



Community-based enterprises and conservation: the Kalahan Forest Farms Development Project

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Natural resource management on the Kalahan Reserve.

In the devolution of natural resource management, ensuring business opportunities is an important means of providing communities with the motivation to manage their land and resources sustainably. The Kalahan Forest Farm Development Project in the Philippines provides an example of the link between successful community-based enterprise and natural resource management.

The Kalahan Reserve comprises 13 894 ha in northern Luzon, mostly pine and dipterocarp forests. It is home to much endemic and endangered flora and fauna. The Ikalahans (meaning "people of the broadleaf forest") have lived here for centuries, relying mainly on hunting, gathering and traditional swidden agriculture for survival. In the 1950s, however, the Government of the Philippines started to enforce actively the doctrine that all forests and uplands are government lands, proclaiming the indigenous people as squatters on the land they had always inhabited.

At about the same time, the local people were beginning to tend towards utilizing the reserve's resources more fully and less carefully. They began to neglect their traditional methods of using and protecting the natural resources, and new destructive practices such as cattle rearing were introduced.

In 1970, the Ikalahans tried to organize a producers' cooperative to address the rampant economic exploitation of the resources. Unable to negotiate with the government to create the cooperative, in 1973 they formed instead the Kalahan Educational Foundation (KEF) to "promote the education and development of the Ikalahan people" and to give the community legal representation. Since then KEF has been the main stakeholder organization in the reserve and has taken the lead in implementing many activities in areas such as land tenure, resource management, policy formation, sustainable agriculture and education.

In 1974, KEF and the now defunct Ministry of Agriculture and Natural Resources negotiated an agreement that gave the Ikalahans full and legal stewardship, management and utilization rights for 25 years in exchange for the protection and rehabilitation of the Kalahan Reserve. As the agreement was nearing its end, KEF secured three Certificate of Ancestral Domain Claims in three adjacent provinces which expanded the organization's rights and management

activities to 45 000 ha.

Resource policies in the Kalahan Reserve

Resource use	Nature of restriction	Fine or penalty
Use rights	<ul style="list-style-type: none"> • Kalahan residents only • Access to resources in secondary forest areas only, not primary forest, subject to resource guidelines below • New residents to obtain permits for resource use 	<ul style="list-style-type: none"> • Non-residents reported to the Department of Environment and Natural Resources (DENR) for prosecution
Fuelwood and lumber	<ul style="list-style-type: none"> • On-reserve use only, not for outside sale • Harvesting restrictions - marked trees only to be cut • Cutting permit required • Registration of chainsaws with Agro-Forestry (AF) office 	<ul style="list-style-type: none"> • 400 pesos per tree cut • Confiscation of all produce • 500 pesos for unregistered chainsaws and reported to DENR for prosecution
Swidden farming	<ul style="list-style-type: none"> • New clearings must have permit from AF office • Cultivated lands to be interspersed with forest and not on land susceptible to slides 	<ul style="list-style-type: none"> • 500 pesos in dedicated watershed or sanctuary (primary forest) areas and required to cover cost of reforesting area • 100 pesos anywhere else
Forest fires	<ul style="list-style-type: none"> • No burning except for "proper agricultural development" (see Swidden farming) • Guidelines re firelines and burning times 	<ul style="list-style-type: none"> • 500 pesos, plus payment for damages and reforesting area plus remuneration of people involved in putting out fire
Fishing	<ul style="list-style-type: none"> • Bona fide residents only • No use of chemicals or electrical current 	<ul style="list-style-type: none"> • 200 pesos for fishing with chemicals or electrical current • Confiscation of electrical equipment for second offence by residents
Orchid collection	<ul style="list-style-type: none"> • Strict guidelines on methods for orchid collection • Complete ban on collection of endangered orchid species 	See below
Wildlife and flora	<ul style="list-style-type: none"> • In sanctuaries: no harvesting of trees, orchids, rattan, bamboo, birds or other animals • Outside sanctuaries: hunting of animals permitted from July to August; birds from September to October 	<ul style="list-style-type: none"> • First offence: 1 000 pesos plus confiscation • Second offence: 2 000 pesos plus confiscation • Third offence: 3 000 pesos plus confiscation (3 000 pesos fine also applies for hunting wild pig and other big animals in sanctuary areas on the first offence)

Source: KEF. 1995. Development Plan: Ancestral Domain Kalahan Reserve Phase 2.

KEF is governed by a board of trustees, which consists of 11 members elected by the different communities within the reserve. The board has two basic functions: to manage KEF and to manage the Kalahan Reserve. Board members are required to consult regularly with their respective town members and to make personal monitoring rounds to formulate and enforce necessary resource management policies. The project activities are implemented by designated staff members, organized into project teams. An administrative team, headed by

an executive director, oversees the implementation of project activities.

The Forest Farms Development Project, supported by the Biodiversity Conservation Network (BCN) from 1994 to 1998, was initiated "to establish an effective resource management framework to ensure a stable and diverse forest ecosystem within the Kalahan Reserve". The project aimed to develop income-generating opportunities based on forest products that would satisfy the needs of the community and, in turn, encourage the Ikalahans to conserve the biodiversity of the reserve. The project assisted in strengthening KEF Mountain Fresh jam and jelly production and assisted in research activities in support of the conservation efforts within the Kalahan Reserve.

Enterprise activities: Mountain Fresh jams and jellies

The main product of KEF is the Mountain Fresh line of jams and jellies. The enterprise has been supplying major supermarkets in Manila since the late 1980s. The Ikalahans sell on average 15 000 kg of fruits worth about 60 000 pesos (roughly US\$1 500) to KEF each year, of which 65 percent is guava, the best-selling product. Although the average revenue generated per gatherer is only about 1 to 2 percent of the Ikalahans' individual annual cash income, selling to the food-processing unit has become important as a source of ready cash.

The enterprise covers its variable costs but is not yet able to cover its fixed costs in full. The goal is "to bring the Food Processing Centre to the point where its net profits can support the other activities of KEF", says Pastor Delbert Rice, KEF Executive Director. To do this, KEF is developing strategies to increase Mountain Fresh sales, including increased promotions and marketing efforts and a new line of products.

The BCN project has monitored fruit production and regeneration of species to ensure that the supply is sufficient for the Mountain Fresh venture and that biodiversity within the reserve is maintained. At present, the KEF food processing plant processes not more than 5 000 kg per year, or just 11 percent of total annual fruit production. Home consumption by the Ikalahans is estimated to be about 50 percent of total production.

Resource monitoring and conservation activities

An important aspect of KEF's conservation activities is monitoring of the resources to demonstrate that the enterprise activities are ecologically, economically and socially sustainable.

To help in forest protection, the Ikalahans developed a land use classification system. Recognizing the importance of watershed protection and biodiversity preservation, they classified 3 159 ha of the reserve, covered mostly in mossy forest and some primary dipterocarp forest, as a sanctuary area where extraction, hunting and agriculture are not permitted. In 1997, the sanctuary area was expanded to 4 224 ha to include some primary pine forest and secondary mossy forest. The Ikalahans and KEF also decided to designate parts of the reserve as protection forest (in steep areas that could not be exploited anyway) and production forest, which is open to regulated exploitation. The other categories in the classification are upland agriculture, pastureland and titled land.

KEF estimates that, when the Ikalahans assumed responsibility for the management of the reserve in the 1960s, about 35 percent of the upper half was covered in grasslands and thinly scattered pine, while several areas around three of the largest barangays (towns, the smallest political units in the Philippines) were grasslands. More than 30 years later, these areas are mostly covered with secondary pine and dipterocarp forest. From 1994 to 1997, there was a slight decrease in mossy, pine and dipterocarp forests, but the status quo was maintained in lowland agriculture, and grasslands decreased. Upland agriculture increased because of the needs of a growing population but it still accounts for a small proportion of the reserve.

KEF has established and implemented policies and guidelines to control harvesting of resources, use of fire and swidden farming in the reserve (see Table). These policies are enforced by KEF staff (including forest guards and agroforestry staff), barangay officials and the members of the KEF board of trustees. A system has been developed between KEF and barangays whereby 75 percent of any fine collected is transferred to the apprehending body. For example, if a barangay official catches an offender, the barangay receives 75 percent of the fine and 25 percent goes to KEF. The board of trustees makes annual monitoring visits to all the barangays in the reserve. To provide incentive for strong enforcement of resource policies by barangays, rewards may be presented to barangays where policies have been well implemented, for example where there have been no illegal fires during the year.

As a means of exploring other possible livelihood niches, the BCN project has carried out Modified Timber Stock Improvement (MTSI) research to determine sustainable yields for cutting as well as the cash-generating potential of timber harvesting activities. The scheme currently allows the community to cut timber for local use, provided that regulations are followed; the commercial sale of timber is prohibited. KEF is now in the process of examining timber growth and harvest information from about 86 MTSI sample plots throughout the Kalahan Reserve. KEF has placed the sustainable cutting rates per forest type as 10 percent of the annual volume of timber produce. At present, the forestry team estimates that less than 10 percent of the growth increment is extracted by the local population.

Such monitoring and regulation can reduce illegal timber cutting. If studies show that logging is a sustainable and profitable enterprise, then MTSI can be replicated in other areas both within and outside the reserve.

