Market and Finance options for ejido forestry in the Yucatán Peninsula

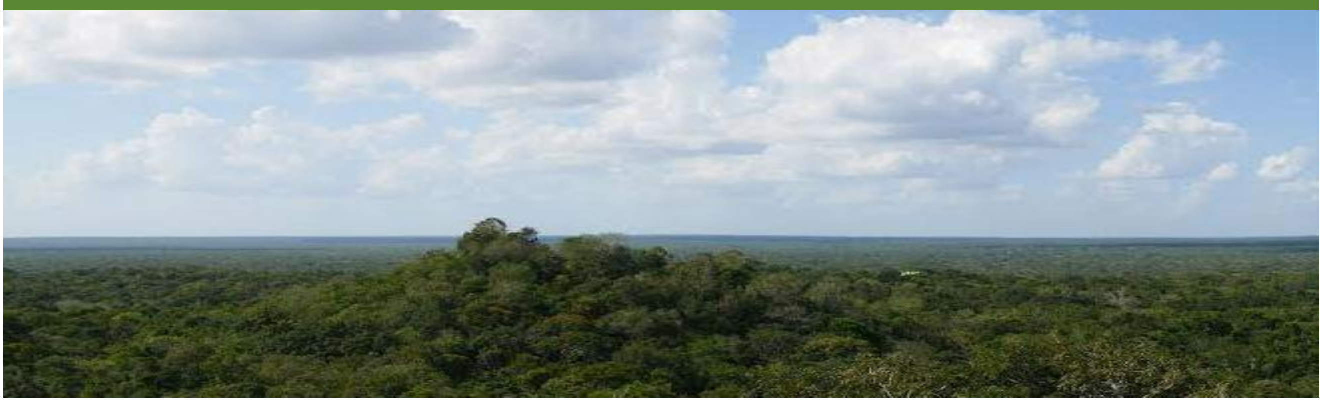

Foto: Dan Ackerman

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ALIANZA MÉXICO PARA LA REDUCCIÓN DE EMISIONES POR DEFORESTACIÓN Y DEGRADACIÓN

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Summary points:

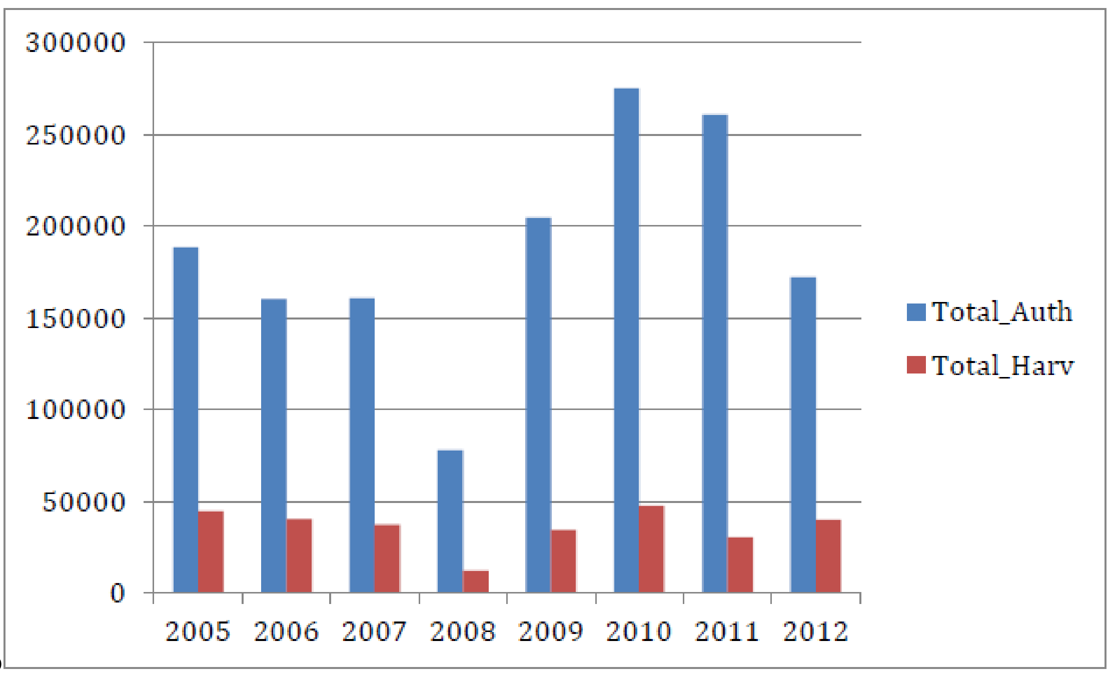
- *Ejido* forestry in Mexico's Yucatan region is at a crossroads: stagnating productivity, lack of diversification and decreased availability of mahogany put the future of many community forest enterprises (CFEs) at risk.
- Achieving greater competitiveness will be necessary if forestry is to remain a viable land use alternative, enable REDD+ and power rural economic development; to do so CFEs need to access better markets for a wider diversity of species and products.
- Such markets exist and are growing, but they demand low-cost, high-quality, value-added products; for CFEs to penetrate and hold on to such markets, they need access to finance.
- Finance of CFEs has traditionally come from timber buyers and intermediaries (for working capital) as well as government subsidy programs, principally CONAFOR (for infrastructure); presently, there are few incentives for CFEs to apply for credits from financial institutions.
- Lending to CFEs on the Peninsula from financial institutions has been highly limited; however, there are an increasing number of publically-backed financial mechanisms with a mandate to make credits available to CFEs, as well as positive experiences with CFE finance from other parts of Mexico and the region.
- Structural and social/organizational barriers must be overcome if CFEs on the Peninsula are to successfully access and execute financial credits.
- Recommendations for making such credits accessible and attractive to CFEs include: expanding the range of CFE assets eligible as guarantees; fixing interest rates over the life of loans and extending credit time horizons; involving responsible buyers in the structuring of credit arrangements, and; building long-term, field-based technical support to CFEs into loan packages.
- As important as more accessible credit may be, it is equally critical for CFEs to increase partnerships with responsible buyers that can provide finance and assist with enterprise development; in such partnerships, FSC certification is of fundamental importance.

Introduction

Forestry is crucial for economic development among many *ejidos* of the Yucatán region of Mexico. About 70% of the Peninsula is forested, and 75% of the total land area is owned by *ejidos*. Forestry represents an important economic lifeblood for many rural communities. Of 120 *ejidos* with approved forestry activities in the states of Campeche and Quintana Roo, for example, 39 report forestry as their major source of income (Ellis et al. 2014). Such activity thus supports the livelihoods of thousands of people in a region that corresponds to more than 7% of Mexico's total land area, amounting to 3.5% of the country's total population.

But the future of *ejido* forestry on the Peninsula is insecure. Long a global model for community forestry in the tropics – since the days of the *Plan Piloto Forestal* (1984-1998) – *ejido* forest enterprise has faced significant challenges over the last decade. Changes to social organization, lack of diversification of forest production, and the effects of Hurricane Dean (2007) have all taken their toll. Stagnating productivity, a problem in the forestry sector throughout Mexico, is increasingly hindering growth of community forest enterprise (CFE). Figure 1 below shows data on timber harvesting in Quintana Roo during the period 2005-2012, which is broadly representative. While allowable cut annually ranges between 100,000-275,000 m^3, actual harvest volume has for years been under 50,000 m^3, less than 25% of timber harvest capacity.

Figure 1. Authorized and harvested volumes of forestry ejidos in Quintana Roo (2005-2012)



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Source: Ellis et al.[1]

[1] Ellis, E.A., Ward, D.R., Romero Montero, J.A., and I.U. Hernández Gómez. 2014. Evaluation and field survey of timber producing communities for assessing improved forest management opportunities for community forests in the peninsula Yucatan and Cutzamala early action site. Report prepared for MREDD+.

A number of factors are commonly highlighted as root causes of the malaise among CFEs in the region. These include:

- Social and organizational dynamics – above all the preponderance of the "work group" model, leading to de facto parcelization of the forest resource, hindering the ability to build collective enterprise and invest in long-term development. Wilshusen[2] among others has analyzed the origins and impacts of the work group model at length. Additionally, the concentration of decision making power among older *ejidatarios* and the general lack of participation of youth in forestry undermines the potential for enterprise dynamism.
- Regulatory barriers – expensive, cumbersome and sometimes redundant bureaucratic requirements of government agencies to engage in legal forestry operations, acting as a disincentive to undertake forest harvesting and undermining CFE efficiency and profitability. The Mexican Civil Council for Sustainable Silviculture (CCMSS) has recently made this a core focus of its reform agenda[3].
- Diminishing mahogany and failure to diversify production – plenty has been written on the topic of cutting cycles and mahogany regeneration on the Peninsula[4]; the details will not be rehashed in this brief. It is clear in any case that forestry *ejidos* have less mahogany available than they did during their first cut cycle. Given that mahogany is still the most important species in terms of volume production and income, declining availability has hurt CFEs. Meanwhile, failure to diversify production and market so- called "lesser-known" species has stood in the way of further CFE growth.
- Disadvantageous market conditions – control of markets by a very small number of buyers that dictate demand, pricing and, ultimately, investment. Such a market structure hinders CFE capability to escape debt, finance operations and develop new products, particularly critical for the lesser-known species that must form an increasingly important part of their business vision. Increased competition from imports and new species makes even mahogany a less profitable product than in years past.
- Lack of sustainable finance – capital for forestry operations comes from buyers, often landing CFEs in a debt trap with limited ability to invest in enterprise development. Structural barriers to accessing credit from financial institutions – plus the availability of government subsidy for many CFE needs – creates disincentives for CFEs to access credits.

This brief deals with the latter two issues, and especially the question of finance, which is advanced as the most practical issue for technical assistance agencies to address in attempting to solve the pressing challenges faced by CFEs on the Peninsula.

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[2] Wilshusen, P.R. 2005. Community adaptation or collective breakdown? The emergence of "work groups" in two forestry *ejidos* in Quintana Roo, Mexico. In: *The Community Forests of Mexico: Managing for Sustainable Landscapes*. Edited by David Barton Bray, Leticia Merino-Pérez and Deborah Barry. University of Texas Press: Austin.

[3] http://www.ccmss.org.mx/wp-content/uploads/2015/05/Sobrerregulacion-Mendoza-FernandezVazquez-CCMSS.pdf

[4] See Snook, L.K. 2003. Regeneration, growth and sustainability of mahogany in Mexico's Yucatan forests. *In* A. Lugo, J. Figueroa-Cólon & M. Alayón, eds. *Big-leaf mahogany: genetics, ecology and management*, p. 169-192. Springer Verlag: New York.

Market conditions and barriers to CFE access

Foto: Eugenio Fernández

Two unfavorable external market conditions have in essence conspired to create serious challenges for CFEs to achieve greater competitiveness. First is the lack of diversity of buyers on the Peninsula. One buyer in particular dominates the vast majority of timber traded in the region. This buyer also finances the bulk of forestry operations that occur on *ejido* lands, providing advances (sometimes on a weekly basis) typically not to CFEs as a whole but to individuals with allocated quotas (per the "work group" model). The domination of the market by a sole buyer dictating both demand for species and pricing makes it difficult for socially- splintered, debt-ridden CFEs to articulate their own vision and invest in enterprise development.

Second is the increasing competition from imported wood products. Critically, mahogany markets for CFEs in the region are not as profitable as in past years, due above all to greater imports. This includes plywood made from Asian mahoganies, as well as imports of "true" big-leaf mahogany from Central and South America. These imports, often coming from operations that have significantly greater scale than an average CFE, arrive in Mexico at prices far below mahogany harvested and sawn in local CFEs. And they are typically delivered at a higher level of value added, in greater volumes and better quality than what most CFEs can produce.

As noted, mahogany volumes are dwindling among most CFE operations. Still, the volume harvest of mahogany remains greater than for any other species on the Peninsula. Given this dynamic, and the fact that most CFEs have a considerable diversity of other species with increasing market demand, achieving markets for lesser-known species has taken on growing importance. Some of the most important species are listed in the Table 1 below.

Table 1. Lesser-known species of the Yucatán region

Species	Common name	Notes
Bucida buceras	Pucté	Drying difficult; low demand but some use for flooring; past use for railroad ties; potential in heavy construction (SG: 0.85)
Bursera simaruba	Chacá	Easy to work; current use for plywood and low-grade furniture; potential use in construction, siding and pallets (SG: 0.33)
Cordia dodecandra	Ziricote	Fairly easy to work; current use for furniture and cabinetry; potential to expand use for musical instruments and specialty wood products, as well as veneer (SG: 0.61)
Lonchocarpus castilloi	Manchiche	Sapwood/heartwood contrast notable, highly durable; current use for flooring and some furniture; potential for decking and heavy construction (SG: 0.79)
Lysiloma bahamensis	Tzalam	Good workability, medium durability, nice walnut color; current use for flooring and furniture; potential for posts and beams, moldings and doors (SG: 0.63)
Manilkara zapota	Chico zapote	Important for chicle tapping; current use for a wide range of products in construction to furniture and flooring; potential for fine moldings and artisanal products (SG: 0.85)
Metopium brownei	Chechén negro	Susceptible to insects and fungi, medium durability; current use for flooring and high-end furniture; potential use in artisanal products and sapwood for furniture (SG: 0.74)
Piscidia communis	Jabín	Highly durable and resistant; current use mainly for posts; potential for flooring and tool handles (SG: 0.74)
Platyimiscium yucatanum	Granadillo	Attractive color, good workability, highly durable; current use for furniture and flooring; potential for veneer and musical instruments (SG: 0.58)
Sickingia salvadorensis	Chakte kok	Bright red color; high price due to low milling yields; currently used for flooring; potential uses for furniture and moldings (SG: 0.52)
Swartzia cubensis	Katalox	Black-violet heartwood makes it a substitute for ebony, but low yield and workability; current use for flooring; potential use in high-end furniture and parquet (SG: 0.86)

***SG = Specific gravity. Sources: interviews; ITTO[5], Forster et al.[6], WWF/GFTN[7],**

[5]ITTO. 2012. Caracterización tecnológica de las especies de madera. Documento de Proyecto PD 385/05 Rev. 4 (I,F), “Industrialización Comercialización y Manejo Sostenible de diez Especies Nativas Mexicanas.” Organización Internacional de las Maderas Tropicales. Universidad de Guadalajara. Centro Universitario de Ciencias Exactas e Ingenierías, Departamento de Madera, Celulosa y Papel, Unidad Académica "Propiedades y Usos de la Madera."
[6] Forster, R., Albrecht, H., Belisle, M., Caballero, A., Galletti, H., Lacayo, O., and S. Ortiz. 1998. Forest communities and the marketing of lesser-used tropical hardwoods in Mesoamerica. USAID/USFS.
[7] http://gftn.panda.org/?212135/Guide-to-Lesser-Known-Tropical-Timber-Species

The need to diversify production among CFEs has long been recognized. The multiple benefits – from increased productivity and enterprise competitiveness, to the potential for creating improved conditions for mahogany regeneration – form a compelling narrative. Countless consultant reports have lamented the lack of markets for such species. Yet there is a clear mythology about this supposed lack of markets. Year on year, global demand is improving for most of the species listed in the above table. During research for this brief, in fact, a visit to the Peninsula's main buyer revealed at least half a dozen of such species on offer in his showroom. The buyer reported strong and growing markets in the USA and China. Significantly, a negligible amount of the material was sourced from local CFEs.

For CFEs to take advantage of such new markets they must be able to deliver a product that can compete with imports. To do this they need to improve the productivity and efficiency of forest operations, invest in value-added infrastructure, and professionalize enterprise management to comply with the demands of fast-paced global markets. Several barriers stand in the way. CFEs in general lack dedicated professional staff, thus marketing is typically carried out by either the *ejido* leadership or foresters, neither of whom typically have any background or training in marketing. Another key limitation is the lack of access to basic communications needed to carry out marketing; internet connections and cell phone reception are limited or non-existent in many forestry *ejidos*. Finally, crucially, many *ejidos* do not have a clear sense of their real costs and real income from forest production, nor of market prices for wood. They therefore lack the essential information to set prices and negotiate. The general paucity of systematic bookkeeping and administrative control render many CFEs unable to identify problems, streamline operations, and increase profits by either cutting costs or increasing investment.

Improving technical capacities in these areas is a key priority for public investment and technical assistance agencies; recommendations in this regard are included below. But a more fundamental transformation of the CFE business model will require access to non-traditional sources of finance, i.e. not from local intermediaries or buyers. Specifically, credits from financial institutions and/or increasing partnerships with responsible buyers will be linchpins in the achievement of a more competitive CFE sector on the Peninsula in the years to come. The remainder of this brief focuses on forest finance and prospects for CFE access to credit.

Forest finance

Capital is critical for sustainable forestry and business operations. At every level, CFEs need investment: from forest management (inventory, mapping, road construction, operational plans, forest harvesting, monitoring, etc.), to value-added processing (sawmills, kilns, carpentry equipment, etc.) and enterprise administration and marketing (staff, sales, travel and communications, etc.). As elsewhere in Mexico, capital for CFE development in the Yucatán region comes principally from two sources: government subsidy and buyer advances. Mexico in general counts a high degree of state investment in forestry in comparison to other countries in the Global South – the 2015 budget CONAFOR is nearly US $475 million, dwarfing that of forestry administrations in nearly all other developing countries. Yet to date relatively few government programs have been focused on transforming community forestry operations into market savvy and competitive businesses.

Even though CFEs have access to government subsidies, and even though they are selling wood into markets with often robust demand, most if not all CFEs on the Peninsula are unprofitable. To be profitable, they must reinvest. But reinvestment by CFEs in their own operations is often constrained by their multi-objective management focus. For example, while CFE management may wish to reinvest profits in enterprise development, there is typically heavy pressure to maximize dividend payouts to individuals. Where reinvestment priorities, moreover, might dictate efficiency measures, leadership often wants to maximize employment opportunities for the community. This leads to a tendency to over-staff operations (driving up the costs of production and making CFE products uncompetitive) and to under-invest in new machinery (which cuts into dividends) or mechanization (which is perceived to eliminate jobs)[8]. Similarly, pressure on CFEs to pay for social services, fiestas, schools, infrastructure and other support to the community usually exhausts cash reserves by the end of the year and puts a premium on rapid cash turnover.

This places most, if not all, CFEs on the Peninsula in a situation where they lack working capital year to year. Faced with this, *ejidos* forward sell a part of their expected volume production to buyers and/or brokers who advance cash in exchange for fixed wood prices. Under such arrangements, wood is typically sold on the stump ahead of annual operations to agents that then dictate the terms of sale. On the Peninsula, such advances are often made to different individuals within 'work groups' in each *ejido*; individuals and groups will then forward-sell their own quotas among themselves, sometimes years in advance. There is little experience financing otherwise, e.g. CFEs themselves financing harvesting, processing and shipping wood to buyers and receiving payment 60-90 days later. Likewise, few CFEs have experience marketing products in differentiated markets. Selling graded wood into such markets would add value but, like self-financing operations, would create the challenge of cash flow and payments after shipments arrive.

Throughout Mexico, access to credit in the forestry sector remains highly limited. Only 0.01 % of total loans by the banking sector go to forestry broadly, and less than 1% of credits extended to the primary production sector in the country go to forestry. Similarly, only 1.5% of credit goes to forest industries (as a percentage of credit extended to the industrial sector as a whole). Only 16% of the *ejidos* and communities have applied for a loan, the vast majority for agriculture and herding activities. These data are for financial mechanisms through state-backed institutions (see below). There are very few cases of CFEs, at any level of development, accessing loans directly from private banks. Interest rates are high – on the order of 35% – presenting levels of risk that are unacceptable to CFEs. Nor would the vast majority of CFEs qualify for a loan from a traditional lender, for various reasons considered below. Yet access to credit is recognized as critical. Studies have shown that the main difficulty cited by Mexican *ejido* or community members in forming or building out their enterprise is the lack of finance[9].

Formal investment partnerships between CFEs and international private sector forestry companies (i.e. joint ventures) are also highly limited. Experience in Mexico in general with such business models remains scarce, due mostly to the private sector's hesitance to enter into joint venture partnerships with Mexican CFEs, as well as forest communities' negative historical experience with private forest concessions. On the other hand, there are cases of CFEs working with national companies sourcing wood and providing working capital under favorable terms. More on this model is presented below.

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[8] Evidence from several communities elsewhere in Mexico – notably Ixtlán de Juárez in the Sierra Norte of Oaxaca – shows that while new investments do eliminate low pay, low skill, low production positions, moving up the value chain allows CFEs to place the same workers into higher paying, higher value-added activities making furniture. Additionally, more women tend to find employment in higher value-added activities.

[9] Forest Investment Plan of Mexico. Available at: https://www.climateinvestmentfunds.org/cifnet/?q=country-program-info/mexicos-fip-programming

Major constraints to CFE access to credit

There are three underlying and interrelated barriers that obstruct CFE access to finance from sources beyond state agencies and buyers: (i) bank and private sector hesitance to partner with the forestry sector in general, and with community managed operations in particular, which they view as high risk; (ii) community lack of experience with applying for and managing loans, plus a tradition of financing operations through cash advances with local buyers, and; (iii) poor CFE management of cash flow due to weak administrative capacity, lack of business planning, and short-term priorities of communities.

In line with and beyond the above broad-scale issues, *ejido* enterprise leadership interviewed during the preparation of this brief cited a host of specific barriers. These include:

- Many forestry *ejidos* do not have the required legal status to apply for loan. In order to apply for and execute a loan from most financial institutions, the *ejido* must have a legally-registered enterprise.
- The creation of an enterprise in the *ejido* solely to apply for and manage credits can generate redundancies, rivalries and inefficiencies. For example, during the early 2000s, the *ejido* Noh Bec did exactly this in order to access credits from FIRA. Conflict between the leadership of the loan executing enterprise, the *comisariado* and the wider community *asamblea* around loan management eventually led to dissolution of the body. The debt, meanwhile, which financed the purchase of a sawmill, remained with the community. This experience makes it difficult to sell the idea of applying for credits in the future to the *asamblea*.
- Similarly, although CFE leadership may see advantages to applying for credits, *ejidatarios* in general have little appetite for risk, particularly in an environment where subsidies are readily available, and where buyers are ready to give advances. Most of those interviewed stated that it is extremely difficult to sell the idea of taking out a loan to the wider community *asamblea*.
- Even were the *asamblea* to approve applying for a loan and the credit be granted, CFE representatives interviewed saw high risks due to social pressures and wider community priorities. That is, due the governance of CFEs, the use of the monies would likely be subjected to the vagaries and near-term priorities of the community, and may ultimately be put towards ends unrelated to the financing agreement, creating problems for the CFE.
- Currently, market prices for wood are too low to justify taking out a loan. In other words, there is too little profit to be made to take on even low-interest loans.
- Loan agencies require guarantees that CFEs typically can't provide. The eligibility of standing timber and projected harvests via approved management plans as a guarantee is an important advance, however, that has been accepted in one of the documented cases above. Still, *ejidatarios* noted that timber alone short-sells the host of assets the forest holds for the public at large (e.g. carbon).
- Variable interest rates pose high risks. Loan offers that CFEs have experience with do not have fixed interest rates, and there is a perception of a "bait and switch" approach, where the financial institution offers a low interest rate to start, and then raises the rate later to garner their return.
- CFEs interviewed perceive the time horizons of available loans to be too short given the nature of the forestry business. By contrast, local buyers and intermediaries provide advances amounting to projected harvest incomes 2-3 years out.

Foto: Eugenio Fernández

Still, *ejidatarios* and CFE representatives reported that the concept of financial credits is still attractive. As noted, the single greatest barrier to improved competitiveness reported by CFEs stakeholders is the lack of finance. All those interviewed during the course of fieldwork reported that operating via advances from buyers was suboptimal, and welcomed the idea of finance from another source, as long as conditions were attractive.

Furthermore, although government subsidies are widely available – from CONAFOR and other sources – their existence does not make financial credits irrelevant. CFE representatives interviewed reported loans as potentially more attractive, since they see subsidies as: (a) politically driven, (b) not tailored to their specific needs, (c) requiring high levels of CFE co-finance, and (d) with strict time horizons and pressure to get the money in fast and then spend the money within a year.

Mapping of finance options

This section maps the most feasible alternatives for CFEs operating on the Peninsula to access finance that will allow them to diversify production, penetrate value-added markets and increase overall competitiveness.

Forest Investment Program (FIP)

Perhaps the most visible investment vehicle open to CFEs in the Peninsula is through new mechanisms put in place by the Forest Investment Program (FIP). Falling under the broader framework of Mexico's REDD+ program, there are two principal financial mechanisms for CFEs under the FIP, known as Projects 3 and 4. Project 3 consists of loans to "credit-worthy" CFEs from *Financiera Nacional para el Desarrollo Agropecuario, Rural, Forestal y Pesquero* (FND, formerly *Financiera Rural*, see description below). Project 4 is directed towards technical assistance and small loan funding to less-developed CFEs through FINDECA, a Oaxaca-based loan agency. Since both mechanisms are part of the FIP for Mexico, and backed by both loans and grants from the Inter-American Development Bank (IDB), there is considerable effort to make credits to CFEs more accessible. Most importantly, participating institutions are making low interest credits available (between 0%-15%), and have a mandate to tie technical assistance to loan packages. Both thus respond to critical barriers identified by CFEs.

Financiera Nacional para el Desarrollo Agropecuario, Rural, Forestal y Pesquero (FND)

As the main executing arm of one of the FIP projects, FND has a relatively deep track record trying to make loans to CFEs in Mexico. FND was created in 2002 as part of a larger government strategy aimed at increasing the supply of financial services in the rural sector. FND's main objective is to promote the development of economic activities linked to the rural sector, aiming to increase productivity and improve livelihoods. To do so, FND's mandate is to generate innovative financial and non-financial tools, aiming particularly at productive units with little or no access to financial services and which represent a high productive potential for the country.
To this end, FND has structured loan packages that are designed to be more accessible to CFEs. Currently, FND offers loans that require no guarantee and at very low interest rates (7% was cited by an FND representative in Chetumal). Still, FND's track record with execution has lagged, and they are regarded by CFEs interviewed as being highly bureaucratic, with many "hidden" costs to application that pose problems for CFEs.

FINDECA

FINDECA is a non-regulated financial institution in Mexico, headquartered in Oaxaca, with an office in Chiapas. FINDECA will soon be opening an office in Chetumal as part of its work with the FIP. FINDECA is a Financial Society of Multiple Objectives (SOFOM), a non-regulated but legal financial institution. FINDECA's mission is to provide affordable financing to help develop the rural sector in the south and southeast of Mexico, by financing productive projects that incorporate sustainable use and conservation of environmental areas certified by recognized independent parties. Their focus is to facilitate access to finance for small enterprises in rural areas who historically have had difficulty obtaining financing. For five years it has been funding rural enterprises, *ejidos*, and communities in the states of Oaxaca, Chiapas, Guerrero, Quintana Roo and Puebla. It has 20 employees, of whom 60% are operational staff; it has an average placement of US$1.3 million per year in credit.

FINDECA's forestry activities are most prominent in *ejidos* and communities, including loans for extraction and industrialization of wood, production of tree seedlings. They have been active in Quintana Roo, financing the extraction and industrialization of *chicozapote* chicle resin (*Manilkara zapota*), and commercial timber species enrichment. A major step forward, from the CFE perspective, is that FINDECA has made standing timber an eligible guarantee for CFEs to use in accessing credits. FINDECA has also been vocal about its support for FSC certification, which the SOFOM sees as a baseline guarantee necessary for accessing finance. FINDECA is present in at least two *ejidos* on the Peninsula currently, working together with FIRA (see below), and is set to do more under the FIP Project 4.

FIRA

The other key financial institution on the Peninsula is FIRA (*Fideicomisos Instituidos en Relación con la Agricultura*). Not formally part of the FIP, FIRA is an institution that channels credits to the rural sector, using Government of Mexico funds from the Bank of Mexico. FIRA operates four trusts[10] each of which is executed through intermediaries like private banks, SOFOMs (e.g. FINDECA), savings and loan agencies and credit unions. Critically, FIRA makes technicians available to work with its loan applicants over an extended period, often based in the field, to ensure adequate planning, application and readiness for execution. FIRA is currently involved in a loan arrangement with a group of forestry producers in the state of Hidalgo, profiled below. On the Peninsula, FIRA is working with FINDECA in Tres Garantías, a CFE in Quintana Roo state. More on this innovative loan proposal, which may be seen as a model, is presented below in the recommendations section.

CFE-buyer alliances

Although this brief is focused on forest finance from institutional sources, the option of more advantageous partnerships with both private and public sector buyers cannot be ignored. Given the significant barriers remaining to access credits, and the need to bring buyers into loan agreements (see below), this model is probably more feasible for most CFEs on the Peninsula. Key to such alliances, however, is the presence of responsible buyers that are willing to enter into long-term partnerships and invest in local enterprise development. Such buyers are scarce on the Peninsula, but there are both historical and regional examples of such arrangements working well, as well as some nascent partnerships developing on the Peninsula currently. Box 1 summarizes the experience of a group of *ejidos* on the Peninsula working with a Mexican state-owned company sourcing railroad ties.

Box 1. The Organization of Forestry *Ejidos* of the Zona Maya (OEPFZM)

The OEPFZM has 19 *ejido* members, covering a total area of 289,000 hectares in the municipality of Felipe Carrillo Puerto, Quintana Roo. The organization was created in 1986 to support member *ejidos* to the technical and administrative capacity necessary for sustainable forestry local enterprise. During the 1980s and 90s, OEPFZM had a long-standing agreement with the Mexican national railway company to supply railroad ties. The partnership lasted for more than 10 years, during which time 18 different species were sold to the company. At the height of the partnership, OEPFZM was selling 7,000,000 board feet of wood annually. As part of the partnership, the company financed annual operations, and also invested significant support in technical assistance for quality control. Interviews conducted during the field mission indicated that this type of arrangement was perceived as highly beneficial and low risk to CFEs, above all because it was long-term agreement with a state-owned firm that had to comply with certain rules, where demand was consistent, and where prices were fair. The partnership dwindled as the company began to substitute concrete ties for wood. Once the railway was privatized in the mid-90s, intermediaries came in, splintering the relationship, and undermining the company's interest to invest.

[10] Fondo de Garantía y Fomento para la Agricultura, Ganadería y Avicultura (FONDO); Fondo Especial para Financiamientos Agropecuarios (FEFA); Fondo Especial de Asistencia Técnica y Garantía para Créditos Agropecuarios (FEGA); Fondo de Garantía y Fomento para las Actividades Pesqueras (FOPESCA)

Positive experience with the national railway indicates that this model could be replicated. A similar alliance in the state of Oaxaca was highly successful and gave rise to significant investments, improvements in CFE competitiveness, and even the birth of a new second-tier retail business model, something unparalleled in Mexico. Box 2 summarizes the experience of ICOFOSA and TIP Muebles in Oaxaca. Such a model of state-driven procurement could be particularly powerful avenue given the size and reach of Mexican federal and state government purchase orders. In 2007, moreover, the federal government passed a policy requiring that all state agencies and state-owned enterprises source only "certified" wood. That policy has not been implemented or enforced in any meaningful way to date, and offers a key opportunity for positioning certified CFE wood in national markets.

Beyond partnerships with state buyers, one area for further development in the Peninsula is long-term alliances with responsible international buyers. Although examples of such partnerships in Mexico are rather scarce, there is positive experience in Central America. Two second-tier organizations – FORESCOM in the Maya Biosphere Reserve in Guatemala, and UNICAF in the Río Plátano Biosphere Reserve in Honduras – have long-standing partnerships with several North American companies that not only support working capital needs, but also have invested in training and technical assistance for CFE development. Most notable among these partners are companies sourcing wood for musical instruments, above all mahogany for guitar necks. In such alliances, the role of FSC certification has been fundamental: the end buyers require the FSC label in order to continue sourcing.

An important example – one of the few promising market trends on the Peninsula currently – is the partnership between the *ejido* Caobas (Quintana Roo) and buyers in Spanish markets linked to the *ejido* via Rainforest Alliance and COPADE, a Spanish NGO. Caobas renewed its FSC certification last year – the first among forestry *ejidos* in the Peninsula, all of whom lost their certificates in the wake of Dean. At the same time, Rainforest Alliance and COPADE – who were

Box 2. The case of TIP Muebles, Oaxaca

In 2005, three of the more advanced CFEs in the state of Oaxaca – Santiago Textitlán, Ixtlán de Juárez, and Pueblos Mancomunados – acquired factories to produce furniture from the wood they harvest. The following year, these communities formed an alliance called ICOFOSA (*Integradora Comunal Forestal de Oaxaca, S.A. de C.V.*) to coordinate joint production and marketing of furniture, in response to a contract with the state government to provide certified wooden school furniture. ICOFOSA subsequently launched a commercial arm, which it branded TIP Muebles, with the aim of retailing member- produced furniture. Despite a competitive and depressed national market for wooden furniture, not to mention a global recession, TIP Muebles sales doubled between 2007 and 2013, while points of sale grew from a single store in Oaxaca City in 2006 to 8 retail outlets and several large distributors throughout Mexico at present. The case of TIP Muebles is an important potential model for CFE partners in the Peninsula, given the local market for value-added products.

collaborating with FORESCOM in Guatemala to export FSC-certified wood to Europe – made the connection between a Spanish buyer and the Caobas CFE. This connection resulted in the first shipment of FSC-certified wood to an international buyer in years to leave the Peninsula, in the spring of 2015. Given the end-buyers' business in a high-quality, certified, value-added product (guitar parts), there is considerable scope to build on this alliance and leverage investment from the buyer in CFE development in Caobas and other *ejidos* on the Peninsula.
Now that Noh Bec has been recertified to FSC, and Tres Garantías is closing in as well, the time is ripe to build out this model.

Discussion and recommendations

Alliances with responsible buyers

As much as the option of financial credits will be important for CFEs, it is clear that long-term partnerships with good buyers is a critical missing link on the Peninsula. Interviewed *ejidos* stressed the need for "safe and secure" market alliances with buyers that would provide financing on favorable terms and invest in local capacity upgrades. In such arrangements, as noted, the role of certification will be critical. Responsible buyers of the kind that *ejidos* are seeking are generally interested in a certified product, which provides guarantees of the sustainability of management and enterprise. For the international market, this means FSC certification. To the extent that state and federal-level buyers could become partners for forest finance – as in the case of OEPFZM and railways, or TIP Muebles in Oaxaca – there may be scope to leverage the Mexican national certification system (NMX) as well.

For such alliances to develop, however, experience suggests that there must be a strong role of technical assistance providers. Such groups act as critical 'go-betweens' – mobilizing responsible buyers, bringing them to see the CFE offer, and managing the many bureaucratic and cultural hurdles that occur along the way. Expectations on both sides must be kept in check, moreover, since such alliances take a long time to bear fruit. In the case of Caobas, for example, it was more than a year between the initial contact and the eventual sale. At the same time, CFEs should be made aware that such buyers are also typically capable of providing advances to finance working capital, on more favorable terms. (Although the understanding with most is that through better profits, improved enterprise operations and a long-term vision, the CFE will begin to reinvest and free itself of the need for annual advances.) Finally, it will be important to facilitate south- south learning for the Peninsula's CFEs. Although some representatives are familiar with the FORESCOM case in neighboring Petén, most do not know TIP Muebles, and neither are widely known by *ejidatarios*. Examples of profitable CFEs and second-tier business are important for *ejido* members to see with their own eyes.

Foto: Eugenio Fernández

Innovative finance

Financial institutions looking to expand access to credit should look for innovative new ways to organize CFE finance. Box 3 describes one such example, a fledgling finance concept for an *ejido* in Quintana Roo that has yet to be executed, but which holds significant promise. Financing should be mobilized not just for infrastructure, which may be best handled by second-tier businesses due to issues of scale, but also for working capital, and to get around the difficulties inherent in the "work group" model.

Box 3. Tres Garantías and FINDECA

Tres Garantías is an *ejido* in the municipality of Othon P. Blanco, Quintana Roo. The *ejido* covers an area of 43,320 ha and has a population of approximately 800 people, 100 of whom are *ejidatarios*. The area under forest management is 23,500 ha. A participant in the Plan Piloto Forestal, Tres Garantias is one of the larger and better-organized forestry operations on the Peninsula. The *ejido's* CFE is currently negotiating a loan with FINDECA, which would apply FIRA funds, to fund an innovative approach to reconsolidating production in the *ejido*. Presently, the enterprise – which was constituted to run the *ejido* sawmill – provides a service to various *ejido* "work groups" who process their individual and group harvest quotas in the CFE mill. The CFE itself, however does not have a harvest quota, hindering its ability to capitalize and "buy out" *ejidatario* or work group quotas. The proposed FIRA loan would allow them to forward purchase enough of various "work groups" quotas to have its own wood and then capitalize operations, invest in value-added and build up their enterprise. Thus, it is an attempt by the CFE to essentially "re-collectivize" *ejido* forestry in Tres Garantías. If it is successful, it could have significant replication potential, both on the Peninsula and among smallholder producers elsewhere in Mexico and beyond. The loan in the offing carries an interest rate of 13-14%, and would be for between MXN 500,000 and 1,000,000, over a one-year time horizon. While CFE representatives were optimistic about passing it through the *asamblea*, there was considerable concern that, given current market prices, they would not be able to turn enough of a profit over such a short period of time to pay the loan back. A notable element in this case is the dedicated presence of a "*técnico*" deployed by FIRA to support the CFE in the process. Informants cited this as fundamental to the loan application getting as far as it has.

The promise and risks of second-tier organizations

This brief has raised examples of several second-tier organizations both within Mexico and regionally. Cases such as ICOFOSA/TIP Muebles in Oaxaca, FORESCOM in Guatemala and UNICAF in Honduras form a compelling story about the potential benefits of several CFEs coming together to jointly invest and market their products. With respect to finance, second-tier groups may indeed be a good option for CFEs on the Peninsula, since in theory they are separate from local-scale dynamics that can complicate loan performance. In practice, however, the performance of second-tier groups in applying for and executing finance for members has been mixed. Variable needs among member CFEs, plus competing priorities between members and the second-tier body itself, has created tensions in other cases.

Furthermore, interviews conducted for this brief revealed considerable skepticism toward the idea of a second-tier business as loan executor for a group of member CFEs. There is indeed experience with trying to build such a body, the *Sociedad de Productores Forestales de Quintana Roo*, in fact, attempted a FORESCOM-type approach in the 1990s that was seen by those interviewed to have been a failure, reportedly due to corruption and favoritism. If there is to be an effort to build such a second-tier body, it will be critical to ensure that it emerges organically, with strong *ejido* support, with a logic and rules of engagement that are clear and compelling, and where there are strong governance mechanisms to avoid elite capture. As interviewees put it, the second-tier body needs to exist to serve its members and help solve their problems, not the other way around. Such a mandate may make achievement of a competitive business difficult. In any case, it should be noted that second-tier groups already exist on the Peninsula – including OEPFZM, the *Sociedad*, and the newer *Alianza Selva Maya de Quintana Roo*, which groups 5 *ejidos* (Bacalar, Petcacab, X-Hazil, Felipe Carrillo Puerto and Noh Bec). Technical assistance agencies should work with them rather than trying to create new organizations.

Box 4. The Association of Silviculturalists of the Pachuca and Tulancingo region, Hidalgo

The ASR Pachuca and Tulancingo is a second-tier group founded in 1988 in the central Mexican state of Hidalgo. The group has 162 members, including 38 *ejidos* and 134 smallholders. Nearly all members manage relatively small parcels of forest, and thus have difficulty investing in forest management, to say nothing of value-added and marketing. The ASR provides technical training and services to members related to forest management planning, silviculture, forest harvesting, tree nursery operations and timber processing. Since 2008, the ASR has slowly built up experience managing credits. In 2010, FIRA, working through a group called SIDESA as its intermediary, extended a line of credit to the ASR of up to US $600,000 for a range of ASR needs, most of which are related to training, technical assistance, technology transfer and operational capacity. To date, over US $80,000 has been executed. The principal advantage cited by the ASR as part of the credit arrangement is that the technical assistance they receive – from local forestry services professionals – is worth more than the interest they must pay on the loan. The experience of the ASR shows that second-tier groups can manage credits on behalf of its members, but also underscores the need for a long-term approach.

Scope for REDD+ finance

In theory, REDD+ should offer a potential added revenue stream for CFEs. On the Peninsula, however, it is unlikely that direct payments to CFEs for reduced emissions would result in significant revenues, above all because deforestation rates are not high in most of the forest areas where CFEs operate. While improving forest harvesting and operations could decrease degradation as a result of forestry activities, the Ellis et al. report cited above concluded that the scope for emissions reductions was rather limited, particularly given the rather high costs of operating a REDD+ project (MRV, etc.). There may be potential for payments through a REDD+-related mechanism to benefit well-performing CFEs on the Peninsula, however, if through a national accounting system such CFEs could be rewarded for their continued good management. Moreover, since the FIP officially services Mexico's REDD+ agenda, credits made available to CFEs via loans and grants through the FIP could technically be considered REDD+ finance.

Foto: Eugenio Fernández

Recommendations

Based on stakeholder interviews and the analysis presented above, and with reference to experiences and lessons from within Mexico and the region, the following recommendations are advanced:

- Financial institutions should work to further lower the barriers to CFE accessing credits; critically, the time horizons for loans should be lengthened, and fixed low-interest rates should be offered.
- Loan funds should work to include responsible buyers in credit packages – for example, a buyer commits to offer a higher-than-market price in exchange for being relieved of the burden of providing advances; CFEs would thus garner higher prices and be better able to pay back loans.
- There is a need for greater inclusion of forest values and services in the inclusion of guarantees; financial institutions should also use FSC certification as an additional guarantor, lowering the bar further for certified CFEs.
- Financial institutions need to invest more in placing technicians in the field long term to work with CFEs and TA agencies – the example of Tres Garantías is proof of concept.
- CFEs and TA partners should look for ways to combine credit applications with government subsidy, using support from public funds to back loans as guarantees or co-finance; additionally, TA bodies need to combine forces with financial institution to provide technical training in finance and administration that installs permanent CFE capacities. Technical assistance agencies should invest more heavily in improving CFE

capacities in business administration, and offer training specifically related to market penetration and sales negotiation.
- Both financial institutions and TA agencies need to take advantage of the considerable amount of advance work that has already been done; many CFEs on the Peninsula already have business plans and investment strategies with multiple year time horizons that have been financed by previous projects; these plans should be vetted and incorporated in future investment planning, not duplicated.
- Information channels should be developed providing information on market alternatives for a diversity of species, as well as current market prices for variable grades and value-added products
- Greater emphasis should be placed on including and training *ejido* youth to reinvigorate CFE development.

Annex I – Key informants

Name	Title	Ejido/organization
Brigido Vasquez	Technical advisor	Proselva Tropical de Quintana Roo, S.C. (OEPFZM)
Juan Bautista Xix	Technical advisor	Proselva Tropical de Quintana Roo, S.C. (OEPFZM)
Randy Carreón Santos	Technical advisor	Proselva Tropical de Quintana Roo, S.C. (OEPFZM)
Victoria Santos		Proselva Tropical de Quintana Roo, S.C. (OEPFZM)
Rosa Ledesma Santos	Technical advisor	Proselva Tropical de Quintana Roo, S.C. (OEPFZM)
Jose Juan Hernandez	President	OEPFZM
Carlos Torres Sabido	Comisariado	*Ejido* Yoactun
Odilia Rojas Lopez	Technical Advisor	GeosRural, A.C.
Marcelo Carreón		UNORCA
César Pech Perera	Ejido Council	*Ejido* Tres Garantías
Cecilia Regalado Balam	Secretary	Tres Garantías CFE
Oscar Quijano López	Ejido Council	*Ejido* Tres Garantías
José Poot Soso	Manager	Tres Garantías CFE
Roberto Segovia Acevedo	Ejido Council	*Ejido* Tres Garantías
Enrique Reyes Chan		Tres Garantías CFE
José Luis Azuara Salas	CEO	Productos Forestales del Sureste y Centro América, S.A. de C.V.
Olga Trinidad Mejía	Promoter	FIRA, Quintana Roo
Margarito Aranda Márquez	Specialist	FIRA, Quintana Roo
Evangelina Terán Hernández	State manager	FND, Quintana Roo
Senen Carmona Santiago	President	*Ejido* Caobas CFE
Ines Pazaran Guzmán	Secretary	*Ejido* Caobas CFE
Armando Varguez Escobedo	Treasurer	*Ejido* Caobas CFE
Luis Alfonso Arguelles Suarez	Representative	FSC-Mexico, *Ejido* Noh Bec, *Alianza Selva Maya de Quintana Roo*, UE de RL
Francisco Montalvo Reyes		*Ejido* Noh Bec

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