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RESEARCH ARTICLE

Agrarian counterpoint

Disease stigma and inconspicuous suffering in Colombia's borderlands

Javier Lezaun[1] | **Lina Pinto-García**[2,3]

[1]Institute for Science, Innovation and Society, School of Anthropology and Museum Ethnography, University of Oxford, UK

[2]Department of Anthropology, York University, Canada

[3]Institute for Science, Innovation and Society, University of Oxford, Oxford, UK

Correspondence
Javier Lezaun, Institute for Science, Innovation and Society, School of Anthropology and Museum Ethnography, University of Oxford, UK.
Email: javier.lezaun@anthro.ox.ac.uk

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Abstract

In Colombia's northeastern borderlands, agrarian economies shape how disease risk and stigma are understood and managed. As shown in ethnographic fieldwork in and around the Catatumbo region, cutaneous leishmaniasis—a sandfly-transmitted disease that produces chronic skin lesions—appears in two radically different guises across adjacent territories. In coca-growing areas, the disease is driven underground and treated as a marker of criminality. In coffee-growing areas, it appears as an occupational hazard that calls for professional attention and minor but impactful attempts at environmental sanitation. This contrast defines a structural "counterpoint" between coca and coffee, commodities that encode alternative versions of Colombia's agro-political identity and shape narratives of legitimacy and illegality. Comparing labor conditions, ecological dynamics, and public health responses, we show how the visible symptoms of suffering caused by the disease become more or less conspicuous depending on the social value attributed to different kinds of agricultural work.

KEYWORDS

agricultural labor, armed conflict, coca, coffee, Colombia, criminality, illegality, leishmaniasis, stigma

"There is no leishmaniasis in Catatumbo." So we were told, on several occasions, by Gabriel, the public health official responsible for the prevention and management of this disease in Norte de Santander, the Colombian department where the Catatumbo region is located.[1] We met with him in his office in Cúcuta, the departmental capital. Of course, he continued, Catatumbo faces several health challenges, all exacerbated by the persistence of armed conflict and the nexus of illicit economies that thrive in such an environment. But, he insisted, cutaneous leishmaniasis is not one of them, at least not at the moment. Among the array of public health problems that two social scientists could have chosen to study, he implied, we had come looking for one that wasn't there.

This assertion was, and remains, puzzling. During four field visits to Norte de Santander (2021–23), we heard multiple accounts of people suffering from cutaneous leishmaniasis in Catatumbo and met former patients who readily showed us their scars. The disease is, after all, hard to miss. Caused by protozoan parasites transmitted by sandflies, it typically causes what are described in the medical literature as "volcanoes"—circular skin ulcers with raised edges and a reddish crater that may ooze or scab. While these sores can be relatively painless and may sometimes heal spontaneously, they often persist and expand. In the absence of specialized treatment, they are likely to become infected with bacteria or fungi, sometimes leading to severe disfigurement. Beyond their physical effects, the lesions often provoke feelings of disgust, both in those affected and in others.[2]

Leishmaniasis is endemic across Colombia, and Catatumbo provides ideal conditions for its transmission. Encompassing a large forested area in the country's Northeast, the region is home to several species of phlebotomine sandflies and many mammals that serve as reservoirs for *Leishmania* protozoa. At dusk, female sandflies fly close to the ground in search of the blood they need to produce eggs. They feed on armadillos, anteaters, sloths, bats, wild rats, porcupines, pumas, and jaguars—as well as on humans, whom epidemiologists describe as "accidental hosts" (Ferro et al., 2015).

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In Catatumbo the risk of contracting the disease is mediated by labor conditions. The region's natural resources have long attracted *colonos* (settlers) and seasonal workers from other parts of Colombia and nearby Venezuela. Employed in agricultural or mining activities that require extended periods of work in the selva, they often become infected there. Although the disease is vastly underreported, local doctors and nurses are familiar with it and its clinical manifestations.

Among vector-borne diseases, leishmaniasis is moreover uniquely associated with war and forced displacement (Berry & Berrang-Ford, 2016). This is particularly evident in Colombia, where it has historically been labeled a "guerrilla disease," given its disproportionate impact on those who spend extended periods in the jungle. Consequently, the Colombian state has approached the diagnosis and treatment of the condition as a counterinsurgency issue, tightly controlling the circulation of anti-leishmanial drugs to favor their availability to soldiers of the Colombian Armed Forces and to deny it to members of illegal armed groups. The visible marks of the disease can raise suspicions of involvement in insurgent or criminal activities, leading to violence and discrimination. In Catatumbo these ecological, occupational, and political dynamics converge around coca leaf cultivation. Since the 1990s coca plantations have been a pillar of the local economy, routinely exposing workers to sandfly bites.

This is why we were surprised, early in our fieldwork, by Gabriel's observation that there is no leishmaniasis in Catatumbo. In previous research conducted in Colombia's southern Pacific region—a conflict zone near the Ecuadoran border—one of us had found a clear association between coca cultivation and leishmaniasis (Pinto-García, 2025a). We had come to the country's Northeast to tease out the precise connections between crop cultivation and disease risk. In this respect, Gabriel offered a valuable insight. If we wanted to learn more about leishmaniasis in Norte de Santander, we should shift our geographic focus, if only slightly, to the department's coffee-growing areas. There, he argued, we would find the disease in its more virulent form.

From that moment on, we shifted our ethnographic attention back and forth between coffee and coca. In doing so, we tracked the Manichaean agrarian imaginary that has caught Catatumbo, and Colombia as a whole, in a chronic "counterpoint" (Ortiz, 2002) between the country's two most famous agricultural exports. Indeed, coffee and coca represent polar opposites in the country's agro-political identity. In a country where rural areas have long borne the brunt of political violence, coffee epitomizes a benign relationship to the land, representing a civilized and "civilizing" form of agrarian settlement (Nieto Arteta, 1958; Palacios, 2002). It played a crucial role in the emergence of a national economy in the 19th century and remains central to Colombia's self-image. The national soccer team is often nicknamed *los cafeteros* (the coffee growers), and coffee is a source of pride for a country too often reduced in international media to stereotypes of criminality and violence.

Coca, on the other hand, presents a starkly different narrative of rural Colombia—that of a nation trapped in a seemingly endless cycle of violence, in which large sections of the country are abandoned by the state and suffer rapacious exploitation by armed groups and other criminal actors. Accounting for roughly 2 percent of the national GDP (Montenegro et al., 2019), which is twice as much as the coffee sector, coca provides a lifeline for many peasants and rural laborers who lack viable economic alternatives (Thomson et al., 2024). Yet the illicit revenues it generates drive corruption and fuel armed conflict, and the policies of militarized eradication implemented under US pressure have historically undermined the country's democracy. This diametric opposition of coffee and coca provides political actors with a convenient rhetorical tool to demean and demonize certain groups and communities. For instance, former president Álvaro Uribe infamously attempted to justify thousands of state-sponsored killings by suggesting that the victims "were not harvesting coffee" ("No estarían recogiendo café").

Yet, from a purely agrarian perspective, there are striking similarities between these two agricultural commodities. Both are export crops whose production is driven by an ever-expanding international demand for stimulant drugs. Both offer smallholders a chance at relative prosperity in regions where other agricultural options have disappeared (Gutiérrez-Sanín, 2021). In both cases, harvesting relies on a workforce of temporary laborers, who often earn higher wages than those available in other labor-intensive activities. Even from the perspective of sandflies and *Leishmania* protozoa, coca and coffee plantations offer nearly identical conditions for proliferation and transmission. In Norte de Santander, both crops thrive in shaded, humid areas at comparable altitudes, often surrounded by lush vegetation.

It is through the lens of leishmaniasis, then, that we examine the agrarian counterpoint of coca and coffee in Colombia's borderlands. How do agrarian systems mediate the relationship between environmental factors and disease risk? And why is the suffering caused by this condition so conspicuous in some territories yet invisible in others? In addressing these questions, our research builds on earlier work that traced the connections between leishmaniasis and armed conflict in clinical and biomedical research settings (Pinto-García, 2025a). While observing clinical encounters in intramural spaces, we found that ulcers often originated in remote areas shaped by coca-related economies. This insight prompted us to extend our research extramurally into the Catatumbo region, a context further shaped by migration from Venezuela and a long history of armed conflict and grassroots political action for sustainable agrarian livelihoods.

Fieldwork commenced during the final stages of the COVID-19 pandemic and relied on assistance from a local humanitarian organization, which was crucial for logistics, safety, and community access. We conversed informally with research participants and conducted semistructured interviews in Cúcuta, Catatumbo (municipality of Tibú), and in nearby coffee-growing areas in Norte de Santander (see Figure 1), during four field visits from 2021 to 2023. Our interlocutors included former leishmaniasis patients, representatives of peasant organizations, leaders of community councils (Juntas de Acción Comunal), coca and coffee growers, and other residents in the department. International humanitarian health organizations provided additional entry points and insights into gaps in leish-

FIGURE 1 Colombia's department of Norte de Santander, in the northeastern region of the country, bordering Venezuela. (Map by Milenioscuro, Wikimedia Commons, CC BY-SA 3.0; modified by the authors) [This figure appears in color in the online issue]

maniasis detection and treatment. We also made formal requests to the Colombian Ministry of Health to find out how many reported leishmaniasis cases there were among Venezuelan citizens. Our work benefited from complementary experiences: one of us is Colombian, with a long history of studying leishmaniasis and conflict, while the other is a non-Colombian, Spanish-speaking researcher who has worked on the social and environmental dimensions of vector-borne diseases in other contexts. These experiences informed our approach at the intersection of anthropology, critical global health studies, and science and technology studies.

TIBÚ

The initial focus of our fieldwork was the municipality of Tibú, which encompasses over 2,700 square kilometers of forested land along the Venezuelan border. The town of Tibú, a four-hour drive north of Cúcuta, is the largest settlement in the municipality, with roughly 20,000 residents. It was established in the 1940s as a camp for workers in the Barco oil concession, marking the beginning of a long history of natural resource extraction in the region, often at the behest of foreign companies. Catatumbo's vast mineral and agricultural wealth attracted multiple waves of migration from other regions of Colombia and across the border from Venezuela. This colonization displaced the indigenous Barí population, which is now concentrated in two *resguardos*, or indigenous reserves, in Catatumbo's northernmost section.

A crossroads of routes linking Colombia's Andean region with the Caribbean coast, Catatumbo has long been an area of operations for left-wing guerrilla groups. The Ejército de Liberación Nacional (ELN) arrived in the 1970s and maintains a dominant presence. Other armed groups, notably the Fuerzas Armadas Revolucionarias de Colombia–Ejército del Pueblo (FARC-EP) and the Ejército Popular de Liberación, have also been active in the area. In 1999 paramilitary activity expanded dramatically with the arrival of the Autodefensas Unidas de Colombia (AUC) and its so-called Catatumbo Bloc. The ensuing escalation of violence and human rights abuses, still vividly remembered, led to thousands of deaths and disappearances, as well as the forced displacement of tens of thousands of residents (CNMH, 2015).

In 2006 the AUC demobilized, and in 2016 a peace agreement was reached between the Colombian government and the FARC-EP. But this did not bring peace to the region, given the continuing presence of FARC dissidents, ELN campaigns to reassert dominance, operations by international crime syndicates to control drug-trafficking routes, and intermittent counterinsurgency and counternarcotics campaigns by the Colombian Armed Forces. All this has ensured that Catatumbo, and the municipality of Tibú in particular, remain firmly lodged in the national imagination as a "red zone" of illegality and armed conflict (CNMH, 2018).

Throughout this prolonged period of violence and intimidation, coca leaf cultivation has remained the mainstay of the local economy. Production surged in the late 1980s as the prices of other agricultural commodities collapsed because of economic-liberalization policies. Coca offered smallholding peasants relatively high financial returns and readily available routes to commercialization—a crucial factor in a region with limited and unreliable road infrastructure. Armed conflict exacerbated dependency on the crop; for many of those forcibly displaced from their lands and communities, the only means of reconstituting a viable existence was often either growing coca or working in *la raspa* (i.e., picking coca leaves as temporary farm laborers, or *raspachines*) (CNMH, 2018). Today, the municipality of Tibú is considered Colombia's top coca producer by area, with roughly 220 square kilometers under cultivation (UNODC, 2023).

Amid this complex set of dynamics, Tibú and the rest of Catatumbo are also defined a long history of popular mobilization for peaceful development, beginning with the first oil workers' strike in the 1930s and continuing today under the leadership of peasant and Barí organizations. In 2000 several thousand residents marched in the town of Tibú to call for an end to aerial fumigations and to demand government support for peaceful crop-substitution programs. In 2013 a mass *paro* (strike) blocked the region's roads for almost two months as participants protested the government's failure to fulfill past promises and demanded an alternative-development plan (Estrada Álvarez et al., 2019).

Starting in 2015 an already-fragile situation was exacerbated by increased migration from Venezuela. In Catatumbo there has always been a steady cross-border flow of people, including families and seasonal workers. Crises have often provoked large-scale migrations, such as in 2000–2010, when thousands of Colombian citizens left for Venezuela to escape violence in Catatumbo and other areas. Then, with the economic crisis in Venezuela, the movement reversed direction and intensified

rapidly. By early 2022, an estimated 16,000 Venezuelans were entering Norte de Santander each day through three official crossings and over 74 *trochas* (irregular routes, often controlled by armed groups and gangs) (Ramírez Cañón, 2022). Most of these migrants were en route to other regions in Colombia and to other countries in the Americas, but many stayed in Catatumbo, drawn by family connections and opportunities for casual wage employment in agriculture and mining.

The influx of new arrivals pushed the region's medical infrastructure—already under strain after decades of state underinvestment—to its breaking point, and the provision of primary health care came to rely increasingly on international humanitarian organizations. In 2018, Médecins sans Frontières (MSF) established a permanent team in Tibú, and in 2019, a second organization, Première Urgence Internationale (PUI), arrived in Catatumbo. When we began our fieldwork in mid-2021, MSF had just withdrawn from Tibú, leaving PUI as the area's main humanitarian actor. The organization served as the primary provider of health care services for many of the municipality's residents, both Colombian and Venezuelan, particularly in rural districts, or *veredas*.

Common health conditions in the area include diarrhea, intestinal parasites, upper respiratory infections, and malaria. Yet when asked to describe the problems that most commonly affect their patients, doctors and nurses working in Catatumbo often pointed to the unusually high prevalence of "skin diseases" or "skin lesions." These broad categories encompass a diverse array of clinical symptoms, often of uncertain cause. Medical practitioners in Tibú assumed that many of these epidermal conditions were linked to chemical exposure during the production and processing of coca leaf. "It's the first thing that comes to our mind," noted a PUI doctor. A colleague of hers elaborated on this reasoning:

> We often don't know the cause. Maybe because they work with coca? Water issues? They often use rainwater to wash. […] They are probably fumigating every once in a while. They spray their own crops with chemical substances. One way or another, they come into contact with substances, even if the exact mechanism is not clear, and they end up with many skin lesions. And that is very common in every age group—children, adults. I have seen it often with elderly people. They also suffer from many skin lesions.

Juliana, a doctor who worked in Tibú under the auspices of MSF, described a characteristic skin rash, which she associated with agricultural work in general and coca cultivation in particular:

> This is a rural area, and most people work in the fields or are, one way or another, in contact with people who work in the fields. They often deny it, because many work with illicit crops and use many substances to fumigate, and everything related to the processing of coca. They handle substances that can trigger allergic reactions.

The use of toxic substances begins with herbicides used to prepare new areas for planting and to control weed growth. This risk intensifies during the transformation of coca leaves into base paste, a process that many coca growers (*cocaleros*) undertake themselves. Known as *quimiquiar*, it involves several hazardous substances (such as kerosene and sulfuric acid) and takes place in makeshift labs known as *cambuches* (shacks) or *cocinas* (kitchens).[3] Migrants with little experience in agricultural work are particularly vulnerable to toxic exposure. Juliana recounted meeting Venezuelan farm laborers who "had no idea about these [coca] plants, about these crops, about this kind of work":

> They have a very hard time. The only person who died in my care here in Colombia was a Venezuelan man, very young, 32 years old, recently arrived, who was assigned to fumigate coca plants. I think this person had no idea—he had never done it before. He had acute intoxication. He arrived in agony and died very quickly.

Criminalization drives unsafe practices and limits access to medical countermeasures. As Acero et al. (2023) demonstrate in their study of coca production in the department of Putumayo, the haste with which laborers in the coca economy must transport, handle, and dispose of dangerous chemicals increases their risk of poisoning (see also Rhodes et al., 2023). Chemicals are also used to conceal involvement in illicit activities: in Catatumbo, *raspachines* sometimes wash their hands with chlorine to remove the dark stains left by coca leaf sap, especially if they plan to cross the border through an irregular *trocha*, where they might face extortion. Additionally, as we heard repeatedly in Tibú, employment in the coca economy impedes access to medical care. This is partly because employers often restrict the mobility of *raspachines*, but also because workers are reluctant to seek treatment for conditions that might reveal their participation in illegal activities. Moreover, many Venezuelan citizens cannot access the Colombian health system for conditions not deemed "emergencies."

This explains why a disease like leishmaniasis can be both prevalent and invisible. The practices of coca growing and harvesting, especially the constant clearing of forested areas and the plots' concealment by lush vegetation, increase exposure to phlebotomine sandflies. But once someone has been infected, the initial symptoms often go unnoticed or are misdiagnosed as one of various skin lesions that are prevalent in the region. It is only when conventional topical treatments fail to halt the growth of an ulcer that patients may seek care outside their immediate community (Pinto-García, 2025b). In such cases, the first point of contact during our fieldwork was PUI, either through its permanent clinic in the town of Tibú or during its staffers' visits to La Gabarra, the main hub for coca production in the region (and a meeting point for members of Barí communities living farther north).

Meeting a PUI doctor or nurse is the first step in a convoluted and arduous process to obtain an official diagnosis of leishmaniasis. Because PUI staff lack the necessary laboratory infrastructure, they must refer suspected leishmaniasis patients

to the state hospital in the town of Tibú. Traveling there poses significant challenges for many who lack the financial means or avoid the town due to fears for their personal safety. A PUI nurse told us about a man she had recently seen in La Gabarra who could not afford to travel to Tibú for the necessary tests; the ulcer on his calf had advanced to the point of exposing his tibia. Another nurse, working out of Campo 2, a settlement along the main road between Tibú and Cúcuta, mentioned that several of her patients "cannot touch Tibú" ("no pueden tocar Tibú") because they feel unsafe there.

Those who manage to reach the hospital sometimes fail to receive care. Medical staff may decide that the ulcer does not represent a true "emergency" and turn the patient away—a particularly common experience for Venezuelan citizens. The state hospital, expanded to much fanfare in 2018, is chronically understaffed. During one of our visits in late 2023, it had only eight doctors out of an expected complement of 12; half of them were Venezuelan citizens who had moved to Colombia in search of better professional opportunities. Luis, a doctor trained in Venezuela who had spent several years working at the hospital before joining the PUI team, noted that many Colombian doctors refuse to work in Tibú. "Even doctors from Cúcuta do not come to this area because of the social context," he said.[4]

Once a patient reaches the hospital, leishmaniasis is diagnosed through a *raspado*, a procedure in which a sample is scraped directly from the lesion with a scalpel—without anesthesia—and then spread onto glass slides. The slides are stained and examined under a microscope to detect *Leishmania* parasites. A positive test must be confirmed through a second analysis at the laboratory of the Instituto Departamental de Salud (IDS) in Cúcuta. Only then can treatment begin, a painful and lengthy process that starts with additional tests (available only in Tibú and Cúcuta) to ensure that the patient is healthy enough to withstand Glucantime (meglumine antimoniate), the drug most commonly used to treat the disease. The standard regimen in Colombia consists of two daily intramuscular injections for 20 consecutive days, administered under the supervision of a health professional, given the medication's high toxicity. As a result of the long association of leishmaniasis with armed conflict, the IDS safeguards all the Glucantime allocated to the department and sends Tibú only the exact number of ampoules needed to treat officially confirmed cases.

A patient residing in a far-flung area of the municipality will thus need to travel to Tibú every day for three weeks or stay in town for that period. This is challenging enough for someone living in La Gabarra, for example, and even more so for those, like members of the Barí communities, living in even more distant locations. Faced with these obstacles, many patients fail to complete the regimen or resort to alternative methods (including those provided by traditional healers). Sometimes they manage to procure Glucantime from Venezuela, or surreptitiously from the Colombian army or guerrilla groups (Pinto-García, 2025a).

This is the context in which we should interpret official pronouncements on the prevalence of leishmaniasis in Catatumbo. Many statements from public officials—such as "There is no leishmaniasis in Catatumbo" or "Tibú is making no noise about leishmaniasis"—reflect the difficulty residents face in making their symptoms and suffering visible to health professionals through official channels. We observed this difficulty during a meeting organized by our research team in Cúcuta, with support from a local humanitarian organization. The meeting included two IDS officials and two representatives from Arenilla, a community near Tibú predominantly composed of Venezuelan families and recently returned Colombian citizens. The purpose was to discuss what appeared to be a local outbreak of leishmaniasis that the IDS had not yet addressed.

At the meeting a public health official explained that any control intervention, such as fumigation to eliminate the insect vector, would need to be justified by epidemiological data on reported cases in that location. Although the representatives from Arenilla mentioned at least 20 recent cases in a community of 80 households, the IDS officials denied that there was an outbreak, pointing out that the public health database showed no evidence of it. The residents of Arenilla described this absence differently: they highlighted the challenges of traveling to Tibú, including difficulties in finding transportation, movement restrictions imposed by armed groups, the undocumented status of several community members, and concerns that they would be denied care at the hospital if their condition were not deemed an emergency. The public health officials responded by suggesting that the residents of Arenilla should be grateful, because there were people in worse situations in Catatumbo. After a back-and-forth facilitated by members of the humanitarian organization, IDS staff agreed to visit the community a month later to distribute mosquito nets, share information about the disease, and assess—though not diagnose microscopically—possible cases.

The exchanges at this meeting brought to mind an observation made by Juliana, the MSF doctor who had worked in Tibú for several years. With extensive experience in humanitarian crises around the world, she pointed out that what sets Catatumbo and other "red zones" in Colombia apart is "a systematic tendency to make the conflict invisible." By this, she meant the interconnected institutional and personal silences that prevent public acknowledgment of the conflict and of the different forms of hardship it engenders. A telling indicator of this structural silence is the reluctance of residents, in both interviews and casual conversations, to name the armed groups active in their areas. A similar reluctance also inhibits open expressions of suffering that might raise suspicions of involvement in illicit activities or with illegal actors. As Juliana put it, "There is no voice that will raise the alarm: 'This is happening here. We need help.'" This invisibilization of suffering perpetuates the cycle of violence, she argued, and makes it impossible to address, or even identify, the severe impacts of the conflict on health.

There are telling exceptions to this structural invisibility, moments when the Colombian state visibly addresses leishmaniasis in Catatumbo. Occasionally, the battalions of the Colombian army responsible for Tibú visit remote settlements to identify cases of leishmaniasis among the "civilian population." During these visits, soldiers wash and dress ulcers and distribute information on how to prevent infection. They also publish photographs of these visits on their social media accounts as examples of the social services the army provides to local communities.[5]

This militarized version of primary health care underscores the chronic neglect that characterizes state action in Catatumbo. It also exemplifies how the state asserts its presence in rural areas of Colombia beset by armed conflict: through sporadic, often media-oriented bursts of activity that fail to provide lasting protection, medical or otherwise, and do not empower local actors to better address the problem at hand (Ramírez, 2019).

In the absence of an active and adequately resourced public health infrastructure, leishmaniasis is driven underground to the point of "disappearing" from public view. Like many other issues in Catatumbo, it becomes yet another hidden dimension of the conflict, surfacing only sporadically as the object of spectacular displays of militarized state attention. This invisibilization is particularly striking because, not far from Tibú, the same disease is made conspicuous and addressed more systematically as an occupational hazard in another agrarian regime.

ARBOLEDAS

We leave Cúcuta at 7 a.m. in a pickup truck to travel to Arboledas, a municipality deep in the interior of Norte de Santander. After an hour of smooth riding along the Peralonso River, we cross the Cordillera Oriental, where work is underway to repair sections of the road blocked by landslides. Our driver, Ramiro, who used to run bus routes in this part of the department, is skilled at navigating the many obstacles along the way.

Although Norte de Santander is no longer one of the country's most famous coffee-growing regions, it is often described as the "cradle" of Colombian *caficultura*. In the 18th century, Jesuit priests brought seeds from present-day Venezuela and established the first coffee haciendas here. Today, the area around Arboledas has roughly 20 square kilometers under cultivation, most in small plots of fewer than five hectares. The "forced simplification" of coffee landscapes visible elsewhere in Colombia, characterized by large plantations exposed to the sun, has not yet reshaped the agrarian ecosystem here. Coffee cherries are still largely produced using the traditional "shade" method, under the canopy of trees.

We arrive in the town of Arboledas before noon to meet Bernardo, a local employee of the National Federation of Coffee Growers (Federación Nacional de Cafeteros, or FNC). When Bernardo mentions that we still have an hour and a half of uphill road to reach our destination, Ramiro expresses concern; he fears encountering guerrillas. He asks Bernardo to ride ahead on his motorbike and to warn us via WhatsApp if he sees a *retén*, or checkpoint. Despite Ramiro's misgivings, the rest of the journey is uneventful. Later, Bernardo suggests that armed groups are inactive ("andan apartados") while they await the results of ongoing negotiations with the Colombian government.

The Bellavista coffee farm lies at the end of the unpaved road along a steep canyon, just at the point where hillside farming and cattle grazing give way to the paramo. There, we meet Eladio and Gloria, co-owners of one of the 15 plots of land that make up the property. Over lunch and *tinto* (black coffee), we discuss the history of coffee cultivation in the area, the prospects for the next harvest, and their experiences with medical services.

Eladio and Gloria moved to Bellavista 15 years ago, they tell us, soon after the FNC purchased the farm. The land had been abandoned after the area became a staging ground for armed groups. By buying it, the FNC hoped to resettle this internal agrarian frontier with young men and women from local coffee-growing families. The recolonization was supported by an FNC extension officer and a social worker, and the FNC continues to provide technical assistance and marketing channels to the some 15 households that work the land.

When asked about the main health conditions facing coffee growers in the area, Gloria deadpans, "Back pain." The conversation quickly shifts to leishmaniasis, prompting Gloria and Eladio to recall the outbreak of 2014, when Arboledas became the epicenter of a large wave of cases across Norte de Santander. Initial reports of leishmaniasis infections coincided with the start of the coffee harvest season, reinforcing the perception among residents and medical staff that there was a connection between the crop and the disease. Although many diagnoses were among young children and residents not directly involved in harvesting work, public health officials hypothesized that sandflies were being transported to nearby villages on the clothing of farmworkers or in the baskets full of coffee cherries. Notably, there is little, if any, physical separation between cultivated areas and human settlements; even in the town of Arboledas, the transition from urban area to coffee farms to selva is seamless. From 2014 to 2016, 1,852 laboratory-confirmed cases of leishmaniasis were reported in Norte de Santander; 21 percent of those (398) were registered in the municipality of Arboledas (Sandoval-Ramírez et al., 2020).

During the outbreak, three cases were reported among Bellavista farmers. We visit one of them, Miguel, who vividly remembers the persistent skin ulcer and his daily trips to the health center in Arboledas for Glucantime injections. Regular announcements on community radio reminded him and other patients throughout the *vereda* about the importance of completing their treatment. According to Marcos, an FNC employee then based in Arboledas, Bellavista and other farms were visited several times by *malarios*—the term in rural Colombia for public health workers focused on vector-borne diseases. The *malarios*, in this case IDS staff, distributed leaflets, identified potential cases of the disease, and described ways to reduce the risk of exposure to sandfly bites. Marcos recalls,

> *Malarios* traveled from farm to farm, spraying insecticides, distributing mosquito nets, impregnating the nets with chemicals, and educating residents about the vector. They also advised coffee growers to clean their farms and organize their homes to keep out the mosquitoes [sandflies].

In this effort, IDS staff worked closely with FNC extension agents. As Marcos explains, he and his colleagues were tasked with communicating to coffee growers the importance of adopting preventive measures to avoid infection. "We told them that [the treatment] is hard, that it is tiresome," Marcos recalls. "We

said things like 'If you get sick, you are going to lose time undergoing the treatment. The treatment is not going to let you work as you should, because it is very exhausting.'"

This public health campaign was based on the long-held assumption of a connection between work on coffee farms and risk of infection. In fact, the first systematic studies of leishmaniasis in Colombia were conducted in coffee-growing regions of Norte de Santander. Several historical names used to describe the disease linked the characteristic ulcers it causes to towns that served as hubs of the regional coffee economy: *bubón de Vélez*, *úlcera de Pamplonita*, *úlcera de Cucutilla*, or *úlcera de Chinácota* (Werner & Barreto, 1981). Arboledas in particular has figured prominently in epidemiological studies of the disease. The area has been surveyed by medical entomologists and public health officials for decades, and several species of the sandfly vector were first documented in studies conducted there (Alexander et al., 1992).

Yet this scientific association of leishmaniasis with coffee cultivation arises from the crop's economic importance rather than an inherent link between the ecosystems or occupational practices of the coffee economy and heightened risk of disease. Any agricultural activity that involves extended periods of work in warm, forested settings can create a comparable pattern of infection. The key difference with coca-growing areas in Tibú, where vector species and animal reservoirs are also endemic, is that cases among coffee growers are more readily reported to public health officials. This reporting leads to the detection of "clusters" or "outbreaks," which creates a more sustained state of alertness. This, in turn, helps generate scientific data that substantiates an epidemiological link between the disease and labor on coffee farms.

A decade after the outbreak, one can observe how public health vigilance remains embedded in coffee production. This is most evident in the attention given to the *beneficio* or *beneficiadero*, the site where coffee cherries are brought after harvesting for depulping and drying. Miguel, the coffee farmer at Bellavista who was treated for leishmaniasis in 2014, recalls that the *malarios* who visited the farm repeatedly emphasized that the risk of infection originated "not so much in coffee growing but in processing, in the coffee pulp, in the *beneficiaderos*." The danger, in particular, lay in the heaps of organic material left on the farm after the cherries were washed and depulped. This material was allowed to ferment in the open air for use as fertilizer or fuel, and in the meantime, it attracted various insects, including sandflies, as well as domestic animals. Miguel remembers learning from the visiting *malarios* that he "should keep [the *beneficiadero*] covered, or at least roofed, especially to prevent rainwater. Otherwise, it would become a source of contamination, and it is also a vector for the mosquito [i.e., sandfly] that transmits leishmaniasis."

The main *beneficiadero* at Bellavista, now roofed, is located just a few yards from the main house. The pulp-processing area has been remodeled with support from the FNC and rebuilt in cement (see Figure 2), organized around a series of rectangular concrete basins used to ferment and rinse the beans. Bernardo, the FNC employee, describes these basins as *fosas*. He quickly points out, however, that the FNC prefers the term "pulp processor" to "remove any stigma" associated with the term *fosa*, which in Colombia is often used to describe mass graves related to political violence (as in *fosa común*).

FIGURE 2 A roofed *beneficiadero*, where harvested coffee cherries are brought for processing, at the Bellavista farm, in a *vereda* (rural district) of the municipality of Arboledas, Norte de Santander. In the foreground are two cement *fosas* (basins); in the background, a coffee-pulping machine. (Javier Lezaun and Lina Pinto-García) [This figure appears in color in the online issue]

The upgrade of the *beneficiadero* at Bellavista is a small but telling example of the sort of improvement in coffee farms that the FNC sponsors in this region as part of its extension work. This work includes a wide range of activities, from introducing new pest-resistant coffee varieties to facilitating credit from the state-owned Banco Agrario. Known as the "yellow army," from the color of their shirts—emblazoned with the image of Juan Valdez, the iconic representation of the Colombian coffee farmer—the more than 1,200 FNC extension agents working across Colombia see themselves as catalysts for the continual improvement and "technification" of coffee production. Marcos describes the FNC extension agent as a *todero* (all-rounder):

> He is the trusted friend of the coffee grower, the channel, the bridge between the coffee institutions and the grower. One becomes a confidant, even a *compadre*, with the coffee growers. With our knowledge and the knowledge of the coffee grower, the goal is to orient coffee growers and their families in the best possible way to improve their quality of life.

Marcos grew up on a coffee farm in Chinácota, not far from Arboledas, and he recalls that during his childhood, there was a branch of the FNC Extension Service specifically dedicated to health. Its scope was extensive, ranging from family planning to the prevention of vector-borne diseases. "I remember that they used to go to the coffee farms to train people, to prepare food with the women," Marcos says. Although that branch of the FNC no longer exists, the example of the *beneficiadero* illustrates how extension activities address the nexus of occupational and environmental health risks. The result is a form of patchy but meaningful agrarian sanitation (cf. Nading, 2025).

The motivations for this sort of intervention are complex. Since its foundation in 1928, the FNC has operated as a private entity (or *gremio*) with extensive public functions and, in some areas, state-like powers, including the authority to administer tax revenues from coffee exports and to design regional development strategies (Rodríguez Valencia et al., 2015). In his history of the Colombian coffee economy, Palacios (2002, p. 217) describes the FNC as "the most difficult of institutions to define," noting that "the tensions arising out of its different functions … are themselves reflections of wider contradictions in the Colombian socio-economic model."

In farms like Bellavista, extension work aims to demonstrate the potential for resettling an internal coffee frontier through the production and marketing of "specialty coffees." These commodities can command premium prices thanks to an international "economy of qualities" (Callon et al., 2002), which justifies interventions to improve not only the quality of coffee trees and beans but also, in some cases, the well-being of farmers. This stands in stark contrast to the situation we encountered in Tibú: there, *cocaleros* may take measures to improve productivity and enhance the purity of the base paste they produce—and many house their *raspachines* in dignified conditions—but there is no extension service providing a measure of agrarian sanitation against leishmaniasis or any other occupational risk. Moreover, the criminalization of the crop, along with the stigma associated with work in its production, hinders the consolidation of epidemiological knowledge about any potential links between this agrarian regime and disease risk.

AGRARIAN COUNTERPOINTS AND OVERLAPS

As we prepare to return to Cúcuta, Gloria and Eladio ask us to drive some of their farmworkers to Arboledas. The group consists of five Venezuelan brothers, aged 12 to 23, who are traveling home to spend Christmas and New Year's with their family. They have been coming to Bellavista for three years and plan to return in January. On our drive to Arboledas, the five young men, sitting in the bed of the pickup truck, cheer loudly to greet friends and acquaintances in every village along the way.

According to estimates, up to 40 percent of coffee workers in Norte de Santander are Venezuelans, about half of whom are women (Hernández, 2022). Some specialize in coffee picking, traveling the country from finca to finca, while others tend to stay locally and supplement their income with various other forms of casual employment. Traditionally, work as a *raspachín* has been an obvious choice, since it generally offers better pay; during our fieldwork, however, depressed coca prices made this option less attractive. Oil palm plantations, probably the fastest-growing sector in Catatumbo's economy, offer fewer opportunities for casual employment. The best pay, we were told, was in coal mining, which at the time offered higher wages than any form of agricultural work.

The movement of temporary workers between different crops, as well as between agricultural and mining employment, highlights structural connections and overlaps within various agro-extractivist regimes in Norte de Santander, both licit and illicit. Coffee and coca are labor-intensive systems rooted in smallholding economies that have helped prevent land concentration and monoculture, which are more prevalent in other parts of the country. The two crops share intertwined histories in the colonization and recolonization of the territory, providing a lifeline for producers at risk of displacement by economic and political violence. Connections between the two economies are strengthened by price volatility in international markets; during coffee price crises, coca often serves as a buffer, and vice versa (Thomson et al., 2024).

The working conditions for temporary laborers in both economies are by no means antithetical; piece rate payments are common in both, and living conditions can be similarly precarious. Venezuelans make up a crucial part of both workforces and often earn less than their Colombian counterparts, even when working on the same farm. Many lack official work permits, and even those with regularized legal status can encounter difficulties accessing the Colombian health system and other public services, regardless of which crop they pick.

Both economies operate within deeply interconnected ecological dynamics, even concerning chemical contamination. The toxic exposures characteristic of work on coca plantations and *cambuches* cannot be neatly confined to a specific crop. In Catatumbo we collected many accounts linking disease symptoms—such as frequent allergic reactions and skin lesions—to the contamination of rivers and stored rainwater. This "life in the midst of poison" (Lyons, 2020, p. 1) is not tied exclusively to the production of a specific agricultural commodity; it absorbs injurious substances released from a variety of often illegal and poorly regulated extractive activities, including wastewater discharge from palm oil mills, fertilizer and pesticide runoff from farms and plantations, the destruction of springs by the excavation of coal-mining tunnels, and so on. The cumulative environmental impact affects the daily lives of residents in rural areas of Norte de Santander in all aspects, regardless of their occupation.

In her studies of Colombia's Bajo Cauca region—profoundly shaped by gold mining and coca cultivation—Chiavaroli (2024, 2025) describes how chemical contamination associated with these economies, particularly exposures to mercury and glyphosate, extends beyond individual bodies and discrete workforces, disrupting both biological and social reproduction across entire territories. A similar dynamic occurs in Norte de Santander. Because this region consists of a patchwork of diverse extractive operations rather than a single plantation-style monoculture, the compounding effects resemble what Chen (2012, p. 196) describes as "toxic worlding." Defin-

ing relationships of cause and effect is complicated by deeply imbricated ecosystems and the constant mobility of laborers. Medically objectified forms of harm matter less than toxicity as "a *condition*," one "that is too complex to imagine as a property of one or another individual or group or something that could itself be so easily bounded" (Chen, 2012, p. 196; see also Nading, 2020).

Given these environmental connections and the similarities in their structural positions, it is striking how work in coffee and coca production can elicit such wildly divergent imaginaries of worth. Coffee growers remain ideal *colonos*—self-sufficient, "moral" peasants who improve and civilize the land through their work (Ramírez, 2022), while *cocaleros* are imagined as rootless settlers (*colonos desarraigados*), destroyers of the environment motivated by selfish, short-term economic interests. Notably, even temporary laborers often appear as opposing archetypes, even though the same individual may often engage in both activities. The classic image of the itinerant *raspachín* is that of a transient worker, often a migrant, lacking local roots or intention to settle (Torres Bustamante, 2012). In contrast, the seasonal laborer recruited for the coffee harvest, the *chapolero* (and even more commonly the *chapolera*), figures in the national imaginary (and coffee marketing literature) as part of a collective of specialized workers with a deep appreciation for the qualities of coffee. The *raspachín* scrapes coca leaves, while the *chapolera* hand-picks coffee cherries.

A similar pattern of economic and moral antitheses is described by Ortiz (2002) in *Cuban Counterpoint* (*Contrapunteo cubano del tabaco y el azúcar*), his classic anthropological study of the roles of tobacco and sugar in Cuba's history. Ortiz argued that tobacco and sugar embodied radically different sociopolitical regimes. Tobacco was a "liberal," "reformist," and in some cases even "revolutionary" force in the country's history, contributing to its national sovereignty and development. In contrast, sugar operated as a "conservative, if not absolutist" actor (Ortiz, 2002, p. 204), always subservient to foreign interests. This radical difference was grounded in incompatible political economies. Tobacco was cultivated in small plots, or *tabacales*, and its manufacture required forms of craftwork that empowered producers as autonomous individuals and endowed consumption with the virtues of connoisseurship. Sugar, on the other hand, was produced in extensive *cañaverales* (cane fields) by enslaved or unfree laborers, and it was commercialized as a bulk commodity. The dominance of brute force in the labor regimes of sugar production meant that the commodity always sought to shape society in its own authoritarian image (Ortiz, 2002).

The situation differs in Norte de Santander and across Colombia, where the land and labor regimes supporting coffee and coca production are far from antithetical. Coca and coffee are both "paradoxical economies" (González Acevedo et al., 2020, p. 14) in a country with one of the world's highest levels of land-tenure concentration, and are linked by a constant exchange of labor and credit. This is not "a tale of two countrysides" (Gutiérrez-Sanín, 2021, p. 2) but one of alternative-development pathways that share key features in their political economies but exist under very different conditions of (il)legality.

Examining these two agrarian regimes through the lens of leishmaniasis—specifically the differential degree of conspicuousness that the disease acquires in Tibú and Arboledas—highlights a crucial differentiating factor: the way the state manifests itself in territories dominated by either crop. This is not simply a matter of "presence" or "absence" but of the modalities of attention and care practiced by different state apparatuses and infrastructures (Ballvé, 2020; Peñaranda Currie et al., 2021; Serje, 2012). At times, the state pays more attention to leishmaniasis in Tibú than in Arboledas, as shown in the periodic displays of militarized care provided to rural residents. But this intervention is at best palliative, alleviating symptoms rather than addressing root causes, and it serves mainly to bolster the state's legitimacy in a territory perceived as outside its control. In Arboledas public health authorities maintain a more consistent, albeit understated, presence and have a better understanding of epidemiological patterns. This is so not only because residents find it easier to disclose their symptoms and seek treatment but also because the state is willing to invest more resources in territories it sees as contributing to the country's prosperity.

Even in Arboledas, however, key interventions to prevent leishmaniasis are supported by a private organization, the FNC, which takes on several functions typically associated with state actors. This is, by definition, a precarious arrangement, and coffee alone cannot protect against precarization or displacement, as evidenced by the experiences of other coffee-growing regions in the country (Acero, 2016). A decline in the international price of Colombian coffee compels many growers to abandon production, and it undermines the FNC's economic and political clout. In her study of the so-called Coffee Axis (the regions of Caldas, Quindío, and Risaralda, in Colombia's central Andean region), Rettberg (2010, p. 112) shows how a sharp price drop in the 1990s "reduced the ability of the powerful National Coffee Federation to compensate for the state's failure to provide economic stability and social services," thereby creating "an opening for illegal armed groups and drug traffickers." As we saw in Arboledas, FNC extension workers still support improvements in living and working conditions, but the range of social and environmental services the FNC offers today pales in comparison with what it provided in the era of international price controls.

There is little prospect of establishing a comparable extension system for *cocaleros* and *raspachines*, except in the radically different form of "crop substitution" programs. In the first decade of the 2000s, these programs encouraged Catatumbo's peasants to abandon coca in favor of oil palm, a crop backed by powerful local and national interests. In the Tibú area, this shift toward oil palm agriculture led to significant land dispossession (Gutiérrez-Sanín et al., 2024; Uribe, 2014; Vargas & Uribe, 2017). The flaws and failures of "crop substitution" were among the main drivers of the regional strike in 2013, which united *cocaleros* and other groups in a struggle for sustainable agrarian livelihoods and the right to remain on the land.

A fundamental requirement for any successful alternative-development strategy, whether concerning legal or illicit crops, is the acknowledgment of growers and laborers as political actors and legitimate interlocutors of the state, entitled

to advocate for collective claims to well-being (Pinto-García & Lezaun, 2025). Coffee farmers can organize and openly advance their interests, most visibly during the "coffee elections" in which every four years growers federated with the FNC elect delegates to municipal and departmental committees. In contrast, associations of *cocaleros*, in Catatumbo and elsewhere in Colombia, have been systematically repressed by the Colombian military and illegal armed groups.

Key to this politics of recognition is a more nuanced understanding of the relationship between coca growers, the crops they produce, and the territories they inhabit. These actors are not mere puppets or victims of armed groups, nor are they transient individuals driven solely by economic gain and indifferent to environmental devastation, as Ramírez (2011, 2017) compellingly argues in her ethnographic studies of cocalero social movements. Ramírez calls for a politics of "differentiated inclusion" grounded in a recognition of the violence these collectives have suffered and the distinctive cultural identities they express in different regions of the country. Similarly, in her study of life in coca-growing regions of Caquetá, Ciro (2020) describes a "continuum" in *cocaleros*' perception of their crop, which they view as both a savior and a punishment, and calls for more inclusive policies focused not exclusively on "crop substitution" but on deeper processes of "rural transformation."

One element of the 2016 peace agreement between the Colombian government and the FARC-EP was the recognition of coca growers as legitimate political actors. For a while, Catatumbo was at the forefront of this approach. Peasant-based organizations like the Asociación Campesina del Catatumbo (Ascamcat) have for years given voice to the demands of the region's coca growers. The first-ever national meeting of *cocaleros* took place in the town of El Tarra in December 2022; it was attended by Gustavo Petro, who had recently been inaugurated as president of Colombia. Petro used the opportunity to announce a series of public investments in Catatumbo. A few days later, the government reached a ceasefire agreement with several armed groups in pursuit of its new "total peace" agenda.

CONCLUSION: (IN)CONSPICUOUS SUFFERING

The project that brought us to Catatumbo was titled *Diseased Landscapes/Paisajes Enfermizos*. It aimed to study the relationship between coca cultivation and the state of (post)conflict in Colombia by investigating leishmaniasis and its (in)visibility as a public health concern. We sought to gain a better understanding of the intimate connections between crop, disease, and forms of state and nonstate violence, which together shape life in many of the country's so-called red zones.

As we comparatively analyzed leishmaniasis in coca- and coffee-growing regions of Norte de Santander, we began to question the concept guiding our inquiry. The idea of a "diseased landscape" attributes pathogenic force and pathological status to a specific configuration of environmental or territorial factors. Yet, as our research eventually revealed, radically different manifestations of the same disease are yielded by agrarian systems that exist close to each other and operate under very similar ecological conditions. In coca-growing areas, leishmaniasis is driven underground as yet another marker of criminality, while just a few miles away, it is surfaced as an occupational hazard deserving professional attention and environmental sanitation.

By extending the scope of our study to coffee and its territories in and around Catatumbo, we decoupled the notion of "landscape" from any single agrarian regime, gaining a more granular understanding of the contrasts and connections between legal and illicit economies. Norte de Santander is not a "narco frontier" but a complex patchwork of territories—an uneven landscape that encompasses different forms of agricultural production and varying intensities of armed conflict (Ferguson, 2006).

As far as leishmaniasis is concerned, the contrast between coca and coffee is driven by the stigma attached to one agricultural activity but not the other, as well as by how the state manifests itself in areas dominated by each crop. The stigmatizing power of leishmaniasis is not intrinsic to the disease, nor can it be directly inferred from the sores and scars it leaves on the body. It is a function of the social value attributed to each agricultural commodity and, by extension, to the people who produce it.

Conditions in Catatumbo have deteriorated further since our fieldwork concluded. Starting in January 2025, clashes between the ELN and FARC dissidents led to the worst cycle of violence since the early 2000s, forcing more than 50,000 residents from their homes in a matter of days. The following February, MSF returned to Tibú and restarted its mobile clinics to assist this displaced population. Amid the renewed conflict, several community leaders have been killed, and negotiations have ceased between the ELN and the Colombian government. The conflict has also temporarily interrupted the fragile process of political recognition for coca growers, reinstating the regime of nearly complete invisibility that has long characterized the region's humanitarian situation.

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ORCID

Javier Lezaun https://orcid.org/0000-0002-5483-3628
Lina Pinto-García https://orcid.org/0000-0003-3507-3368

ENDNOTES

[1] All personal names are pseudonyms to guarantee anonymity. Place-names are real except these two: Arenilla and Bellavista.

The fieldwork was conducted entirely in Spanish. All quotations from interviews and conversations were translated into English by the authors. Likewise, quotations from texts originally written in Spanish have been translated into English by the authors.

[2] Biomedicine classifies leishmaniasis as cutaneous or visceral. "Leishmaniasis" refers here to the more common but less severe cutaneous form, which accounts for 95–98 percent of cases in Colombia.

[3] State-sponsored aerial glyphosate fumigations to destroy coca plantations have been another historical source of toxic exposure in Catatumbo. By the time our fieldwork started, this method had been discontinued in favor of sporadic efforts at "manual eradication."

[4] In 2020, after an assassination attempt on a doctor, several clinicians resigned their posts, and outpatient services were canceled.

[5] See, for example, these two posts on Twitter (now X): (1) Juan Pablo Rodriguez (@GrRodriguezB), "Nuestros #Héroes @FuerzasMilCol prestan atención médica a la población civil afectada por leishmaniasis #Tibú #IngenierosMilitares 👍" [Our #Heroes @FuerzasMilCol provide medical attention to the civilian population affected by leishmaniasis #Tibú #IngenierosMilitares 👍], August 14, 2017, https://x.com/GrRodriguezB/status/897223377265577984; (2) Ingenieros Militares (@Ingenieros_EJC), "Soldados del batallón de Ingenieros N.°50 prestan atención médica a joven con posible leishmaniasis en la vereda Casa Zinc del municipio de Tibú #NorteDeSantander" [Soldiers of the 50th Battalion of Engineers provide medical attention to a young man with possible leishmaniasis in the village Casa Zinc, municipality of Tibú #NorteDeSantander], March 31, 2021, https://x.com/Ingenieros_EJC/status/1377380188355403781.

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