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Demystifying the Tragedy of the Commons
The Resin Tappers of Honduras

A federation is battling misguided macropolicies to help communities save “their” trees and the nation’s forests.

This forest belongs to the people of San José de Protección, Comayagua,” says Don Víctor Manuel Sánchez, founder of the community’s agroforestry cooperative and a member of the national federation of resin tappers. He speaks slowly and firmly, giving voice to sentiments commonly heard in the rural highlands of Honduras. Yet his circumstances convey the precariousness of his convictions. Sánchez is speaking from the jail where he and other co-op leaders are being detained after being arrested the night before for trespassing.

For years members of the cooperative have tapped resin from pine trees growing on lands under the jurisdiction of the ejido, or the local municipality. Recently, a large tract of ejidal land was sold to an outsider from the capital city of Tegucigalpa who wished to enclose it for other purposes. When local resin tappers persisted, the new landowner had their leaders arrested.

Although the facts seem straightforward, the roots of the conflict are tangled. The landowner has title to the soil, but the state owns the trees. In the past, a state agency had given the cooperative’s resin tappers usufructure rights and assigned them a production quota. Now it claimed neutrality.

Here, in microcosm, is the renewal of a long-standing debate over who owns the nation’s forests and how they should be used. These questions were supposed to have been answered in 1974, when Honduras established the Sistema Social Forestal, or Social Forestry System, within the Corporación Hondureña de Desarrollo Forestal (COHDEFOR) to halt clearcutting by European and North American lumber companies, regulate the extraction and marketing of forest products, and finance government development programs. In effect, Law 103 nationalized the forests and created COHDEFOR to administer their use. COHDEFOR would implement its mandate by encouraging farmers to join cooperatives or other work groups that would harvest forest resources, combat fires, and prevent overgrazing, illegal cutting, and slash-and-burn agriculture.

By the early 1990s, the system was in disarray. While producing only 15 percent of the nation’s exports, woodlands continued to shrink at such an alarming rate they would vanish by the turn of the century. More than one-third of the rural population still lived in forested areas, yet they remained among the nation’s poorest people. Critics charged that drastic reforms were needed to prevent Honduras from falling victim to what an influential body of research has called “the tragedy of the commons.”

This term was coined by Garrett Hardin in 1968 to describe how communal lands are inevitably degraded as population pressure rises and people rush to use available resources before others can do so. At about the same time, Harold Demsetz (1967) assigned blame for this depletion to communal forms of ownership that “fail to concentrate the cost associated with any person’s exercise of his communal rights on that person.” The remedy was to establish clear private property rights since an individual owner would “attempt to maximize [the land’s] present value.” Later writers of “the property-rights school,” including Theodore Panayotou (1989), argued that public ownership also led to resource exhaustion and should be privatized along with other forms of communal property.

Arguments concerning the relative superiority of public or private own-
Modern resin-tapping methods can sustain the productive life of trees for up to 40 years. Left to right: A co-op worker carefully scores pine bark with a blade. Resin flows through the scars, often aided by sulfuric acid, into a delantal, or canal, accumulating in a plastic cup attached below. Each tapper brings the resin from his trees to a central collection site, which every two days sends a shipment to the processing plant in Tegucigalpa.

ership misinterpret the value and legitimacy of common property and communal management. Other authors have stressed the logic and sustainability of common property regimes. As Bromley (1989) writes, a confusion of terms exists. A common property regime is not a situation of open access; common property has a well-defined group of authorized users, a well-defined resource that the group will manage and use, and a set of institutional arrangements with rules of use for the resource. Like private property, common property can contribute to sustained forest management. S.V. Ciriacy-Wantrup and Richard Bishop (1975) also argue that common property, and communal management of resources, is not a disaster: “Common property is not everybody’s property.” The concept implies that potential resource users who are not members of the group of co-equal owners are excluded.”

Although the failures of the Honduran Social Forestry System are increasingly obvious, the diagnosis and cure are not. In reality, neither state, private, nor common property regimes have spotless records in environmental protection. The experience of cattle ranching in much of Latin America shows how private ownership can contribute to deforestation (Nations and Komor 1983), while the experience of Swiss and some African livestock herders shows that communal grazing systems can be ecologically sound (Netting 1976; Swallow 1990), suggesting that factors other than property ownership are at work.

Identifying those factors is crucial not only for Honduras, where the government is considering the privatization of its woodlands, but for rubber tappers in Brazil, nut gatherers in Peru, and other promising community efforts elsewhere in Latin America to increase incomes among the poor while protecting dwindling forests. The experience of the resin tappers in the Federación Hondureña de Cooperativas Agro-Forestal (FEHCAFOR) suggests how the tragedy of the commons can be avoided. A look at two affiliates—the Cooperativa Villa Santa-Los Trozos and the Cooperativa San Juan de Ojojona—reveals three determining factors: secure tenure, economic incentives, and institutional capacity.

SECURE TENURE

“If a tree is productive, it can last 20 to 25 years,” says Rosalio Espinal, president of FEHCAFOR and member of the Cooperativa Villa Santa-Los Trozos. “These trees are our livelihood, so we must protect them.”

Juan Francisco Martínez, secretary of the Cooperativa San Juan de Ojojona, adds that “the government says the forests belong to COHDEFOR, but we are the ones who put out the fires, clear the underbrush, and look after the trees.”

Long years of stewardship have convinced resin tappers that the forest is theirs, but despite their passionate conviction, national policymakers remain unconvinced that the rural poor can manage this resource. As the country undergoes a program of economic restructuring, reforms are being proposed for the state forestry system that threaten to reduce access by resin tappers and other community groups. These reforms are unlikely to work if they misread the cause of the past failures, confusing public ownership with common property and common property with open access. That is, one must understand the relationship between the prescribed Social Forestry System and actual tenure, that “bundle of rights” to extract value from an area that includes how people perceive, partition, own, and defend resources.
formally and informally (Fortmann and Ridell in Raintree, et al. 1987).

Currently, Honduran resin tappers operate under a combination of common, state, and individual property regimes. As previously mentioned, the state owns the trees, while the topsoil is privately, nationally, or municipally owned. Although Article 29 of Law 103 establishing the Social Forestry System apparently assigns to cooperatives and community groups exclusive access rights to tap resin and extract timber from national forests, legal tenure, in practice, is highly conditional.

To begin with, each cooperative must renegotiate its lease annually through a sales contract with COHDEFOR that spells out how many barrels of resin can be taken and how many board feet of lumber can be cut. The cooperative can only sell its timber to the authorized local sawmill, which has exclusive rights for marketing products from its “tributary” area. The contract also binds the cooperative to “submit unconditionally” to COHDEFOR’s forest management plans in the area, forbids the cooperative from trying to block any contracts COHDEFOR signs with third parties, and specifies that “access to the area of resination is unrestricted.”

The cooperatives that have prospered under the Social Forestry System have been able to informally organize and defend their tenure rights and the forest itself. The Cooperativa Villa Santa-Los Trozos is a prime example.

Villa Santa is a rural town of 2,500 people in the municipality of Danil in the department of El Paraíso. Covered by a thick pine forest canopy and receiving abundant rainfall in excess of 1.5 meters annually, the surrounding mountainous zone is being populated by settlers from the parched southern areas of Honduras, including Sabana Grande and Nueva Armenia.

On May 16, 1973, the town’s residents blockaded the main road for 24 days to keep tractors from an Italian sawmill from clearcutting the forest. “We felt obliged to defend the forest, even though we did not know what it could give us,” says Policarpio Alvaringa. Assisted by university students and lawyers from Tegucigalpa, 12 strike leaders who became known as los primitivos, or the wise old men, decided to form the cooperative Alvaringa would one day lead. A concession to use 22,000 hectares of national forests was obtained from the newly organized COHDEFOR, and the co-op obtained 216 sets of modern tapping equipment on consignment from the Maya resin-processing company. After dividing the land among individual members for care and harvesting, the community was in business.

Members paid a quota into a savings fund for each barrel of resin they tapped, allowing the cooperative to purchase a truck for transporting resin from centrally located pickup stations to the processing plant in Tegucigalpa. A consumer store was opened to buy staples and agricultural supplies in bulk for discount sale. In 1980, the co-op began to market logs from trees past the resin cycle; they then diversified their income sources by marketing tree sprigs as binding material to tobacco companies in a nearby valley. By 1989, the cooperative had nearly 200 members and a reserve fund of nearly $300,000.

The key to this success has been the cooperative’s ability to limit access to the forest. Today, most members have fenced in their tracts and live near enough to monitor entry. Forest claims can be bequeathed to family members after death, or transferred following resettlement, by making provisions with the cooperative secretary. A sharecropping arrangement, or medias, has been worked out that allows members to rent out their trees to a worker, who receives half the resin collected. And on two occasions, the co-op leadership has met with the national director of COHDEFOR to stop sawmill logging and other outside incursions.

The Cooperativa San Juan de Ojojona, located in the department of Francisco Morazán, has not been so fortunate. The area, which has been a
resin-tapping center since the practice was introduced to Honduras in 1913, is marked by extreme poverty, growing aridity, rapidly dwindling forest cover, and high out-migration to nearby Tegucigalpa. In 1966, 60 peasants from several villages in the municipality of Ojojona joined together to form the nation's first co-operative for marketing resin. The Cooperativa San Juan blossomed under the Social Forestry System initiated in the early 1970s, growing to more than 300 members, acquiring a truck, and starting a consumer store. Co-op leaders rose to prominent positions in the new national federation, FEHCAFOR.

The bubble burst in 1979 when the president, who was a former mayor of the municipality, absconded with nearly $50,000. The organization was left in shambles. By 1989, resin production had plummeted to only 180 barrels, or 45 metric tons, less than 7 percent of the production in Villa Santa. Today, the Cooperativa San Juan has only 35 members, and has reserve capital of only about $1,000.

The San Juan resin tappers live far from each other and far from their assigned plots, making it difficult to tend trees properly or defend them from outsiders. Cooperative President Bienvenido Martinez sadly noted that “anyone can come in to steal our resin cups, cut wood, and start fires... because the forests are ejidal, and there are no fences.”

In this arid zone above valleys deforested by the cattle expansion of the 1950s, trees are increasingly sparse, and the rate of natural regeneration is low. Even if the cooperative had the knowledge and resources to reforest, the prevailing system of “open access” makes it futile. Both resin tapping and the forest verge on extinction.

The experience of these two cooperatives shows that the key to viable community forestry is the ability to control access to the resource base and develop rules for managing its use. The package of new legislative proposals to reform the social forestry system threatens to undermine strong cooperatives that have managed, despite COHDEPOR’s policies, to achieve informal tenure rights, and push the weaker ones quickly over the edge.

Some of these proposals are intended to give economic incentives for forest protection, while potentially increasing government revenues. COHDEPOR’s monopoly on wood exports has ended, and the stumpage fee for logging trees has nearly doubled. Also being discussed is a plan in which farmers would be paid to plant trees, tree ownership would be ceded to private property owners, and tax breaks would encourage conservation and rational use.

The transfer of usufructure rights to private owners would have an immediate impact on resin tappers such as those in San José de Protección, where outsiders are rapidly buying up the land. The main threat, however, comes from legislation to privatize public lands. One scenario would expand the 58 tributary areas over which 63 functioning sawmills currently have jurisdiction, and give them exclusive rights to manage all production activities, including resin tapping, and the responsibility for reforestation. An alternative approach would pass forest jurisdiction from COHDEPOR to municipal governments, but resin tappers suspect the result would be the same. Lumber companies have the capital to promise greater short-term profits, and FEHCAFOR manager Salvador Meza kept intact for long periods, providing habitat for flora and fauna, maintaining watersheds, and preventing soil erosion. By offering small farmers a long-term, environmentally sound “cash crop,” resin tapping discourages slash-and-burn agriculture by co-op members, and can sow the seeds for increased farmer receptivity to more sustainable methods of subsistence farming as well. Farmers living “with” the forest prove to be effective firefighters against both natural and manmade blazes, and cooperatives have mobilized their members on numerous occasions to keep their livelihoods from going up in smoke.

Meanwhile, FEHCAFOR officials and forestry technicians point to numerous examples of overexploitation by Honduran sawmills under the existing tributary system, and wonder, since many are foreign owned, if the mills will be committed to preserving the nation’s forests over the long term once restraints are removed. Even if lumber companies are required to reforest, clearcutting disrupts habitat and magnifies many of the other ecological threats resin tapping avoids.

In late 1988, FEHCAFOR placed an advertisement in La Tribuna, Honduras’s most prominent daily newspaper, warning the public that expansion of the tributary areas will “deliver [the forest] to the service of a few sawmills, hurting the majority of the Honduran people, who would be converted into poorly paid day laborers.” Falling income will presumably increase the rate of migration to already burdened urban areas, and those who remain behind will have little incentive to protect someone else’s property.

Whether resin tappers earning long-term income from pine trees or whether sawmills turning those trees into plywood for quick export will better safeguard forest cover is yet to be determined. What is certain is that cooperatives, like the one in Villa Santa, can operate as private corporate bodies to efficiently use forest resources and spark rural development among campesino farmers.

ECONOMIC INCENTIVES

Secure tenure is a prerequisite for successful forestry cooperatives, but it is not sufficient. Evaluating tree-
planting programs in Haiti, anthropologist Gerald Murray has said: “Ecological protection and reforestation occur only as secondary effects to activities that generate income. ...Peasants are not villains or the blind [who need] to be educated, but rational, goal-oriented, economic actors.”

Rosalio Espinal of the Villa Santa cooperative explains it more directly, saying, “We do not want to cut pine trees before they finish the resin cycle because that would be like butchering a milk cow.”

Most resin tappers are small farmers who have taken up the trade to earn cash income to buy needed consumer goods and tide them over during the lean months while subsistence crops are being planted and before they are harvested. Working alone, a farmer can spend two or three days a week installing tubes and plastic drain cups into pine trees of the species pinus oocarpa, tecun amania, caribaea, pinabeta, and costanero, thinly scoring the bark with a blade to avoid damaging the wood, and pouring sulfuric acid into the scars to increase the flow. During the height of the resin-tapping season from January to May and during mid-summer, a farmer can collect as much as a quarter metric ton of resin sap monthly per stand of 500 trees, earning approximately $300 for the annual season. In Villa Santa, some tappers have access to as many as 2,000 trees, with the average being around 1,000.

Unfortunately, the terms of trade have been highly volatile during the past decade, and future profitability is in question. Drastic price swings in the international market have created a boom-and-bust cycle, rising to $41 per quarter metric ton in the early 1980s, before plummeting to $16 in 1984, and inching back up to $28 four years later. From this fluctuating gross price, resin tappers paid nearly $10 per quarter metric ton in steady taxes to COHDEFOR and municipal governments and in co-op dues.

Part of the problem has been the resin tappers’ inability to obtain market leverage domestically. They sell their resin to three companies that process it for export to the United States, Japan, and Europe as turpentine, or as resin for soaps, dyes, and adhesives. The three firms have formed a legal oligopolistic accord known as the Resin Fund, which sets the fixed price they will pay tappers and divides the processing pie into equal wedges. The Fund does offer price stability for the six-month tapping season, but it has also been pegged to quality standards that tend to exclude resin collected from the poorest tappers and from marginal woodlands.

These economic trends affect farmers’ decisions about whether to continue resin tapping. With the Resin Fund refusing to buy much “dirty” resin and having been burned by the wild price swings of the past decade, a number of cooperatives, many of them affiliated with the Central Nacional de Trabajadores del Campo, a national farm federation, have abandoned resin tapping for cutting firewood. Moreover, economic changes in 1990 make the situation precarious.

In March of that year, newly elected Honduran President Rafael Leonardo Callejas announced a liberalization of the foreign exchange system, a de facto devaluation that inadvertently threatened to drive resin tappers out of business. The act was designed to encourage exports for Honduran agro-industries while cutting imports and the trade deficit. The resin-processing companies were able to improve their domestic balance sheets by converting at a higher rate dollars earned abroad, while using their control of the resin market to avoid passing any of the profit through to tappers by paying them higher prices. Meanwhile, tappers were being squeezed at the other end as their input costs soared after import duty waivers and sales tax exemptions were abolished. The price of inputs such as sulfuric acid doubled, while the costs of plastic cups and steel blades increased by 30 percent.

After the companies refused to raise product prices, in May 1990 the FEHCAFOR cooperatives decided to withhold their resin from the market.
Left and above: Only those trees that have reached the end of the resin cycle (after 20 to 40 years) are sawn down and sold as lumber or firewood for supplemental income.

By July, the cooperatives had negotiated a price increase of 20 percent, and sales resumed. Following another six months of tortuous negotiations, the Resin Fund announced that a further increase to $52 per quarter metric ton would take effect in February 1991.

The common element in the dangers posed by plans to change the forest tenure system and undertake economic structural adjustment has been the invisibility of resin tappers to policymakers. The ability of FEHCAFOR to negotiate higher prices showed what could be accomplished through organization. But some farmers, including FEHCAFOR manager Salvador Meza, thought that something more than organized reaction was needed. "It would be better," he said, "if we could expand our business by processing our own resin."

INSTITUTIONAL CAPACITY

The success of a cooperative or other community group involved in natural resource management depends on its usefulness to the people who join it. There must be an economically and legally secure activity if the enterprise is to get off the drawing board. Once people have come together, dynamic leadership and the development of managerial skills are needed to maintain the consensus and transform the enthusiasm of shared ideals into the nuts and bolts of essential services. The experiences of the Cooperativas Villa Santa and San Juan de Ojojona offer clues about why some commu-
nity institutions gel to form a workable consensus while others cannot.

One might think that the crucial failure limiting the San Juan cooperative was its lapse in leadership when a former president embezzled funds. Surprisingly, both the Villa Santa cooperative and the federation FEHCAFOR itself suffered similar lapses, with the latter actually dissolving before being revived in 1984 by the Confederación Hondureña de Cooperativas (CHC). Before turning to the national level, it is instructive to see what can be learned from the resiliency of Villa Santa at the local level.

Four lessons can be learned. First, members shared a powerful experience of common participation in a community movement. Genaro Osorio, one of the 12 primitivos present at the outset says, "It was the strike to block the sawmill from tearing up this place that got us motivated to start this co-op." The mystique of acting together to protect the forest adhered to the organization that followed, binding its members together.

Second, the Villa Santa area is plentifully endowed with natural forest tracts and a climate favorable for resin production. Most members have access to parcels in excess of 1,000 trees, allowing them to earn enough to conserve the resource rather than cash it in. Mild temperatures in the area are conducive to the sulfuric-acid tapping method, which effectively doubles traditional yields. Good roads have facilitated the transport of resin, and the payoff from group marketing has encouraged diversification into other forest-based production activities. Multiple use strengthens the conservation ethos, and allows the cooperative to weather erratic price swings in one commodity.

Third, members were able to obtain credit to buy modern tapping equipment and learned how to use it from the beginning of the cooperative. "People from Maya [the resin-processing company that supplied the equipment] taught don Luis Alonso how to attach the cup and canal," recalls Felipe Alemendares, one of the first members. "He experimented with this and showed me; it was quite easy and we all caught on quickly."

Almost by default, since COHDEFOR did not provide communities in the Social Forestry Sys-

FEHCAFOR cooperatives such as this one benefit the whole community by opening stores to sell staples and farm supplies in bulk at discount prices.

tem with much in the way of credit or technical assistance, the cooperative stumbled on the "farmer first" adaptation of appropriate technologies that has been at the heart of numerous other successful rural development programs (Robert Chambers, et al. 1989). These methodologies, which have been pioneered by non-governmental organizations (NGOs) throughout much of the developing world, show that farmers teaching farmers what they have learned from tinkering with new technologies in their own fields are often far more likely to succeed than extension agents trying to recreate experiments created by scientists at centralized research stations. Ironically, because the "farmer first" approach led to local adoption of the state-recommended cup-and-canal method, the cooperative earned the respect of COHDEFOR, gaining the ear of influential people who could help stop encroachment by sawmills into the forests around Villa Santa.

Finally, the strong participation within the cooperative led to the diffusion of leadership skills so that when the first president drained the organization dry, a new group of leaders rose up to reclaim those resources and reenergize the community enterprise. Remembering those days in 1985, Rosalio Espinosa, one of the new leaders, says, "It was sad the way previous managers had robbed us of what we had worked so hard to make, but we younger men decided to fight back and recover the car and the money that was taken." The capital that was saved allowed the cooperative to buy its truck, start the consumer store, and make new investments.

The deficiencies of the Cooperativa San Juan de Ojojona are a mirror image of Villa Santa's strengths. The diffuse membership scattered among several communities, the already depleted ecological base of the area, the inability to sustain production or diversify its sources to make forestry attractive, and the weak leadership have undermined the ability to form a strong consensus around tenure rights and manage those claims effectively to curtail outside encroachment.

The common property literature revolves constantly around this theme: A breakdown in group decision-making is the prime cause of common property regimes passing into open access and overexploitation. Community forest organizations must be sufficiently strong to exclude outsiders. The apparent failure in San Juan should not obscure a silver lining that might one day be mined if it is not overlooked by outside agencies. Five new cooperatives joined FEHCAFOR in 1990, raising the total membership from 2,700 to 3,145 individuals. What this suggests, despite the still unresolved conflict endangering what remains of the commons, is that resin tappers understand they must join together at some level to cut transport...
costs, market their product competitively, and broker outside support.

If that vision is to become a reality and a force for protecting the commons, it is vital to strengthen institutional coherence and decision-making capability. An IAF grant of $249,000 to FEHCAFOR in 1986 has provided resources to strengthen both the federation and its member cooperatives. A rotating loan fund has been established so that member cooperatives can finance efforts to diversify production and boost yields. The establishment of such funds is crucial since few rural communities in Honduras have sources of informal credit, much less banks. Firefighting equipment has also been purchased that helped extinguish two blazes in Ojojona and another in Protección in 1989 alone. Leadership training programs and technical assistance to improve management, bookkeeping, and production skills were offered by FEHCAFOR, the Instituto de Formación Cooperativa, and the CHC.

Today, Rosalio Espinal, who helped revitalize Villa Santa, is the president of FEHCAFOR, which has undergone a rebirth of its own. Wrecked by leadership abuses in the late 1970s, it was reborn when the national confederation of cooperatives decided that an umbrella organization was needed to facilitate market transport and to negotiate higher prices for resin tappers. Since 1984, it has tripled in size to 48 affiliates, representing over half the country's 6,000 resin tappers and accounting for nearly 70 percent of production.

Espinal must be satisfied that since FEHCAFOR's reemergence, resin prices paid to tappers have more than tripled. Yet he must also be aware from his experience in Villa Santa that market diversification is key. Efforts by COHDEFOR to manage its own resin-processing plant to compete with the big three failed in the mid-1980s, so that might be too ambitious a step for the federation right now. Plans are underway, however, to construct a large warehouse and plant for filtering resin, which could then be exported to processors in the United States and Europe.

Pending an in-depth study of the economic, social, and political feasibility of such an undertaking, there are other signs emerging from local cooperatives that point to new opportunities and a looming danger. When the revolving loan fund was established to diversify production activities, many groups chose to bypass forest diversification to intensify grain production, plant coffee bushes, or start small-scale animal husbandry projects. In one sense this reflects the uncertain market conditions for resin, and the promising markets for other crops being opened up by NGOs such as World Neighbors in Guinope, where farmers have been able to increase their corn and bean yields four-fold in the past five years through intercropping, soil conservation, and organic manures. Since resin tappers are also farmers, channeling investments for maximum return is only natural.

However, it may also signal a growing unease at what is happening to the forest itself. Trees are often seen as "a gift of God," which will regrow naturally to provide resin, firewood, fence posts, animal fodder, shade, and building materials. It is still rare to think of trees as a source of water or, as a national radio program says, "the lungs of the nation." Yet farmers in Villa Santa and Ojojona
have begun to complain that rainfall has decreased markedly during the past 20 years and that the soils are "tired." Even though the resin-tapping cycle lasts from 20 to 40 years, farmers cannot help but notice that among the 500 to 1,000 trees currently being worked, only 100 to 200 new saplings are growing up naturally to replace them.

To avoid long-term decline, forest community members must have access to training in reforestation and in how to integrate farm and forest management for sustainability. Farmer-to-farmer efforts, such as those that led co-op members to replace plastic cups with recycled metal cans, or the experiments in San Juan de Ojojona that showed the cup-and-canal method could be just as productive without using sulfuric acid, suggest that innovation is available at the local level. The question is how to harness it. There is no effective federation-wide program to share what is being learned in individual co-ops, and COHDEFOR technicians are rare visitors to the field and have yet to even devise an education campaign to make the cup-and-canal technology widely available.

The experience of the Cooperativa Villa Santa shows the promise of what can be done, the remaining question is what will be done. Many developing countries such as Honduras still have valuable forest cover remaining, and community groups in place to undertake successful natural resource management. The question is whether governments and international donors have the will to support full and secure tenure rights for these groups and the wisdom to structure market incentives that will make their businesses economically viable. If the answer is yes, then the rural poor will have the opportunity to improve their livelihoods while securing their future and our own.

DENISE STANLEY is a Ph.D. candidate in agriculture and natural resource economics at the University of Wisconsin-Madison. She conducted research on the Honduran resin-tapping cooperatives as part of an overall analysis of IAF ecodvelopment projects. Previously, she worked in Honduras and the Dominican Republic with two private development organizations in rural project planning and credit evaluations.

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