HARVARD IN IBERÁ

INVESTIGATING HARVARD UNIVERSITY'S TIMBER PLANTATIONS IN THE IBERÁ WETLANDS OF ARGENTINA

Responsible Investment at Harvard

OAKLAND INSTITUTE

Opposite page: The sign on the left has become a point of contention between the provincial government and community members in Chavarría. Originally, it said: "To appreciate our forests is to appreciate our future." With a red marker, a resident changed its meaning. It now says, "To appreciate our 'forests' is to appreciate the future?" (The sign on the right is supposed to show the forest fire danger level, although it is missing an adjustable pointer.)

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List of Acronyms

ACSR	Advisory Committee on Shareholder Responsibility
CEO	Chief Executive Officer
EVASA	Empresas Verdes Argentina Sociedad Anonima
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GEF	Global Environment Fund
GEMFF	Global Emerging Markets Forestry Fund LP
HDI	Human Development Index
HMC	Harvard Management Company
IFIA	International Forestry Investment Advisors LLC
IRS	Internal Revenue Service
UNDP	United Nations Development Program

Executive Summary

Background

Harvard University invests large sums of its $32.7 billion endowment in natural resources, including timber plantations, in the developing world.[1] This includes Empresas Verdes Argentinas Sociedad Anonima (EVASA) and Las Misiones, two timber companies that are jointly worth $55.2 million and own 87,884 hectares with pine and eucalyptus plantations in the Iberá Wetlands of northern Argentina.[2]

Before Harvard purchased EVASA and Las Misiones, they were packaged and promoted by investment professionals as socially responsible and environmentally sustainable investments.[3] Most of the plantations controlled by the companies carry the Forest Stewardship Council's label for complying with high social and environmental sustainability standards. With a target annual rate as high as 31%, these are ambitious investments for the university, which uses endowment earnings to fund its research and educational activities.[4]

The Problem

The residents of the communities adjacent to the plantations, however, share a different story. They allege that the companies generate little economic benefit for the local population, cause young people to leave their hometowns, decrease the productivity of nearby land, and create public health hazards. Environmentalists argue that the plantations threaten critical habitat for hundreds of plant and animal species and threaten the integrity of the world's second largest freshwater reserve.

Conclusions and Recommendations

On the basis of the field research and evaluation of documents, this report provides the context for the investments; exposes their social, environmental, and economic impacts; and, based on consultations with key stakeholders, offers recommendations for improving plantation practices and policies. It also seeks to contribute to the public dialogue around the social, economic, and environmental effects of foreign direct investment in northern Argentina.

Specifically, community members provided the following seven recommendations for Harvard to mitigate its negative impact on the environment, workers, and communities in Corrientes:

1. Comprehensively review and respond to the environmental, social, and labor issues included in this report immediately.
2. Limit plantations to non-populated areas of little conservation value;
3. Mitigate community damage and health hazards by paving the main road in Chavarría;
4. Improve fire protection services;
5. Hold public and twice-annual sustainability audit meetings;

6. Ensure wage and benefits parity for subcontracted workers; and
7. Invest in value-added industry and processing.

Methodology

This report presents findings based on field research conducted in Corrientes, Argentina in January and August 2013 by the Responsible Investment at Harvard Coalition with support from the Oakland Institute. The two-person research team travelled to Corrientes City, San Miguel, Montaña, Santa Barbara, Chavarría, Tacuaritas, and Concepcion to meet with the key stakeholders. Altogether, the team conducted interviews with 58 individuals, including community leaders, plantation workers, government officials, company representatives, environmental activists, and residents. The team also gathered supporting documents, took photos, and recorded a short documentary.

Endowments and Natural Resources

As far back as 1912, the Harvard Corporation, the University's highest governing body, was responsible for investing Harvard's endowment. In the first half of the twentieth century, the endowment was invested almost exclusively in stocks and bonds.[5] During Paul Cabot's 17-year tenure as treasurer from 1948 to 1965, Harvard increasingly invested in common stocks rather than in mortgages, long-term bonds, and real estate.[6] The rest of the country's endowment managers took note; a 1968 US Office of Education survey of 135 institutions found that their portfolios held, on average, 54% in common stocks compared to 38% in 1950.[7] Soon after, university endowments began to shift away from safe, low-risk, long-term investments to riskier, higher return options.

By the early 1970s, Harvard decided to become a more active investor and in 1973 created Harvard Management Company (HMC) to take over its endowment management.[8] Prior to HMC, the endowment was managed by State Street Research and Management, a firm now owned by the world's largest asset manager, BlackRock.[9] Over the last 40 years, HMC has pursued investment opportunities in private equity and real assets in order to secure higher risk-adjusted returns than are available on the stock market. Its strategy is informed by the Modern Portfolio Theory, which predicts that an investor can maximize returns for a given level of risk by diversifying a portfolio's holdings across a range of uncorrelated asset classes.[10] Today, HMC operates like a private hedge fund, with multi-million dollar executive pay packages, offices in Boston's downtown financial district, and investments in highly complex financial instruments such as the now-infamous interest rate swaps.[11]

Harvard University depends on HMC for its year-to-year operating budget and capital expenditures. In fiscal year 2012, endowment earnings accounted for 50% of Harvard College's operating revenue.[12] When the endowment lost nearly 30% of its value between 2008 and 2009, the University laid off 250

staff members and the dining halls stopped serving students hot breakfast.[13] Over the long-term, HMC has performed much better than it fared in recent years. Its 20-year annualized return is 12.3%, which far exceeds the 60-40 stock/bond portfolio benchmark annualized return of 7.9% in that same period.[14]

Natural Resources as an Asset Class

University endowments were early entrants to the natural resources asset class. The asset class's long-term investment horizon is appealing for endowments that are charged with creating a lasting source of financial support for universities. Most endowments invest through intermediary investment funds that charge fees for their services, but some large endowments, including Harvard's, bypass intermediary firms and make investments directly.[15] Harvard began to invest in natural resources in 1997, and by 2005, 10% of its endowment was invested in this asset class.

The current leadership of Harvard Management Company (HMC), which manages the University's endowment and related financial assets, has vast experience in natural resources investments.[16] Andrew Wiltshire, Managing Director and Head of Alternative Assets, worked in the New Zealand forestry sector before joining HMC in 2001. He was the highest paid Harvard employee in 2010.[17] When HMC CEO Jane Mendillo was the Vice President of External Investments, she was in charge of the endowment's early timber investments. Since taking the top post, Mendillo has repeatedly expressed enthusiasm for natural resource investments, once calling them "our favorite area."[18] She is particularly keen on timber. According to Mendillo, "They're still inefficient markets when you look at properties and how they're bought and sold and how many are bought and sold."[19] HMC's 2012 annual report reiterates her analysis: "The inefficiencies in these markets can create excellent transaction opportunities."[20]

By 2013, natural resources accounted for 13% ($4 billion) of HMC's portfolio.[21] Combined with real estate and publicly traded commodities, the real assets category accounts for 25% ($7.7 billion) of the endowment.[22] The portion of HMC's portfolio invested in natural resources is 62.5% higher than the average target allocation of 8% according to a 2012 report by The National Association of College and University Business Officers.[23]

Harvard's Investment Strategy

Most investors are limited to trading small quantities of stock in publicly traded companies whose policies are set by managers and independent directors. Unlike typical investors, institutional investors such as Harvard often invest enough to influence management decisions at the companies they invest in.

Harvard owns a controlling stake, which means that it owns more than 50% of the stock, of many of the companies and funds in which it is invested. According to its 2011 IRS Form 990, Harvard controls 237 investment funds, real estate companies, and research and educational organizations.[24] The value of its controlling stakes range from as little as $200 in HMC Adage Manager Incorporated, a company founded in Delaware by HMC in 2001, to $1.2 billion in Kaingaroa Timberlands, a New Zealand-based firm that controls "one of the oldest and largest softwood plantations in the world."[25]

Harvard wholly owns 107 funds, companies, and organizations. Its in-house and external investment teams encourage policies in HMC's companies that they believe will improve investment returns. Two of its key holdings are EVASA and Las Misiones in the Argentine province of Corrientes.

Box 1. Harvard's Shareholder Responsibility

As Harvard's endowment grew and university leadership came to expect higher returns, students and alumni expected Harvard to become a more responsible shareholder. Students first lobbied for Harvard to support proxy resolutions calling for General Motors to expand its corporate board and adopt better safety policies in 1970. Later, students called on Harvard to use its power as a shareholder to force Gulf Oil to disclose the nature of its relationship with the colonial Portuguese government in Angola.[26] In response to these student-led advocacy campaigns, in 1972 Harvard President Derek Bok created the Advisory Committee on Shareholder Responsibility (ACSR) to advise the Harvard Corporation on how to cast the endowment's proxy votes for shareholder resolutions in publicly traded companies.[27] Since the 1980s, student activists have pressured Harvard to stop investing in companies with ties to Pinochet's Chile, apartheid South Africa, war in Darfur, and in HEI Hotels & Resorts.[28]

In an effort to move beyond issue-specific divestment campaigns and toward a more holistic understanding of the university's shareholder responsibilities, a group of students, alumni, and employees formed the Responsible Investment at Harvard Coalition in late 2011.[29] An Oakland Institute report that linked the endowment to land grabs in sub-Saharan Africa helped motivate the group's founding.[30] The Coalition is calling on the Harvard Corporation to align the principles that drive the research and educational mission of the university with those that guide the investment decisions and practices of HMC.[31]

In March 2012, the coalition launched the Fair Harvard Fund as a withholding fund for alumni donors to express support for the cause. After more than 450 students and alumni donated to the fund and student-initiated referenda at Harvard College and Harvard Kennedy School won 80.5% and 93% of the votes, the Harvard Corporation agreed to create a Social Alternative Fund as an option for alumni donors.[32] In February 2012, in response to continued student and alumni demands, HMC created a new position: Vice President for Sustainable Investment.[33] The coalition continues to advocate for the socially and environmentally responsible management of the endowment, transparency of investment decisions, and greater accountability from the Harvard community.

Horsemen ride through the dirt streets of San Miguel, a few miles away from Harvard's plantations.

Background on Corrientes, Argentina

Economy

Relative to its neighbors, Argentina's economy is strong. In 2011, its gross domestic product (GDP) per capita was the highest in Latin America, and, in the same year, the UNDP Human Development Index (HDI) ranked its human development status in the top quartile globally.[34] But, according to a 2009 World Bank report, the Corrientes province ranks below the national average for most socioeconomic indicators and its GDP is in the bottom quartile of provinces in the country.[35]

The Corrientes provincial economy is principally based on the production of raw materials and light industry for domestic markets, with a concentration in the agriculture and natural resource industries.[36] Rice and forestry dominate the economy, accounting for 13% of provincial GDP in 2011.[37] There are plantations on nearly half a million hectares in Corrientes,[38] with roughly half of productive agricultural lands dedicated to rice production, a sector dominated by producers with large estates.[39] More than half (57%) of the province's exports are rice products.[40] The Minister of Production, Jorge Vara, told the research team that between 18,000 and 20,000 people work in the forestry sector, which is more than any other productive sector in the province. However, there is still relatively little value added to the timber after it is sold by the plantations;[41] most of the jobs are in processing plants and transportation services, and few of them are available to the residents of the small communities near the plantations.

With provincial per capita GDP of $3,729--less than

half the national figure--Corrientes province relies heavily on national government funding to finance the public sector.[42] The region's large informal economy contributes to the cycle of poverty, as informally employed workers often do not receive benefits or labor law protection. Estimates of the portion of the population employed in the informal economy range from 32.6% of workers in the province as a whole[43] to 63% of the rural workforce and approximately 80% of forestry sector workers.[44] It is difficult to assess the validity of these figures since there are no official records of informal employment, but they do suggest a substantial informal economy in Corrientes.

In recent years, foreign visitors to the Iberá Wetlands have helped build an emerging ecotourism industry in Corrientes. The popular travel guidebook company *Lonely Planet* lists the Iberá Wetlands as the fifth best attraction in Argentina.[45] In one small town near the wetlands, Colonia Carlos Pellegrini (880 residents), more than 90% of the working population is employed by the tourism sector.[46]

Geography and Biodiversity

The Iberá Wetlands are the highlight of the Corrientes province's many natural treasures.[47] A set of complex interconnecting ecosystems on top of the underground Guaraní Aquifer, the Iberá Wetlands is one of the world's largest bodies of fresh water. These wetlands occupy 20,000 square kilometers, an area slightly smaller than the US state of New Jersey,[48] and include flooded grasslands, native forests, lakes, bogs, and swamps. Importantly, the wetlands serve as a key water source for the region's population, and it is the only wetland in the world that relies exclusively on rainwater as its water source.[49]

The Iberá Wetlands is prime habitat for thousands of species of flora and fauna, with scientists still working to fully document the region's biodiversity.[50] Several endangered species, including marsh deer, neotropical river otter, maned wolf, caimans, and pampas deer, call the wetlands home.[51]

Beyond its rich biodiversity, the Iberá Wetlands are prized as a vast region with low population density and little infrastructure, allowing natural ecosystems to interact without urban interference.[52]

For many of these reasons, in 2002 the Ramsar Convention recognized 24,500 hectares as wetlands of significant international importance, affording the area protection under international treaty.[53] Much of the 20,000 square kilometers (two million hectares) that compose the Iberá Wetlands, however, remains outside the Ramsar Convention's jurisdiction and enforcing the treaty on private lands is a challenge. Approximately 67% of the wetlands are now privately owned.[54]

Local Communities

The communities surrounding the EVASA and Las Misiones timber plantations are among the poorest in the province. An economist at the University of Cuenca del Plata in Corrientes City calculated the HDI for each municipality in the province and found that the communities adjacent to the plantations experience the same levels of human development as Gambia.[55] According to census data, the three departments that contain EVASA and Las Misiones property--San Roque, Concepcion, and San Miguel--have the highest rates of unmet basic needs among the province's 24 departments.[56]

Of the five communities within eight kilometers of EVASA's property in the Departments of San Roque and Concepcion, 41.8% and 58.8% of the population, respectively, have unmet basic needs according to census data.[57] The two major towns in this area are Chavarría (2,337 residents) and Concepcion (4,800 residents).[58] The two closest communities are Tacuaritas (871 residents) and Toro Pichaí (population data is unavailable), both of which are less than 100 meters away from EVASA's land.[59]

There are nine communities within eight kilometers of Las Misiones's property in the Department of San Miguel (10,210 residents), where the company owns 10% of the land.[60] All of Las Misiones's plantations in San Miguel are located within the borders of the Iberá Provincial Nature Reserve.[61] According to census data, 50.2% of the population in the Department of San Miguel has unsatisfied basic needs.[62] The two closest communities are Montaña, which is 100 meters away from Las Misiones's land, and Santa Barbara, which is two kilometers away from Las Misiones's land.[63] There are no census data available for these communities, but residents reported to the research team that 125 families live in Montaña and 25 families live in Santa Barbara. Small-scale agriculture and cattle is the primary economic activity in these communities. According to an employee of the municipal government in San Miguel who administers social welfare programs, more than 50% of residents are unemployed in Santa Barbara and Montaña, the communities in the municipality closest to Harvard's plantations.[64] They receive welfare benefits to cover their living expenses.

Appealing Conditions for Investors

The semi-tropical climate, frequent rainfall, and low seasonal temperature variation make Corrientes province an ideal location for timber plantations.[65] It rains 54.7 inches per year on average in the province, which is 50% more than the average annual rainfall in drippy Seattle, Washington.[66] These favorable climatic conditions allow pine and eucalyptus trees to grow much more quickly than in other regions of the world. Rotation cycles, which start with the establishment of a new forest stand and finish with the harvesting of the majority of the trees, are four times faster in Corrientes than in the southern United States.[67] Growth rates are also accelerated. In Corrientes, loblolly pine (*Pinus taeda*) grows between 35 and 40 cubic meters per hectare per year, which far exceeds the US growth rate of 12 cubic meters per hectare per year.[68]

While biological factors create ideal growing conditions, the legal framework makes timber investments in Corrientes even more attractive. Corrientes is a highly deregulated province known for its conservative, business-friendly political culture and regulatory framework, and it was one of the last two provinces in the country to implement a national law restricting foreigners' ability to acquire land. Even with the late legislative limits, foreign companies may still acquire new land using Argentine holding companies.[69]

The national government has also enacted several laws to make timber investments more lucrative. The legislation guarantees investors 30 years of tax stability, reimbursement of the value added tax within a year, exemption from income and property taxes, exemption from customs duties

for equipment and supplies, and a special capital gains tax incentive.[70] The capital gains incentive allows timber companies to only pay tax on the difference between the company's value when it is sold and the company's value in the year preceding the sale. According to a 2009 World Bank report on the Corrientes economy, "The laws that promote the development of the primary sector create a very favorable environment for plantation investments."[71] According to 2005 calculations by economists who study timber investment, pine and eucalyptus plantations in Corrientes generated an annual internal rate of return of 10.5% and 13.8%, respectively,[72] and a 2008 study bumped calculated internal rate of return to 20% for pine plantations and 18.2% for eucalyptus plantations in Argentina.[73]

An additional incentive, called non-refundable financial support, applies to plantations of no more than 500 hectares. The government subsidizes 80% of implementation costs for the first 300 hectares and 20% for the remaining 200 hectares.[74] Depending on the location and tree species, subsidies can exceed $1,000 per hectare.[75] According to Yale University researchers, "This compares with subsidies of less than $400 per hectare for most plantation schemes in South America."[76]

Beyond earnings from timber, multinational companies have invested in pine and eucalyptus plantations in Corrientes as part of their carbon offset programs. In 1998, the oil and gas giant Royal Dutch Shell reportedly began buying land in Corrientes for the purposes of planting pine plantations as a carbon offset project.[77] In 2009, Novartis International, the Fortune 500 Swiss pharmaceutical company, planned to plant three million trees on 34 square kilometers of former cattle grazing land in Corrientes to count toward its carbon offsetting goals.[78]

Additional elements of the legal system are attractive to foreign investors: the National Foreign Investment Act gives foreign investors the same benefits as national investors, including access to credit.[79] The labor laws covering workers in the agriculture industry are also not very strong. Although the weekly maximum work limit is 48 hours, the limit does not apply to agricultural workers.

Santa Julia is one of Las Misiones's largest plantations. It is fewer than 100 meters from Montaña and roughly two kilometers from Santa Barbara. Before it was bought by Las Misiones in 2008, Santa Julia was a cattle ranch. According to interviews in the surrounding communities, it was the major employer in the region.

Case Study of EVASA and Las Misiones Timber Plantations

In the last 15 years, the timber plantations now managed by EVASA and Las Misiones have been bought and sold several times. With each sale, the new owner acquired land titles and modified environmental and labor practices.

History of EVASA and Las Misiones

In 1998, the year before a national timber promotion law went into effect, Pecom Forestry, a company owned by Argentine billionaire Gregorio Pérez Companc, acquired 106,000 hectares in Corrientes.[80] By 2001, the company managed 16,737 hectares of pine and eucalyptus plantations in the province. Its expansion program, which included a plan to hire at least 150 employees, was suspended early, in the wake of Argentina's debt crisis.[81] In 2002, Brazil oil giant Petrobras purchased $1.1 billion of shares in Pérez Companc SA, the company that owned Pecom Forestry.[82] The deal forced Pérez Companc SA to divest from its non-core assets, including timber, within 30 days.

In December 2002, American conservationists Douglas and Kris Tompkins (see box) purchased Pecom Forestry for $13.5 million. The holdings included 110,074 hectares of grasslands, agricultural lands, and pine and eucalyptus plantations in Corrientes, which have since been divided among the couple's personal holdings, the Conservation Land Trust, and private investors.[83] According to sources familiar with Tompkins, he prioritized the conservation of land with high biodiversity and tourism potential[84] and used the rest of the land to experiment with sustainable farming and forestry practices.

According to the Tompkins Conservation website, Companc had "planned to convert the land into

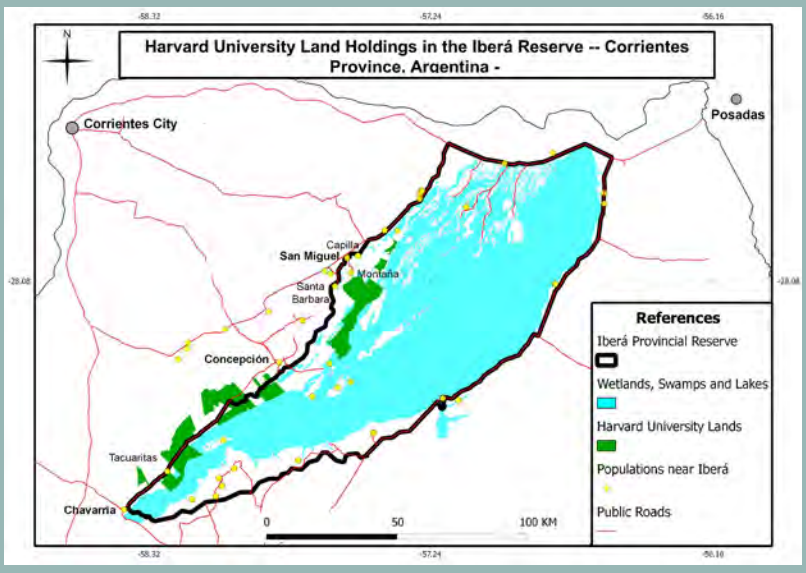
vast industrial tree farms," thus, for Tompkins, "saving the land from this fate meant buying the entire forestry company."[85] The website explains that, "Some of the land was later sold, but the most promising properties were retained and restored, and have now become some of the highest-quality estancias in the region."

In early 2003, Tompkins founded EVASA to manage the acquired pine plantations.[86] Tompkins explained his decision later in a book: "The nearly 55,000 acres of pine plantations needed a considerable investment in restoration and environmental redesign. It was a pity, though, to see the native grasslands converted to industrial exotic monocultures."[87] The company expanded beyond the plantations it had acquired at a rate of 1,000 hectares per year.[88]

In 2007, during the beginning of the global financial crisis, Tompkins sold EVASA to the Global Emerging Markets Forestry Fund LP (GEMFF), a $335 million joint venture between private equity group Global Environment Fund (GEF) and Cambridge-based International Forestry Investment Advisors LLC (IFIA).[89] GEF and IFIA market themselves as socially responsible investors and GEMFF claims it will achieve Forest Stewardship Council (FSC) certification for all of its properties.[90] After selling EVASA, Tomkins remained active in the region, where he still leads Project Esteros del Iberá, a Conservation Land Trust initiative that promotes wetlands conservation through land acquisition, ecological restoration, and ecotourism projects.[91]

In 2008, Tompkins sold some of his land, including the 2,000-hectare plot called La Celina, to Las Misiones.[92] According to the company website, it began its timber production in 2009.[93] In January 2013, EVASA and Las Misiones merged their management structures. The companies increasingly operate as a single entity, with offices next door to each other in Corrientes City and the same senior management. [94]

Figure 1. Harvard's plantations within the Iberá Wetlands. Source: Guardianes del Iberá



Box 2. Role of Douglas and Kris Tompkins

Douglas and Kris Tompkins made small fortunes running outdoor equipment and clothing companies: Douglas co-founded The North Face and Espirit and Kris was the CEO of Patagonia. Since leaving their respective companies, they have become fierce critics of the global economic system. They believe in an environmental philosophy called Deep Ecology, which considers all species, including human beings, to be equal.[95] Now the couple pours their time, energy, and money into conserving ecologically important areas in Chile and Argentina. Douglas first developed a passion for Argentina as a 25-year-old when he travelled from California to Patagonia by van with two friends.[96]

After becoming the largest landowners in Chile, Douglas and Kris donated most of their property to the Chilean government as a wildlife reserve. It is one of the largest nature reserves in the world.[97] The couple has begun a similar project in nearby Argentina, where they plan to purchase high conservation value land that they can later donate to the government. Douglas focuses on the Iberá Wetlands and Kris focuses on Patagonia.

Douglas and Kris have received numerous awards for their conservation work, including the Environmental Leader of the Year award from global business magazine *Latin Trade*, the Good Steward award from International Conservation Caucus Foundation, and the New Species Award from the African Rainforest Conservancy.[98] When Douglas Tompkins owned EVASA, he threw an end-of-year party for workers and their families, made unannounced visits to the plantations, and gave bonuses to workers based on their performance in a recycling competition.[99] None of these practices have continued since Harvard purchased the companies.

Though Douglas Tompkins has been widely praised, he is a controversial figure in Corrientes. When he started EVASA in order to experiment with sustainable forestry in the region, the public grew suspicious.[100] Argentine journalist Fabián Garay's question captures the doubt about Douglas's intentions: "Will there be philanthropic ends to Douglas Tompkins's environmental interests?"[101]

Harvard's Ownership

By June 2007, Harvard owned at least 50% of the Global Emerging Markets Forestry Fund according to tax filings, making it the majority owner of EVASA and Las Misiones.[102] HMC made the investment when its future looked bright: its five-year annualized return was 18.4%, the CEO and top five executives earned $23.1 million in a year, and the economy was still relatively unaffected by the housing market crash.[103]

But the recession deepened, and Harvard's endowment was badly affected by the downturn. The fund lost nearly 30% between 2008 and 2009, dropping from an all-time high of $36.9 billion to $26.0 billion in a single year.[104] Prior to experiencing these losses, HMC had planned to expand its investment partnerships by $11 billion.[105] As the crisis worsened, HMC changed course and sought to exit many of its investment commitments early.[106]

As part of that larger strategy, in 2010 HMC sold its stake in GEMFF and directly bought two of the fund's holdings, EVASA and Las Misiones. The move allowed Harvard to eliminate intermediaries and maintain some of the same assets.[107] By June 2011, Harvard's ownership stakes in EVASA and Las Misiones were together worth $50.9 million.[108]

Today, few employees or residents know the names of the companies, let alone who owns them. The owners are referred to as "the Chileans," possibly because Harvard's Diversified International Timber Holdings LLC owns Las Misiones through its Chilean subsidiary Los Boldos SA.[109] Locals refer to these companies by the names of the plantations, which are posted at their entrances.

Box 3. Forest Stewardship Council

In the early 1990s, as environmental organizations became increasingly frustrated with politicians' reluctance to enact legislation to slow deforestation, a coalition of groups founded the Forest Stewardship Council (FSC) to encourage more sustainable business practices in the timber industry. FSC is a non-state, market-driven certification for timber plantations that adhere to high standards of social and environmental sustainability.

FSC's founding members include Greenpeace, Friends of the Earth, the World Wildlife Fund, indigenous rights organizations, and trade unions.[110] In the decades since it was founded, FSC has achieved a reputation as the most rigorous voluntary certification for timber plantations. Some environmental groups, however, including Friends of the Earth, have withdrawn their support for

the FSC because they believe that the certification has "fail[ed] to guarantee rigorous environmental and social standards."[111]

FSC has adopted global principles that include sections on local law, land tenure, land uses, indigenous peoples' rights, neighboring communities, and workers' rights. The principles also call on timber companies to develop management plans, monitor and assess their environmental impact, maintain high conservation value forests, and improve the health of native forests. The principles are elaborated into criteria that apply to FSC-certified plantations across the world, but national and subnational multi-stakeholder committees can modify the criteria for their regions.

According to a study on FSC effectiveness in Argentina by Ralph Espach, the Latin American Affairs Director for the nonprofit research organization CNA, "State regulations and enforcement over forestry practices [in Argentina] are extremely weak and easily avoided." The study found that the ineffective regulatory framework created an opportunity for a private certifier to enter the country, since FSC seeks to fulfill some of the regulatory functions that the state is not providing.[112]

FSC Certification for EVASA and Las Misiones

EVASA began the FSC certification process under Tompkins's leadership by beginning to work with the Rainforest Alliance, a New York-based nonprofit conservation organization that is accredited by the FSC to certify timber plantations in Argentina. Ariel Zorrilla, Rainforest Alliance Representative for Argentina, explained to the research team that certification means that the company is committed to a collaborative process, not that it complies with all FSC standards. Zorrilla helped facilitate GEMFF's acquisition of EVASA, where he continued to work as a forestry consultant.

According to an employee who requested anonymity because he was not authorized to speak on record, EVASA did not make many changes in its operations to achieve FSC certification. The employee said that the certification process required EVASA to better document its activities and that the compliance costs were insignificant.[113]

The Rainforest Alliance audits certified plantations at least once per year. Each auditor is limited to two visits per company in a five-year period to reduce the likelihood of forming a close relationship with a company representative. However, auditors do provide company management with advance notice before the audit. For example, EVASA coordinates stakeholder interviews and arranges tours of the company's dormitories before each audit.

One worker told the research team that this allows EVASA to portray an unrealistic image of its operations: "They know when they are going to come 15 to 20 days beforehand, and they clean everything up; they leave it looking perfect. For example, when Pérez Companc was still the owner, the trucks had seat belts. Now, they hide the trucks without safety belts when the inspectors come."[114]

The research team was not given permission to enter EVASA's property nor tour worker dormitories. Managers monitored the team's movements in nearby public areas where they interviewed local residents. In January 2013, EVASA and Las Misiones's Forestry Operations Manager, Arturo Sandoval Saavedra, said that the company planned to open its operations to the public for visiting days in order to improve its public image. Six months later, residents in the surrounding communities reported to the research team that they had still not been invited to visit EVASA or Las Misiones plantations.

Three years ago, EVASA held a public meeting to satisfy an FSC requirement. Residents in Chavarría reported to the research team that the meeting was not well publicized and lasted more than eight hours, which was too long for many people to attend.

In 2011, an Argentina National Parks Administration official joined five environmental organizations in sending a 17-page letter to FSC headquarters protesting the certification of timber plantations in the Iberá Wetlands region.[115] The letter argues that grasslands of high conservation value are fundamentally different from the native forests and jungles environments for which FSC was created. It documents the changes in land fertility, biodiversity, water use, and economic opportunities created by the timber plantations, and calls on FSC to suspend certifications in the region until it issues amended guidelines for grasslands. The letter highlights the role of EVASA plantations in damaging the integrity of the Iberá Wetlands.

Las Misiones is currently seeking FSC certification. At the time of this report's publication, it remains in the pre-certification phase.

Memorial Hall on Harvard's campus.

Business Strategy and Investments Overview

Globally, timber price increases driven by rising demand and waning supply make the plantations an attractive investment.[116] Furthermore, investment professionals argue that timber assets diversify an investment portfolio because of how they perform relative to inflation and other asset classes. Harvard seeks to make even higher returns by taking advantage of the special economic opportunities available to investors in developing countries.

According to Jon Caulfield, the Director of Research and Analysis for Regions Timberland Group, three factors drive pine plantation returns: biological growth, product price changes, and land price changes.[117] According to his analysis, these factors account for 60.5%, 33.3%, and 6.2% of returns.[118] Since the main driver is biological growth, which is unaffected by political and economic conditions, timber is weakly correlated with other asset classes and exhibits low volatility.[119] Asset classes that are weakly correlated with other asset classes are central to the validity of Modern Portfolio Theory, HMC's guiding investment strategy that calls for broad portfolio diversification. In practice, the forestry sector has a long, consistent record of performing well when the economy is faltering: it has "gone up in every bear market since 1910."[120] Returns are also highly correlated with inflation, which means that timber investments serve as a hedge against future increases in the inflation rate.[121]

GEF Chairman John Earhart and IFIA Founder Clark Binkley outline their investment strategy for GEMFF in a confidential business information report titled "A Global Emerging Markets Forestry Investment Strategy."[122] The strategy calls for investors to seek investment opportunities where there are low levels of existing capital, large tracts of inexpensive land, fast biological tree growth rates, and easy access to emerging markets. It also encourages investments in manufacturing, technology, and labor in order to drive higher investment returns.[123]

The conditions in Corrientes meet each of these

criteria. EVASA has plantations on 25,167 of its 55,384 hectares and Las Misiones will have plantations on 14,250 of its 32,500 hectares by the end of 2013.[124] The companies cannot plant trees on all of their property, since their holdings include protected wetlands, native forests, and unproductive low-lying land.[125]

An EVASA document states that the company will eventually have 47,000 hectares of plantations.[126] According to Arturo Sandoval, Forestry Operations Manager for EVASA and Las Misiones, the companies do not intend to develop more plantations after 2013. Emilio Spataro, the Coordinator of the Corrientes-based environmental organization Guardianes del Iberá, reported to the research team that he believes EVASA will reach its target by acquiring existing timber plantations in the area.

After acquiring property and preparing the lands for cultivation, EVASA and Las Misiones established additional plantations. In the intermediary years, the trees required pruning and thinning. The final stage will be to harvest the trees and bring them to market.[127] In most parts of the world, it takes 30 years to reach the last stage. According to EVASA's forestry plan, the company will make the final cut once its trees are 22 years old, slightly above the provincial average of 20 years.[128] After the company finishes the first rotation, it will thin its plantations every 13 years and harvest them every 23 years.

Impact on the Environment

Harvard's timber plantations in Corrientes have caused significant environmental changes, including on biodiversity, groundwater, wetlands, and soil.

Biodiversity

According to an EVASA document, "In its plantations, EVASA has important wetlands and ecosystems that should be designated as areas of high ecological value."

However, multiple experts have cited the negative effects of timber plantations on biodiversity. According to Juan Jose Neiff, an ecologist known for his research in the Iberá Wetlands, "The timber plantations generally reduce fauna complexity and cause species segregation, leading to an associated loss of biodiversity and scenic value."[129] According to an engineer who works at the Provincial Office of Parks and Reserve Management, Ramiro Badessich, very few plants and animals survive in EVASA and Las Misiones's timber plantations.[130]

Residents also reported to the research team that they have seen fewer bird species since the plantations replaced the pasture and wetlands that used to prevail in the region. According to Emilio Spataro, of Guardianes del Iberá, plantations have rendered the habitat corridors insufficient because the native species are not accustomed to traveling long distances between habitable zones.[131]

Additionally, residents in Santa Barbara and Montaña reported to the research team that they live in fear of a deadly forest fire sweeping through their communities. They said that smaller fires are not uncommon, and the smoke makes it hard to breathe. One resident said: "If the fire doesn't kill us, the smoke will. If they don't come to rescue us, the

smoke will kill us. The smoke is awesome; it makes you go crazy."

Reduced Access to Water

Most families in Santa Barbara and Montaña, two small communities near Las Misiones's plantations, do not have running water. Hundreds of residents rely on groundwater for drinking, cooking, bathing and irrigation. Residents informed the research team that groundwater levels have dropped since the late 1990s, and that they have had to extend their wells by as much as 28 meters to reach ground water.

Jorge Vicente, a 50-year-old unemployed Montaña resident, worked on Santa Julia before it was purchased by Harvard and converted into a timber plantation. Before the land near his home was converted into a plantation, he deepened his well every six years. Now, he said, he has to deepen it every two months. "The plantations provide work, but at the same time they leave us without water," he said. "The wetlands near the trees are drying up. There's no more water."[132]

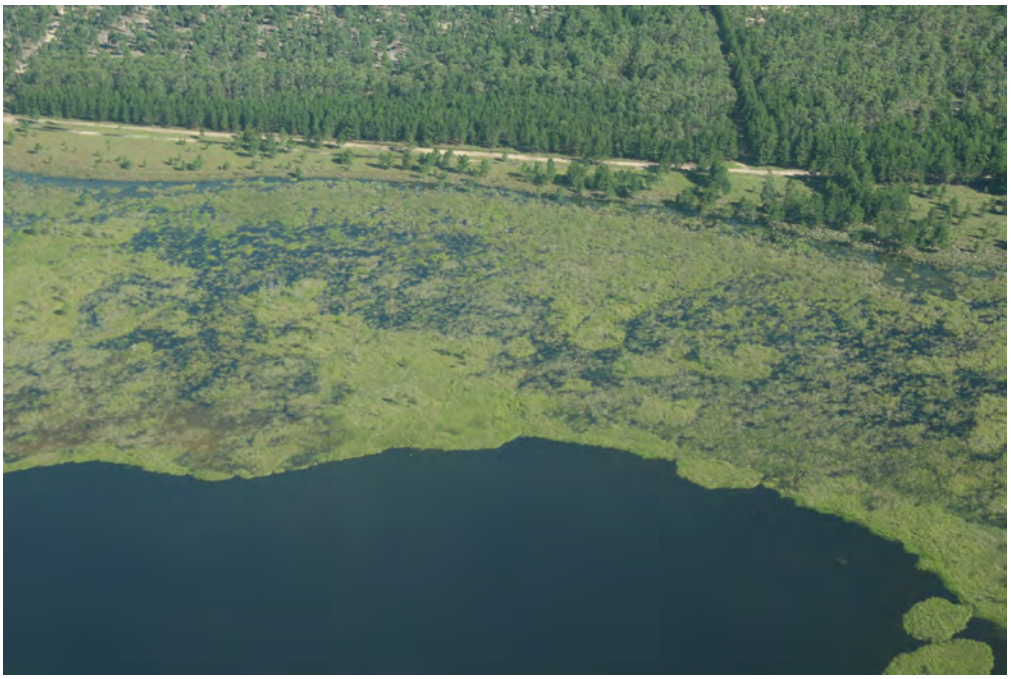
According to residents interviewed in Montaña, harvests are less abundant now than they were a decade ago. Residents blame the timber plantations for the change. Jorge Morel, the Director of Environmental Management of the Corrientes Institute of Water and the Environment, is in charge of the environmental permitting process for industrial activity in the Iberá Wetlands. He told the research team that the residents are mistaken, because pine and eucalyptus trees only consume rainwater and not any groundwater.[133] Las Misiones's environmental impact statement states that the plantations' hydrodynamic effects, which include water runoff and infiltration, benefit the hydrology of the region.[134]

Within the scientific community, however, there is widespread agreement that timber plantations consume more water than native plants do. "Synthesis data suggests that trees are able to use 15–20% more precipitation than grasses."[135] But the long-term effect of timber plantations on water levels is a matter of debate, partially because it depends on rainfall patterns. According to Neiff, an ecologist with decades of experience studying the Iberá Wetlands, "During very wet times, [the timber plantations] attenuate the effect of the rainstorms in magnitude and duration. During prolonged dry periods, they negatively influence the water level, since they use water that would otherwise go to surface-level bodies of water." Neiff says that timber companies operating in the region should better study the impact of the timber plantations on the aquifer below the Iberá Wetlands.[136]

In other regions, the impact of timber plantations on water levels has been subject to more scientific inquiry. A research team in northern Uruguay, which borders Corrientes, found that a timber plantation is "predicted to reduce mean annual water yield from the landscape by 23% as compared to the grassland with grazing."[137] These effects are not limited to the plantations themselves. In recent years, two studies conducted by US research teams concluded that converting land into timber plantations dramatically reduces the amount of groundwater available to local populations.[138]

According to biologists at Duke University who conducted a study on timber plantations and

groundwater dynamics in Argentina, "Despite the slightly higher elevation of the plantation (10 cm on average), absolute groundwater levels were 30–60 cm lower than in the grassland."[139] The water use leads to a short-term increase in productivity, but "plantation establishment may compromise the fertility of soils, the sustainability of forestry and other land uses, and the quality of water resources."[140] These effects have not yet been observed in Corrientes, but they remain risk factors for the future.



Wetlands

Provincial law requires that plantations be at least 30 meters from the edges of lakes, at least 30 meters from swamps and medium-sized rivers, and at least 70 meters from large rivers and waterways.[141] These buffer zones are important for preserving biodiversity and are often used as wildlife corridors.[142] According to a former company representative, EVASA created wildlife corridors and wetlands buffers that have since been abandoned.[143]

According to Las Misiones's 2011 environmental impact statement, the company's minimum standard is a 20-meter margin between plantations and rivers and wetlands, which is 10 to 50 meters below the legal threshold.[144] However, the photo below shows pine trees that have spread beyond the boundaries of a Las Misiones plantation.

According to Neiff, pine and eucalyptus plantations lead to lower levels of surface water. Furthermore, the plantations consume rainwater, which the aquatic ecosystem of the Iberá Wetlands relies on to sustain itself. This leads to a reduction in the diversity and size of water features, including lakes and wetlands.[145]

This allegation suggests that the legally required distances between plantations and bodies of water may be insufficient to prevent the absorption of groundwater by the plantations and the corresponding draining of nearby water sources. Although the Las Misiones environmental impact assessment says that it "avoid[s] the modification of natural drainages," the research team took aerial photos that suggest parts of the company's plantations were planted on top of former lakes and streams.[146]

This aerial photo suggests that Harvard's plantations are planted on top of former lakes and streams. The lakes and streams are covered by the darker green trees on the right and the lighter green grasslands on the left.

Soil

According to "The Ten Best Reasons to Invest in the Argentine Forest Industry" report by Argentina's Secretariat of Agriculture, Livestock, Fishing and Food, inexpensive, sparsely populated land "allows the intensive use of soils."[147] Residents in Montaña, Santa Barbara, Caiman, and Chavarria raised concerns to the research team about what will happen to the land after the timber plantations are harvested.

There is evidence to suggest that the soil will not be able to sustain other uses in the wake of the plantations. According to a research team at the Environmental Study Group of Argentina's National Scientific and Technical Research Council, groundwater use by a timber plantation can "trigger a rapid secondary salinization of vadose zones and aquifers, compromising the sustainability of forestry in the long term."[148] If the groundwater becomes too saline, plants cannot absorb it, much like people cannot rehydrate themselves with saltwater.[149] According to the Duke University research team in Argentina, "groundwater was 10–20 times saltier beneath the plantation than in surrounding grasslands."[150] Thus, there is a high probability that EVASA and Las Misiones's timber plantations may lead to long-term soil damage.

Carbon Sequestration

Las Misiones and EVASA do not participate in a carbon credit market, but do claim that their business models are environmentally sustainable and help combat global warming because their plantations sequester carbon. The Global Environment Fund (GEF), which owned EVASA from 2007 to 2010, wrote the following in its application for the

Financial Times's Sustainable Investor of the Year award: "GEF's emerging markets forestry investment program has a positive conservation and biodiversity impact while also sequestering global warming [carbon dioxide] CO2."[151] GEF won the award, and the Chairman and CEO included the news prominently in the annual letter to shareholders.[152] Las Misiones makes a similar statement on its website, where it says that its "trees consume great amounts of CO2." [153]

However, scientists debate the effectiveness of using plantations to sequester carbon. According to a widely cited study conducted by researchers at Duke University and Bowdoin College, "Given the observation that carbon accumulation in the deeper mineral soil layers was absent . . . significant, long-term net carbon sequestration in forest soils is unlikely."[154] As the climate changes and temperatures rise, accumulated carbon also may reenter the atmosphere.[155] According to researchers at the University of Toronto, "Soil fCO2 may accelerate global warming by acting as a positive feedback in the global carbon cycle."[156]

Even among those who believe that timber plantations may sequester carbon, there is disagreement about how long those benefits last. "The largest risk to carbon storage from disturbance is that the forest may not regenerate and instead be replaced by a meadow or shrub land ecosystem."[157] Harvests also reduce the amount of carbon that a forest can store.

There are strategies to mitigate carbon loss, including waiting longer between harvests and only harvesting a small portion of the plantation at a time. These strategies better mimic the natural phenomena that lead to tree loss.[158] However, adopting these strategies would require EVASA and Las Misiones to slow down the rapid harvest cycles that are appealing to investors like Harvard.

Adrían Obregón, a member of the San Miguel Association of Small Producers, rides a horse to visit his neighbors in Montaña.

Impact on Local Communities: Loss of Community Life and Culture

In addition to environmental concerns, local communities report a loss of culture and community life, resulting from the plantations.

Roads in Chavarría and Santa Barbara

According to residents in Chavarría, every day more than 70 trucks use a dirt section of Route 22 in a mostly residential neighborhood.[159] The trucks pass through with heavy loads of timber on their way from EVASA's plantations to wood processing plants in Santa Rosa, a nearby city. Previously, traffic consisted of a few dozen cars and pick-up trucks and occasionally a long-distance passenger bus.

The trucks spew dust into the yards of homes in the neighborhood. Residents reported to the research team that the dust makes it difficult to breathe. The local doctor reported to the research team that respiratory issues are the leading cause of visits to the town's only medical clinic.[160]

Residents also reported that the trucks make loud noise at odd hours, violate maximum weight restrictions, and ignore the road use prohibition on rainy days. According to residents, the trucks create trenches that fill with water when it rains, which makes it difficult for other vehicles to use the road. A woman who has lived on the road for more than

20 years blames the traffic for a crack in the wall of her home, which is less than 15 meters from the road.

In response to these problems, residents demanded that the municipal government build a 3.8-kilometer alternate road, so that the trucks would circumvent residential areas. After their proposal was rejected, the residents decided to pressure the government by interfering with truck traffic. On the morning of October 19, 2012, they used their bodies to block timber trucks from using Route 22 until their demands were met.[161] After police from a nearby town threatened the protesters with tear gas, dozens of Chavarría residents joined the roadblock.

Eight hours after the roadblock began, EVASA delivered machines to help construct a new road, which the municipal government committed to build. Construction began almost immediately, but it has progressed slowly since then. As a short-term resolution, the municipal government started to water the road, which helps control the dust. According to residents and the local doctor, the watering has helped but not solved the problem. And the trucks still do not respect all the local laws. The research team observed a truck driving on the wrong side of the street. A passerby asked out loud: "Do they know we're not in Europe?"

Chavarría is not the only community affected by road challenges created by timber trucks. More than a dozen residents in Santa Barbara reported that the timber trucks have damaged the community's main access road, violated weight restrictions, and ignored transit prohibition on rainy days. Trucks that violate the rainy day prohibition are particularly damaging, with residents reporting that the road is repeatedly impassable by car or motorcycle and that they are unable to make even the 13-kilometer journey to San Miguel for up to four days after a storm.. After residents repeatedly blocked the road and boycotted provincial elections to pressure the government to improve the road, the provincial government financed a construction project for the same. While the construction has made their situation better, residents reported that the timber trucks continue to ignore the law.

This truck is carrying timber from an EVASA plantation and creating dust that has led to respiratory problems in Chavarría.

Socioeconomic Change

In many communities in the Department of San Miguel, it is difficult to find anyone under the age of 40; as younger generations abandon small-scale agriculture for cities to find work. The forestry sector has created a high demand for land, increasing the amount of money residents can earn by selling their holdings. Many of those who remain in the small, rural communities rely on government subsidies for financial support. According to school records, the enrollment at the primary school in Santa Barbara, a community near Harvard's plantations, dropped from 189 students to 51 students between 1994 and 2013.

One Santa Barbara resident spoke to the research team about the socioeconomic change: "The timber plantations don't create jobs for the community. Before the timber plantations came, we grew cotton. Even children, only five or six years old, could harvest cotton with us and bring home bread. Now there is no work. The timber plantations are there, so you can't plant cotton or other crops."

At the beginning of the rotation period, every six to eight years, the plantations hire seasonal workers to plant new trees. The employment rate spikes at the beginning of the period, which helps improve perceptions of the plantations in the surrounding area, but it declines quickly after the initial planting season. "He used to say come and talk with us," a long-time resident of Santa Barbara said of an unidentified plantation manager. "That was when he needed us to plant for him, as temporary help. Now he doesn't even say 'hello' when he walks by."

Impact on Employee's Lives

The research team spoke with three directly employed EVASA workers while conducting field research in Chavarría. The team also spoke with former and sub-contracted workers in Chavarría, Santa Barbara, and Montaña. Many of the company's workers travel to their homes in other provinces when they are not working, and several declined to be interviewed because they said they were worried about repercussions at work.

Workers reported that they work and live in unsafe conditions on the plantations--toiling for 12 consecutive days with no break and living in unhygienic dormitories--but they are afraid of retaliation if they speak candidly with management and FSC auditors.

Subcontracting

A longtime EVASA worker reported that when Tompkins owned the company EVASA directly employed all its workers, but now it only directly employs 11 people and subcontracts the rest of its labor. Diego Arquier, EVASA Manager of Administration and Finance, told the research team that the company employs 215 people, less than half of who are subcontracted.[162] However, according to EVASA and Las Misiones's Forestry Operations Manager Arturo Sandoval, only six of its employees are directly employed. EVASA's 2012 FSC Audit reports yet another number: 121 full-time, part-time, and seasonal workers.

The Rainforest Alliance considers outsourcing arrangements to be high risk when they include the regular use of more than one subcontractor or depend on subcontractors to perform a wide range

of activities. Long-term subcontracted workers employed by Logística SRL to work at EVASA reported to the research team that they are required to work overtime with no pay.[163]

Living Conditions

Las Misiones's environmental impact statement recommends "Constructing temporary housing that have the minimum, indispensable services" for its workers. An FSC audit and worker testimonials suggests that EVASA has not provided basic levels of cleanliness for its workers.[164] Some workers share their dormitories with bats, whose excrement falls on their beds or bodies. A worker took the below photos of his living conditions in the company dormitory.

Since workers sleep in company dormitories, managers can wake them at any hour. A worker in the forest fire prevention department reported that during hot, dry periods when there is a high risk of forest fire he is sometimes awoken in the middle of the night to monitor the plantation. The next morning he is required to start work at the usual hour. He said that he is not compensated for this additional work.[165]

These photos were taken inside one of the dormitories on an EVASA plantation, where workers live for 12 days at a time. To protect the identity of the worker who took the photos, they only show small parts of the building. According to FSC audits and worker testimonials, the dormitories are unsanitary and infested with spiders and bats.

Retaliation

Workers reported that when FSC and government inspectors visit, they risk being punished for speaking candidly. A current EVASA worker informed the research team that two years ago one of his coworkers mentioned the unsanitary working conditions during a meeting held to solicit worker feedback. According to the worker's account, the worker was fired after voicing his concerns.

EVASA workers in Chavarría informed the research team that they risk being fired if they do not report for work, regardless of the circumstances. They are expected to work even when they are sick, and company-provided health insurance does not cover hospitals or pharmacies in the towns closest to the plantations. Since toxic fertilizers are used at the plantations, workers are at heightened risk for developing many medical problems.

Toxic Fertilizers

In 2012, EVASA used two toxic substances on its plantations that are considered to be harmful to human health. It applied the pesticide sulphuramide, which the FSC considers "highly dangerous," on 1,879 hectares, and the herbicide glyphosate, whose use requires safety equipment, on 1,417 hectares.[166]

Glyphosate is the controversial ingredient in Monsanto's RoundUp herbicide.[167] According to a study released in the September 2013 issue of *Food and Chemical Toxicology*, glyphosate increases the rate of growth in breast cancer cells.[168] And according to a meta-review of research on glyphosate, the herbicide is linked to "gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer's disease."[169] The agriculture industry and government regulators do not universally accept these findings. The Environmental Protection Agency, a US federal government agency charged with protecting human health and the environment, recently raised the limit on glyphosate use on farms after a lengthy safety review process that some thought would lead to the pesticide's prohibition.[170]

Bayer CropScience, an agriculture company that manufacturers glyphosate, recommends that people who come in contact with the herbicide use a facial mask, rubber boots, long pants, long-sleeved shirt, protective glasses, and PVC gloves.[171] EVASA workers reported to the research team that they are only provided this protective gear before FSC audits and government inspections.[172]

An elderly couple lives in this typical home in Santa Barbara.

The Way Forward: Recommendations

There are no easy solutions to the social, economic, and environmental challenges presented by Harvard's timber plantations in Corrientes. The research team asked stakeholders, including residents, workers, community leaders and activists, what they want to see changed. Some were hopeless. "I can't do anything against them," said one elderly woman who lives adjacent to a plantation. "I am afraid. The danger has never gone away." But many people provided suggestions for concrete steps that Harvard could take to mitigate its detrimental impact on the environment, treat workers more fairly, and improve their relations with nearby communities in Corrientes. These suggestions include:

Comprehensively review and respond to the environmental, social, and labor issues included in this report immediately.

Limit Plantations to Non-Populated Areas of Little Conservation Value

Most community leaders and residents are not opposed to all timber plantations. However, they want them to be located far away from populated areas to reduce the risk of a forest fire destroying their homes, and far away from areas of high conservation value to defend the integrity of the ecosystem and to preserve the potential for ecotourism. *EVASA and Las Misiones could commit to respecting a two-kilometer buffer zone from homes, farms, and ecologically important areas.*

Build a Road in Chavarría

The road would serve EVASA's business interests by facilitating transportation between plantations and buyers, and it would reduce the burden on the community that presently suffers from health problems and transportation challenges. *EVASA could finance the construction of a paved 3.8-kilometer road around the downtown Chavarría area.*

Improve Fire Protection Services

At any time, the timber plantations could catch fire and threaten the communities and ecosystems that

surround them. While EVASA and Las Misiones employ their own private forest fire watch team, fire protection services for the surrounding communities and neighbors are inadequate. The San Miguel fire department consists of five volunteers and one pick-up truck. *EVASA and Las Misiones could partner with volunteer fire departments and ensure their fiscal health.*

Hold Public Meetings Twice Annually

Only three NGOs and four neighbors were notified of FSC's 2012 annual audit. Public meetings would facilitate greater communication between NGOs and neighbors who are not currently consulted in the annual audit. *EVASA and Las Misiones could hold biannual public meetings.*

Establish a Wage and Benefit Parity Policy for Subcontracted Workers

FSC's subcontracting policies require that EVASA be accountable for the working conditions of its subcontractors. EVASA should comply with this FSC mandate by establishing a wage and benefit parity policy that guarantees subcontracted workers the same pay and benefits as direct employees. *EVASA and Las Misiones could establish a wage and benefit parity policy for all their workers, including paid sick leave and health insurance that covers accessible hospitals and pharmacies.*

Invest in Value-Added Industry and Processing

According to a report on timber plantations written by a researcher for the nonprofit research organization Resources for the Future, "[W]here the land ownership is external to the region the impacts may be muted." On the other hand, when "processing facilities are introduced to complement the forest resource base, net economic benefits probably accrue to the local community."[173] This may also be true of EVASA and Las Misiones.

In order to accrue benefits for nearby communities, EVASA and Las Misiones could encourage local production of value-added goods, such as furniture, cabinets, doors, instruments, and joinery, from their timber. *EVASA and Las Misiones could play an active*

Conclusion

Harvard's timber plantations in northeastern Argentina are part of the University's global approach to natural resource investments, which is a trademark of the endowment's strategy. Harvard has pursued unusually high profits in its Corrientes plantations by taking advantage of an ideal growing climate that leads to fast growth rates, a favorable legal framework that provides special tax benefits for foreign investors, and an attractive image of corporate responsibility.

Most of the plantations are located within the Iberá Provincial Nature Reserve, an area protected by provincial law to preserve the rich biodiversity of the vast Iberá Wetlands. According to residents and environmental scientists, the timber plantations reduce the diversity of plant and animal life in the region and fundamentally change the composition of the ecosystem by absorbing large amounts of water. They are also concerned about the long-term soil damage caused by the plantations.

In an area with low levels of government oversight, Harvard's companies have damaged residential roads, creating community health hazards, and inflated land prices without providing most residents jobs, leading many people to leave their homes in search of work. According to worker testimonials, the jobs provided by the company are undesirable. Among other things, the working conditions are unsafe and the dormitories are unsanitary.

Harvard's plantations in Corrientes threaten the health and safety of thousands of people and the future of one of the world's most important sources of freshwater and biodiversity. These are very serious challenges. However, many of the stakeholders consulted in the course of this research have identified how Harvard can mitigate its social, environmental, and economic impacts. It is up to the leadership of Harvard to make these decisions, and to preserve the integrity of the University's international reputation.

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