalyptus robusta</i>)	Molave (<i>Vitex parviflora</i>)	Mango (<i>Mangifera indica</i>)
Torelliana (<i>Eucalyptus torelliana</i>)		Marang (<i>Artocarpus odoratissimus</i>)
Black wattle (<i>Acacia lebeckoides</i>)		Jackfruit (<i>Artocarpus heterophyllus</i>)
Mangium (<i>Acacia mangium</i>)		
Saligna (<i>Acacia saligna</i>)		
Falcata (<i>Quercus falcata</i>)		
Gmelina (<i>Gmelina arborea</i>)		
Grandis (<i>Tectona grandis</i>)		
Grevillea (<i>Grevillea robusta</i>)		
Mahogany (<i>Swietenia macrophylla</i>)		
Musizi (<i>Maesopsis eminii</i>)		

The officers of ATSAL were, the president, vice-president, secretary, and treasurer (see Figure 1). Sub-committees were also created namely, training and education, seed quality control, promotion and marketing, and germplasm production. The training and education committee was linked to ICRAF's training program, in order for the members to readily access training on seed collection and handling, seedling production, plantation establishment and management, and marketing. During its first year of operation, meetings were held on a weekly basis to train the members on different seed technologies. The sub-committee on quality control, promotion and marketing was led by an experienced seed collector and business-oriented farmer who had worked in a major reforestation project in Lantapan in the 1980s. This committee was in-charge of setting the "quality standards" of ATSAL's seeds, and of marketing tree seeds and seedlings. The committee on germplasm collection and production ensured continuous supply of various agroforestry tree seeds.

Figure 1-ATSAL’s organizational structure

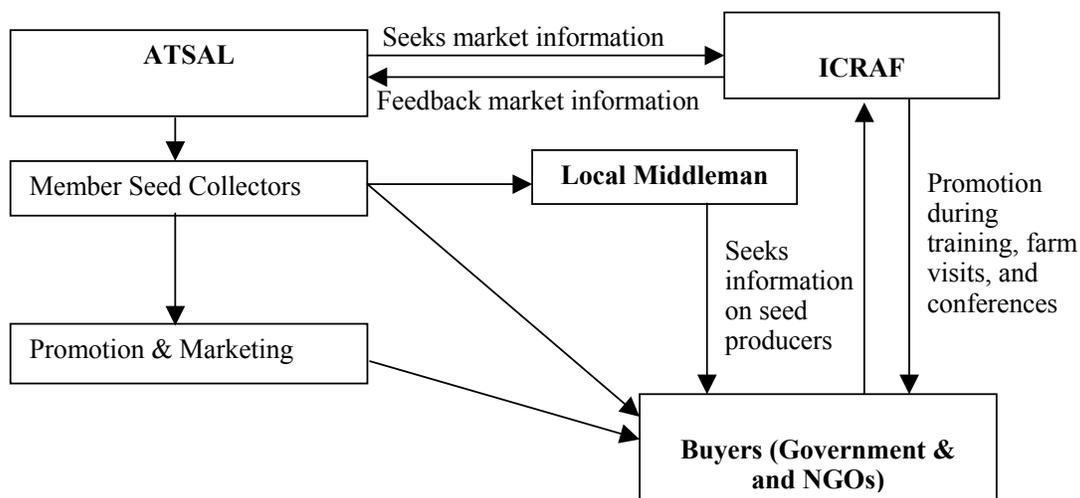


MARKETING STRATEGY, ISSUES AND CHALLENGES

ATSAL’s Marketing Strategy

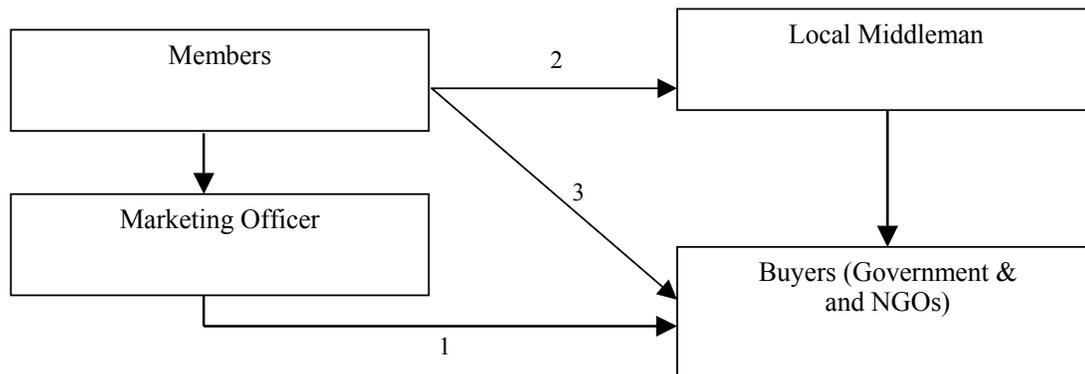
ICRAF introduced ATSAL to various national government agencies (NGAs), NGOs, local government units (LGUs), and research and development organizations at the local, regional and even at international levels, to raise the Association’s profile. As part of the strategy to market ATSAL, it was also tapped by ICRAF to train a multitude of LGU and NGO technicians, practitioners, students, and farmers on seed collection and processing, seedling production, and nursery establishment. This resulted in the creation of market outlets for seeds and seedlings. Subsequently, the Association was able to establish its name as a viable community-based smallholder seed and seedling producer. The role of ICRAF was extremely important not only as technical service provider, but also as “broker” for ATSAL to establish a niche in the market place. Primarily, market information was being provided by ICRAF--many of ATSAL’s customers were established through ICRAF (see Figure 2). The Marketing Officer also provided market information, generated from participating in training sessions, farm visits and conferences. Intermittently, some local middlemen and individual members have also acted as sources of market information.

Figure 2-Flow of market information



There were three marketing channels of ATSAAL’s products (see Figure 3). The first channel mainly involved the Marketing Officer who was in-contact with buyers, then collects the seeds or seedlings from the members to meet bulk orders and delivers them to buyers (market channel 1). In some cases, the Marketing Officer had to travel to other regions to market their products, requiring additional transaction costs. The next marketing channel involved the members, who were selling their seeds and seedlings through a local middleman (market channel 2). The third marketing channel also involved the members but was directly selling their seeds and seedlings to buyers (market channel 3).

Figure 3-Market channels of ATSAAL products



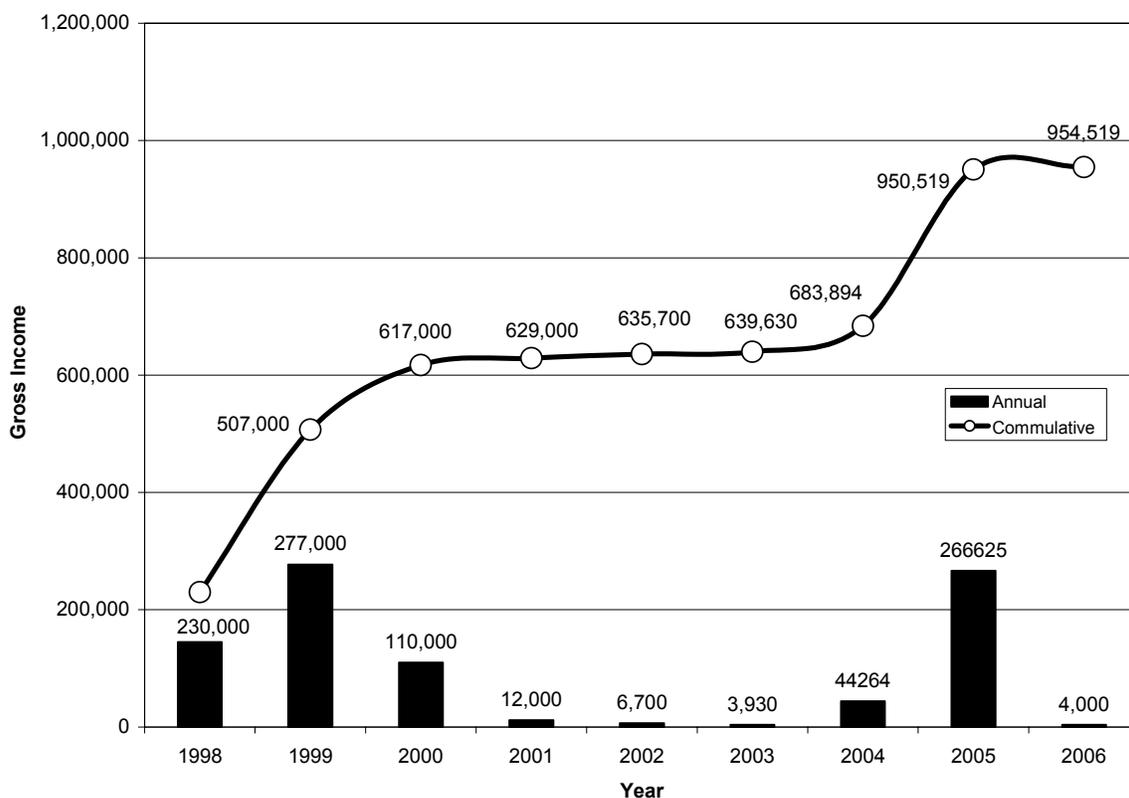
ATSAAL’s collective benefit was manifested in the following benefit-sharing scheme:

- 10 percent for the Association’s general fund
- 15 percent for the marketing officer
- 75 percent for the seed collector

Impacts, group dynamics and market competition

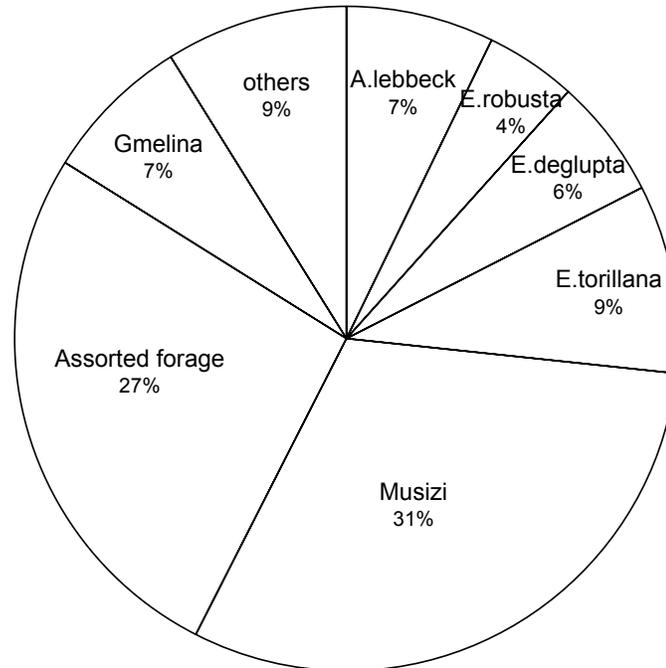
ATSAL performed quiet smoothly during its first two years of operation (1998-2000). The Association was specializing on production of quality seeds of mostly, exotic timber tree species, and was able to create a market niche primarily for NGO, NGA and LGU customers. From 1998 to mid 2006, the reported sales of various agroforestry seeds were more than 954,000 pesos (see Figure 4), suggesting a significant increase in farmers' income. In the Philippines, this record was unprecedented for a smallholder collective. The increasing sale of seeds during the first two years was attributed to its "prepared" market (buyers that had come to Lantapan) (see also Figure 4). For ATSAL, this was favorable because the transactions were locally negotiated, with almost no transaction costs involved. The leadership skills of ATSAL's President and the experience of the Marketing Officer were seen to have contributed to the remarkable sales. Apparently, ATSAL was effective at this scale of the market.

Figure 4-ATSAL's gross income (1998-mid 2006)



The top-selling tree seeds were *Maesopsis Eminii* (31 percent), followed by assorted leguminous forage species (27 percent), and mixed *Eucaplytus* species (see Figure 5). The distribution of seeds was quite dispersed in Mindanao and in the Visayas area, but some members also mentioned that there were unreported sales from buyers in the Luzon area, indicating a national market. In 2000, ATSAL also sold seeds of *Tithonia diversifolia* to one NGO in Nairobi, Kenya.

Figure 5-ATSAL’s top selling agroforestry seeds



By 2000, ATSAL had started to expand its market outside of Lantapan, particularly in the central Philippines, with initial success, but later failed to meet the demand of seeds and the logistical requirements for transporting seedlings. The transaction costs involved with external customers were a burden for ATSAL. The sales of seeds followed a double “S-pattern”, increasing in the first two years and declining in 2000 and rising up only in 2005 (see also Figure 4). This pattern could be attributed to many factors, which are discussed in turn.

First, some members were reportedly hiding their transactions, because they were reluctant to share their proceeds to the Association, indicating a competition between self-interest and collective good. It was also possible that the members were losing confidence due to alleged lack of transparency of transactions negotiated outside of Lantapan. Some members also complained on the high transaction costs involved in marketing seeds and seedlings outside of the municipality. The loss of trust in this case, has diminished social capital, consequently deteriorating collective action. Some members also mentioned that the officers did not collect the money from them-- the officers were seen to be less stringent to implement the rules. All these, suggest a negative group dynamics and poor governance.

Second, ATSAL’s marketing operation had started to decline in mid-2001 when the President had left to work overseas and the Marketing Officer slowed down due to health reasons. By then, the Association seldom had meetings, and the agreed marketing scheme was no longer observed. Consequently, other officers and members have become inactive—some of them got ill, others were simply disinterested or have transferred their residence, and the others were employed outside of Lantapan. Evidently, the lack of effective leadership rendered the Association to becoming “inoperative”.

About the same time, ICRAF's facilitation had also become limited due to a change in focus—this was also seen to have contributed to the drooping Association.

Third, partly due to ATSAL's limited activities, a non-member, but enterprising farmer had started to produce and market seeds and seedlings, and market competition emerged. This farmer was better-resourced to meet the requirements of external markets, and instantly, ATSAL's market share declined. The farmer had established market links outside of Lantapan, and with more resources, was able to meet the logistical requirements in marketing seeds and seedlings, including packaging and delivery. He also developed a farmer training center in Lantapan—this strategy was effective, locking-in the potential customers of ATSAL. Consequently, the members had become more active in marketing their seeds through this farmer who had acted as their middleman, or directly to buyers but using the name of ATSAL.

By 2001, the Landcare Association, a conservation group also facilitated by ICRAF had also started selling seeds and seedlings to the same customers as ATSAL. To avoid conflict arising from competition, ATSAL members decided to reconstruct their marketing scheme in conjunction with Landcare, and eventually, affiliated to the bigger Landcare Association. This move was seen to be advantageous to both groups, suggesting a bigger collective. To some extent, this revitalized ATSAL, leading to their registration with the Securities and Exchange Commission (SEC) in 2003. Further, ATSAL enlisted into a network of nursery operators in Mindanao to access the wider market, but with little success. The Association was unable to fix its organizational problems, because majority of the officers have remained inactive, and since nobody was coordinating the members, only few of them have maintained seed and seedling stocks, and were able to take advantage of the market. Organizational growth was thus hampered by the pathetic leadership of the leaders.

It was obvious that as a collective, ATSAL was unprepared to bear the costs of market competition in large-scale markets. However, the absence of collective marketing has given a “break” for business-oriented members to market their own products directly to buyers. This situation is not unfounded,—as earlier mentioned by Swallow (2001), in a free enterprise, individual capacities and self-interests prevail over the “collective” despite shared goals and interests. By using the name of the “collective” (ATSAL), individual members were able to break in the market; correspondingly, they helped, to maintain ATSAL's presence in the market. This is a natural course in the context of free enterprise, but some members who were poorly-resourced to even contact the potential buyers were deprived or excluded of market opportunities, hence effective group leadership, and on-going facilitation is urgently needed, so as not to exclude the smallholders, and for collective action to thrive in the free market.

In January 2005, the first elected President of ATSAL who had return to Lantapan presided a meeting with the members, and a new set of officers were elected. The group identified the elements of an effective marketing strategy, such as 1) continuous training of members on seed technologies; 2) seed quality certification process among its members; 3) diversification of products including sown timber and small wooden furniture; and 4) participation in training sessions, farm visits and conferences organized by ICRAF and its partners. The sharp increase of sales in 2005 could be attributed to the revitalized collective (see also Figure 4). Although its marketing operations remained concentrated within the locality, regional customers have continued buying their seeds. Broadly speaking, ATSAL's popularity remained high even with only few members marketing seeds, either collectively or individually. As mentioned earlier, ATSAL members were also involved in training sessions, suggesting a scaling up of activities. Apparently, the slack in collective marketing

didn't mean a collapse of the group or of the spirit of "collective", but a lack of maintenance of social capital, which is a foundation of collective action.

3. COLLECTIVE ACTION FOR EFFECTIVE NICHE MARKETING

Niche marketing is about specializing a certain product to satisfy a specific market segment. To capitalize on a niche market is to find readily accessible customers, that is potentially growing, and that is not owned by one established merchant. On this premise, we examined AT SAL in terms of: 1) its competence to produce quality products, in this case seeds and seedlings; and 2) its ability to collectively deal with niche marketing. Then, we draw on lessons for facilitating smallholder collective action, so as to better plan for appropriate interventions.

Although AT SAL is relatively "small" in size, and much-less sophisticated compared to their commercial counterparts, it has demonstrated technical competence as producer of quality seeds and seedlings of selected timber tree species. The group was specializing on production of quality seeds and seedlings of agroforestry tree species by 1) establishing a seed production area where identified mother trees are marked for collecting seeds; 2) applying technically-sound processing techniques, including handling and storing; 3) standardizing the quality of marketable seeds through seed germination tests; and 4) experimenting on different seedling propagation techniques. AT SAL has thus, met the basic requirements for niche marketing by meeting customer satisfaction of quality seeds and seedlings. The maintenance of product quality by AT SAL could be attributed to access to ICRAF's trainings and its experimentation on various seed production technologies. Viewed in these terms, AT SAL has a specialized "product" that can compete in the market. However, this shows that an intermediary agency is needed to provide on-going technical back-up to enable smallholders to maintain the quality of their products.

From the foregoing discussion, the issue confronting AT SAL was neither the lack of technical competence to produce quality seeds, nor the lack of "market" per se, but its organizational weakness to deal with internal conflict and marketing issues. For AT SAL, the timing of trainings and farm visits by various groups in Lantapan was propitious, giving them readily accessible customers, and creating for them, a niche within this market segment. Its expansion in the central Philippines was more to do with increasing the number of customers within the same market segment (NGA, NGO and LGU buyers). Hence it can be said, that over the years, AT SAL has maintained its niche in this particular market segment, and despite its organizational limitations, has gained a stronghold in the local and regional markets, making it renowned as a viable community-based seed and seedling producer. However, expansion to the bigger market, e.g., national or international scale, will require organizational stability and efficiency, hence for a smallholder collective like AT SAL, the odds to success at these scales of the market could be low, considering complex market forces, for which they have little, or no control. Even if smallholder collectives are strong, its long-term success and integration into bigger markets will thus require more mediation and support from external organizations.

4. ORGANIZING SMALLHOLDER COLLECTIVE ACTION

Like AT SAL, collective action is important for smallholders to break in, and gain market access, but is unlikely to sustain without effective leadership and on-going facilitation, thus requiring expenditures on "repairs and maintenance." Such expenditures could be in the form of continuous

technical and leadership training for the group, and technical back up and facilitation by an intermediary-- a supporting institution that has a broad network of partners with which, to link the “collective”, and more importantly, has technical expertise on product quality improvement, in this case agroforestry tree seeds and seedlings. The latter is extremely important—clearly, ATSAL’s comparative advantage as a smallholder collective is its quality treed seeds, known to be produced through technically sound seed technologies. Government extension agencies could also help to facilitate the organization of associations of community-based tree seed producers similar to ATSAL. The maintenance of social capital, an ingredient to collective action is also an important issue. Founded by trust, commitment and reciprocal relationships, social capital can easily depreciate when not in use. Thus, organizing collective action of smallholders is essentially an arduous task, requiring the supporting agency to hold a firm grasp of market realities, to invest in the maintenance of social capital, to provide continuous technical back-up, and to ascertain the conditions that make collective action succeed.

REFERENCES

- Asian Development Bank 1994. Forestry sector study of the Philippines. ADB, Manila, Philippines.
- Anderson J, Dillion J, Hardaker J. 1977. *Agricultural decision analysis*. Ames, Iowa: Iowa State University Press.
- Agarwal B. 1994. *A field of one’s own: Gender and land rights in South Asia*. Cambridge, UK: Cambridge University Press.
- Carandang W, Tolentino E, Roshetko J. 2006. Smallholder Tree Nursery Operations in Southern Philippines – Supporting Mechanisms for Timber Tree Domestication. *Forest, Trees and Livelihoods*. Vol 16.
- Catacutan D. 2005. *Scaling Up Landcare in the Philippines: Issues, Methods and Strategies*. PhD Thesis, University of Queensland, QLD, Australia.
- Coxhead I, Buenavista G. 2001. Implementing a participatory natural resources research program. In: Coxhead I, Buenavista G, eds. *Seeking sustainability: Challenges of agricultural development and environmental management in a Philippine watershed*. Los Baños, Laguna, Philippines: PCARRD. Pp 161-176.
- DENR 1998. Moving CBFM into the 21st Century. *DENR Strategic Action Plan. A Compilation of Policies on Community-Based Forest Management (CBFM)*. Department of Environment and Natural Resources, Quezon City, Philippines.
- Forest Management Bureau 1988. Natural Forest Resources of the Philippines. *Philippine-German Forest Resources Inventory Project*, Manila, Philippines.
- FMB. 2004. Forestry Statistics (2003). Forest Management Bureau, Quezon City, Philippines.
- Garrity D, Kummer D, Guiang E. 1993. The upland ecosystem in the Philippines: alternatives for sustainable farming and forestry. *National Academy Press*, Washington DC.
- Garrity D, Agustin P. 1995. Historical land use evolution in a tropical acid upland agroecosystem. *Agriculture, Ecosystems and Environment* 53: 83-95.

Garrity DP, Amoroso VG, Koffa S, Catacutan D, Buenavista G, Fay P & Dar W . 2002. Integrated Natural Resource Mangement on the Poverty-Protection Interface in an Asian Watershed. *Conservation Ecology*, vol. 6, no. 1.

Gatarwa K, Place F. 2005. Initiatives for rural development through collective action: The case of household participation in group activities in the highlands of Central Kenya. *SP-PRCA Working Paper No .43*. Washington, DC: IFPRI.

Gomez A, Kelly D, Baril M. T. A. (eds.). 1998. *Catalogue of Conservation Practices for Agriculture on Sloping Land. Los Baños, Laguna, Philippines*. SEAMEO SEARCA, Los Banos. Philippines.

Haribon Foundation 2005. Rainforestation: A Strategy for Restoring our dying forests. *Haribon Policy Paper No. 3*. Quezon City, Philippines. (16 pp)

Liu D.S, Iverson L.R, Brown S. 1993. Rates and Patterns of Deforestation in the Philippines: Application of Geographic Information System Analysis. *Forest Ecology and Management* 57, 1-16.

Knox A, Meizen-Dick R, Hazell P. 1998. Property rights, collective action and technologies for natural resource management: A conceptual framework. *SP-PRCA Working Papers No.1*. Washington, DC: IFPRI.

Koffa S, Garrity D. 2001. Grassroots empowerment and sustainability in the management of critical natural resources: The Agroforestry Tree Seed Association of Lantapan. In: Coxhead I, Buenavista G, eds. *Seeking sustainability: Challenges of agricultural development and environmental management in a Philippine watershed*. Los Baños, Laguna, Philippines: PCARRD. Pp.197-217.

Koffa S, Roshetko J. 1999. Farmer-managed germplasm production diffusion pathways in Lantapan, Philippines. Paper presented at Domestication of Agroforestry Trees in Southeast Asia Regional Workshop in Yogyakarta, Indonesia.

Meizen-Dick R, Gregorio M, McCarthy N. 2004. Methods for studying collective action in rural development. *SP-PRCA Working Papers No.33*. Washington, DC: IFPRI.

Mercado A, Garrity D. 2000. The landcare approach: Enhancing community participation in sustainable agriculture and natural resource management in the uplands. In Cason K, ed. *Cultivating community capital for sustainable natural resource management*. Athens, Georgia: SANREM-CRSP.

Olson M. 1971. *The Logic of Collective Action: Public goods and the theory of groups*. USA: Harvard University Press.

Ostrom, E. 1990. *Governing the Commons: The evolution of institution for collective action*. Cambridge, UK: Cambridge University Press.

Pasicolan P. N. 1996. *Tree Growing on Different Grounds: an Analysis of Local Participation in Contract Reforestation in the Philippines*. PhD Dissertation. Leiden Universtity, Centre for Environmental Science. The Netherlands.

Pasicolan P.N, Calub A, Sajise P. E. 1996. The Dynamics of Grassland Transformation in Salindangan, Ilagan, Isabela, Philippines. *Imperata Project Paper 1996/10*. Australian Centre for International Agricultural Research (ACIAR), Canberra ACT.

Pretty J. 2000. Participation and Social Capital Formation in Natural Resource Management: Achievements and Lessons. International Landcare 2000 Conference, Merlbourne, Australia, International Landcare 2000.

Schumacher E. 1973. *Small is beautiful: Economics as if people mattered*. New York: Harper and Row.

Simons A. 1996. Delivery of improvement for agroforestry trees. In Dieters M, Matheson M, Nickles D, Harwood C, Walker S, eds. *Tree improvement for sustainable tropical forestry*. Proceedings of QFRI-IUFRO Conference held in Caloundra, Queensland, Australia 27 October – 1 November 1996.

Sperling L, Scheidegger U, Buruhara R. 1996. *Designing sees systems with small farmers: Principles derived from bean research in the Great Lakes region of Africa*. Overseas Development Institute Network Paper No. 60.

Stockbridge M, Dorward A, Kydd J, Morrison J, Poole N. 2003. Farmer organization for market access: International review. *Briefing paper*. Centre for Development and Poverty Reduction, Imperial College London. (<http://www.wye.ic.ac.uk/AgEcon/ADU/research/projects/farmorg/fosumjul.doc>.) (Accessed on 15 July 2006).

Swallow B, Garrity D, Noordwijk M. 2001. The effects of scales, flows and filters on property rights and collective action in watershed management. *SP-PRCA Working Papers No.16*. Washington, DC: IFPRI.

Utting P. (ed.) 2000. *Forest Policy and Politics in the Philippines: the Dynamics of Participatory Conservation*. Ateneo de Manila Universtiy Press, Quezon City, Philippines.

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CONTACT ADDRESSES

Delia Catacutan, World Agroforestry Centre, Abogado St., Casisang, Malaybalay City 8700, Philippines, 2006 (delia_icraf@yahoo.com)

Manuel Bertomeu, World Agroforestry Centre, Leyte State University, Baybay, Leyte, Philippines, 20006 (m_bertomeu1@terra.es)

Lyndon Arbes, World Agroforestry Centre, Abogado St., Casisang, Malaybalay City 8700, Philippines, 2006 (lendon_icraf@yahoo.com)

Caroline Duque, World Agroforestry Centre, Abogado St., Casisang, Malaybalay City 8700, Philippines, 2006 (ronnieite@yahoo.com)

Novie Butra, World Agroforestry Centre, Abogado St., Casisang, Malaybalay City 8700, Philippines, 2006