


# In search of a substitution model for coca in Colombia: Buffalo, cocoa, and coffee in Peasant Reserve Zones

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## Abstract

For years Colombia has been the world's largest coca producer. Its public management of crops for illicit use has swung between eradication, substitution, and, recently legalization. Forced eradication has been shown to be ineffective, and legalization is an incipient option, so the Peace Agreement puts forward substitution as the path to follow. Yet, what kind of substitution does it suggest? This article analyzes voluntary substitution projects in Peasant Reserve Zones. While some projects have evolved locally due in part to strong peasant associations, they have not gained traction nationally. In general, the difficulties inherent in any business play a role, but there are also structural limitations such as continued fumigations, obligations of prior eradication, the costs of production and transportation due to the lack of infrastructure and public services, and the issue of land rights, which limits peasants' access to the formal funding established by the Peace Agreement.

## KEYWORDS

coca base paste, crops for illicit use, Peasant Reserve Zones, poverty, public policies, substitution

## INTRODUCTION

Colombia has been the world's largest coca producer for years (UNODC, 2021). Coca production has increased in the county even though the area planted with the crop has decreased for 3 consecutive years (UNODC Colombia, 2021a). Coca cultivation remains a painful reality on which thousands of families depend and that is often accompanied by violence and conflict.

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Coca production behaves like a market system that has been consolidating for decades to the benefit of many actors. Because it is illegal, powerful incentives are created that make the value chain (a product's production, transformation, and commercialization phases, among others) more effective and sustainable compared to legal economies. Part of the Colombian peasantry is located at the starting point of the coca base paste value chain—in its production phase—, where they have found opportunities for regular work, economic autonomy, permanence in the territory, and social participation they seldom find in legal economies.

The debate on appropriate antidrug policies in Colombia has swung between eradication and substitution of crops for illicit use. In academia, there appears to be a firm view that eradication policies have not yielded the expected results. In politics, in the 2016 Peace Agreement, the Government of Colombia chaired by President Juan Manuel Santos opted for the substitution route. The Peace Agreement formalized the public agrarian and antidrug policies framed in the Comprehensive Rural Reform (*Reforma Rural Integral*, RRI) and the National Comprehensive Program for the Substitution of Illicit Crops (*Programa Nacional Integral de Sustitución de Cultivos Ilícitos*, PNIS). Yet, post-Agreement implementation was poor, applying eradication and substitution simultaneously, in what Acero-Vargas et al. (2019) dubbed the “narcotized peace” (*paz narcotizada*).

This article seeks to contribute to the study of the characteristics of substitution alternatives, considering three case studies of substitute products—cocoa, coffee, and livestock—that were piloted in three Peasant Reserve Zones—Catatumbo, on the border with Venezuela (northeast Colombia); the Valle del Río Cimitarra (central Colombia); and Tuluá, in the department of Valle del Cauca (southwest Colombia). Peasant Reserve Zones are legally defined as forms of land use planning that seek to “regulate the occupation and use of the Nation's uncultivated lands, giving preferential allocation to peasants with limited resources” (Diario Oficial Colombia, 2023). Sociologically, these zones represent an instrument to counter social inequality and territorial concentration, and a legal gesture for the benefit of the peasant populations that have maintained and cared for the territory even during the height of the conflict.

The study explores the conditions under which it is possible to transition from coca cultivation to licit cultivation in a sustainable manner, specifically the improvement of market access in the three substitute products in a post-Agreement context. With this aim, each product's value chains and market systems were compared with those of coca base paste, the main question being, how can voluntary substitution be an alternative model to forced eradication in Colombia?

In addition to the comparative analysis, we carried out meetings with farmers living in Peasant Reserve Zones. This methodology sought to respond to a second objective of the article, which is to combat the stigma on poor coca-producing peasant populations and to counter their being seen as traffickers, as linked to armed groups, or both. This starting point echoes other voices (Lobo et al., 2020; Vélez & Lobo, 2019) committed to supporting peasants' associative and organizational structures that allow them to leave the coca economy by their own means. Two initial messages are that the peasantry is dedicated to this work with great reluctance and personal costs in a situation of a lack of legal economic alternatives to subsist and remain in the territory (Gutierrez, 2020), and there is a clear intention on the part of the organized peasantry to reverse this situation.

The study took place between September 2017 and December 2018. It was financed by the international nongovernmental organization (NGO) Christian Aid (see Christian Aid, 2023), which has been present in Colombia since the 1990s, and whose mission is to contribute to peace and social justice in the country. The study was carried out by the Christian Aid team in Colombia, the National Association of Peasant Reserve Zones (Anzorc),<sup>1</sup> and the National Coordination of Coca, Poppy and Marijuana Growers (COCCAM),<sup>2</sup> with support from Christian Aid research and inclusive markets teams in London. The study also featured the collaboration of the Observatory of Crops and Growers Declared Illicit (OCCDI) of the Colombian Institute of Studies for the Development of Peace (Indepaz, 2023), and the Colombian Foundation Proinrupaz.<sup>3</sup>

The article begins with a review of the debate on public antidrug policies of eradication, substitution, and legalization. Next, the comparative and qualitative methodology is presented, as well as the choice of case studies. Then, four main findings highlight the fact that a culture of violence remains and that, under these circumstances, coca continues to be the most viable value chain. In the areas visited, buffalo and coffee are preferred to cacao—the designated alternative crop in the Peace Agreement, which implies that diversity of crops is important, and that what really matters is the model of substitution used. The article closes with some conclusions that return to the research question on the substitution model and place the findings within the policy debates on the elimination of crops for illicit use.

## TO ERADICATE, SUBSTITUTE, OR LEGALIZE COCA CROPS?

There are three main public policy options that seek to manage crops for the illicit use of coca in Colombia and separate it from an economy of violence and illegality—forced eradication through either fumigation or manual methods; voluntary substitution for other legal crops (which may or may not include the voluntary eradication of coca); and legalization.<sup>4</sup>

The legalization route, also known in the literature as “industrialization,” is present in Bolivia and Peru. These neighboring countries have legislation that allows the cultivation of coca leaves and the marketing of nonpsychoactive derivatives (see *Acción Técnica Social*, 2023). After decades of eradication policies that had failed to reduce coca cultivation, Bolivia began legal commercialization in 2004, in what some consider to be the most efficient model to date for reducing coca production and poverty (Labate et al., 2018; Ledebur et al., 2020).

Ledebur et al. (2020) note that this route faces more difficulties in Peru than in Bolivia, due to a weaker community trade union structure and a historical mistrust of the government. The differences between Bolivia and Colombia are even greater and include the scale of cultivated land and peasant land ownership, the national symbolism of coca, the presence of cartels and agroindustrial macrocompanies, the political color of the government, and relations with the United States (Mortensen & Gutierrez, 2019; Yanoff, 2017).

Legalization has been studied as a viable option in Colombia (Troyano & Restrepo, 2018). This path includes a recent proposal for a bill in Congress (PL 236-2020) to regulate the domestic market of the coca leaf and its derivatives, both psychoactive (cocaine) and nonpsychoactive (beverages, food, and cosmetics from coca leaves) (*Acción Técnica Social*, 2023). Yet, in a country where coca has played a fundamental role in a conflict lasting more than 50 years, and with the Peace Agreement still very recent, there is little popular and political agreement regarding legalization. Our analysis focuses therefore on comparing the two other options—eradication and substitution. How can voluntary substitution be an alternative policy model to forced eradication in Colombia?

There is academic consensus that forced eradication is inefficient and harmful for economic, health, environmental, and sociopolitical reasons. The few countries that have succeeded with eradication policy have done so with heavy doses of repression (Felbab-Brown, 2020). In economic terms, eradication is costly and ineffective. Aerial spraying is expensive, while replanting or relocating the crop is relatively easy and cheap. According to some studies, destroying laboratories and seizing the final product, or even intermediate products such as the coca paste base, would be more advisable means of reducing the cultivated area than focusing on the initial stages of production (Mejía & Restrepo, 2016; Zuleta, 2017).

Fumigation is also a more expensive measure than voluntary substitution. The aerial spraying strategy cost US\$19 billion (last year of spraying, at 2018 prices), while implementing the substitution plan cost 2.9 billion pesos to serve 80,438 families (La Línea del Medio, 2019).

Other factors against fumigation include risks to human health and food for the communities. Since the agrochemical is sprayed from above, the wind causes it to affect not only coca but also other staple food crops such as maize and cassava (Andreotti et al., 2018; Camacho & Mejía, 2017; Zhang et al., 2019). An interviewed member of the Valle del Río Cimitarra community told Christian Aid (2019), “On many occasions, we had to leave all the crops, animals, and houses abandoned. Those who left were not able to return to the countryside. They [the fumigators] arrived in the region shooting, and everything they found was taken away, and what could not be taken away was burned [...] The fumigations were done almost daily, damaging not only the coca crops but also the other crops.”

In addition, there is a danger of animal, environmental, and water contamination in territories that rarely have sanitation or drinking water systems. This problem is coupled with the deforestation created by the occupation of new land for further cultivation (Cárdenas-Torres, 2006).

On a social and political level, eradication has been linked to the loss of human lives, displacement, and violent clashes between the civilian population and the authorities (Martínez-Ferro & Castro, 2019). Aerial spraying of herbicides can also decrease trust between communities and institutions (Zuleta, 2017) and even strengthen the bond between the population and the warring factions (Felbab-Brown, 2005), complicating the implementation of the Peace Agreement. Perhaps the clearest advantage to forced eradication is that it is the fastest option, which is especially important for governments that need to demonstrate short-term results.

Finally, there are legal reasons that make eradication a nonconstitutional process; Decree 380 of 2021 resumed the aerial spraying program with glyphosate (Dejusticia, 2019). The Constitutional Court of Colombia has previously established conditions to protect the health and environment of affected communities, specifically of communities under special constitutional protection such as indigenous peoples, Afrodescendants, and peasants. Only in cases where there is no agreement with the communities to substitute crops could the government proceed with crop eradication, as stated in Decree 896 (Government of Colombia, 2017).

There is less information on the repercussions of substitution policies than eradication policies. The Peace Agreement marked a turning point in the Colombian government's official position on substitution as a state policy, and a growing number of reports and studies assessing substitution policies have emerged, especially on the current implementation of the PNIS (Gutiérrez-Sanín, 2019; Gutiérrez-Sanín et al., 2019; Marín-Jaramillo et al., 2020; Mejía-Hidalgo, 2021; Peña-Huertas et al., 2019; Vélez-Torres & Lugo-Vivas, 2021).

According to reports from the United Nations Office on Drugs and Crime (UNODC Colombia, 2021b), a total of 99,097 families<sup>5</sup> were registered in the PNIS, of which 67,665 were assisted. Of these families, 98% had complied with the voluntary eradication, with a total of 43,711 hectares eradicated; 74,818 had received immediate food assistance, while 5516 were families with productive projects. These projects included short and long cycles of production, such as cocoa, coffee, pig farming, and silvopastoral activities.<sup>6</sup> Finally, 67,665 families received comprehensive technical assistance services to help them generate productive projects.

The PNIS has been criticized for several reasons (OCCDI, in Christian Aid, 2019). First, PNIS requires a process of eradication before any new crop production under the “coca-free village” concept. This route has already been attempted in Colombia since the 1980s, unsuccessfully, as it leaves the peasantry without income and compensated with aid only temporarily and meagerly (Felbab-Brown, 2020). This path of substitution is outdated in view of the principles of alternative development adopted by the United Nations in 2013, which employ the concept of “correct sequence” to define a state's obligation to materialize community rights before demanding prior eradication (OCCDI, in Christian Aid, 2019). Without the fear of immediate eradication, the peasantry is better positioned to take risks and

test other crops. This gradual development model with coca has already been successful in Bolivia and Thailand (Felbab-Brown, 2020; Mortensen & Gutierrez, 2019; OCCDI, in Christian Aid, 2019; Yanoff, 2017).

Other criticism of the PNIS program is practical in nature and refers to implementation problems such as difficulties in enrolling families that harvest and cultivate coca leaf in the program; and government delays in starting productive projects (Olmos, 2018), incentive payments for families, and the Plans for Immediate Attention (PAIs).<sup>7</sup> The harmonization of PNIS with programme of development with a territorial approach (PDETs) has also been limited.<sup>8</sup> The deadlines initially planned for the PAIs (2 years) were not met, and despite a further extension to 5 years, the PAIs have still not been fully implemented (Mejía-Hidalgo, 2021). This situation suffocates the peasantry, renewing dependence on illicit crops and actors. Additionally, it focuses the attention of criticism on delays and payments rather than on the productive reconversion of the territory, creating distrust between communities and the government. Finally, eradication has little in the way of being “voluntary,” since the state is authorized to eradicate crops without prior agreement with the peasant communities (Yanoff, 2017).

A third set of criticism deals with the lack of protective measures for social leaders involved in the Comprehensive Rural Reform (RRI) and the PNIS. Although the Peace Agreement meant a reduction in deaths related to the armed conflict, threats toward and murders of social leaders have increased (Gutiérrez-Sanín et al., 2020). Although leaders active in restitution and substitution programs do not constitute the majority of murdered rural leaders, their deaths represent a growing phenomenon that is repeated every year and that cannot be ignored. Since its birth in 2017, the social platform COCCAM has denounced 32 murders of leaders who were part of the coordination team, and according to the Colombian Institute of Studies Indepaz, 1260 social leaders were murdered between the signing of the Peace Agreement in 2016 and 2021 (see Colombia Informa, 2021). It not only means a loss of lives and a violation of human rights but also harms the substitution processes—in contexts of insecurity and violence, few farmers will take the risk of setting up longer-term legal crops.

This information marks the starting point of the article, which studies the value chain of the coca base paste and of several productive alternatives to coca in coca-growing areas. This comparison aims to provide useful insight into the sustainable functioning of legal value chains and substitution policies.

## METHODOLOGY

We began this research with a review of secondary sources, which included literature on the implementation of the Peace Agreement, especially points 1 and 4 (Rural Reform, the RRI, and the PNIS); the current political and economic context; the situation of Peasant Reserve Zones; and the role of markets in the Peace Agreement. At the same time, we collaborated with organizations dealing with these issues and with whom we had previously been working.

In the second phase, the OCCDI (Christian Aid, 2019) carried out two case studies of the value chain of coca base paste with peasants living in the Peasant Reserve Zones of Catatumbo and Valle del Río Cimitarra where they studied the advantages and disadvantages of the value chain and the actors and rules that govern it. Meanwhile, Proinrupaz studied the value chains of coffee in Catatumbo and Tuluá, cocoa in Catatumbo, and livestock in Catatumbo and Valle del Río Cimitarra (Christian Aid, 2019). These three products were shortlisted from a longer list of five subsectors (which also included timber and panela), as they best fulfilled the criteria for reducing poverty and improving market systems.

To compare the products studied, we adapted the markets work for the poor approach (Tschumi & Hagan, 2008) and market research for value chain initiatives (Miehlbradt &

Jones, 2007) methodologies, which include an analysis of value chains and their market systems. The value chain analyzes a company's primary and support activities<sup>9</sup> and its competitive advantages and challenges to understand its viability. Costs, values and margins, and actors (producers, intermediaries, carriers, consumers) are examined, as are political and economic dimensions at local and national levels. At times, the economic transformation of peasant territories may depend on national changes, including regulations, investments, and subsidies.

The methods used during the study were qualitative, including interviews and visual methods (timelines) with the associations; community visits and observation; and group workshops with community leaders, youth, women, and peasant producers and ex-producers of the products studied. We did not conduct surveys or statistical studies but used secondary statistical data.

The following Peasant Reserve Zones and grassroots peasant organizations participated.

1. The Peasant Reserve Zone of Valle del Río Cimitarra, located in the departments of Antioquia and Bolívar, with a population of some 9000 families (Prensa Rural, 2012). The collaborating organization was the Cimitarra River Valley Peasant Association (*Asociación Campesina del Valle del Río Cimitarra*, ACVC), created in 1996, which covers 120 Community Action Boards [*Juntas de Acción Comunal*]<sup>10</sup> in eight municipalities (Prensa Rural, 2007). In this area, the coca and livestock value chains were studied. The livestock chain focused on the “Peasant Ecobuffalo” [“Ecobúfalo Campesino”] product. Work was carried out in the municipalities of Cantagallo, San Pablo, Puerto Matilde in Yondó, and Puerto Nuevo Ité in Remedios.
2. The Peasant Reserve Zone of Catatumbo, located in the department of Norte de Santander, with a population of more than 110,000 inhabitants (Prensa Rural, 2017). The collaborating organization was the Association of Farmers of Catatumbo (*Asociación Campesina del Catatumbo*, ASCAMCAT), created in 2005, and formed of inhabitants of four municipalities (Prensa Rural, 2022). In this area, the four value chains were studied—cocoa, coffee, coca, and livestock. Work was carried out in the municipalities of San Calixto, Cúcuta, and Teorama.
3. The Peasant Reserve Zone of Tuluá, located in the department of Valle del Cauca, with a population of 5500 inhabitants (Verdad Abierta, 2015). The collaborating organization was the Cauca Valley Workers Association (*Asociación de Trabajadores del Valle del Cauca*, ASTRACA), created in 2007, which covers several municipalities in the department (Prensa Rural, 2017). In this area, only the coffee chain was studied, in particular the “Coffee Soberano” brand. Work took place in Moralia.

These Peasant Reserve Zones are in different legal phases. The one in Cimitarra was created and legally recognized in 2002, while the one in Catatumbo has been in an advanced process of constitution since 2011 (Comisión de la Verdad, 2021). Meanwhile, the Peasant Reserve Zone of Tuluá is in the initial phase of constitution, which was granted in 2020, so it does not yet enjoy legal guarantees (Prensa Rural, 2020).

Anzorc and COCCAM selected the Peasant Reserve Zones, in collaboration with Christian Aid. The main selection condition was the existence of advanced community production initiatives in the Zones that would allow them to be compared with the more established coca chain. Areas with high coca-growing activity, such as Catatumbo, were also prioritized. The research sought to analyze what productive projects could potentially be supported by the international NGO Christian Aid. Thus, it was not an evaluation of a project with potential conflict of interests for the organizations involved since the project did not yet exist.

The role of Christian Aid focused on financing the study, with the sole condition that the research would explore productive initiatives. In the data collection phase, Christian Aid

carried out participatory rural diagnoses with ACVC, ASCAMCAT, and ASTRACAVA that included timelines on productive processes to understand the historical, political, economic, and social development of these organizations (Christian Aid, 2019). This study focused on organizations and their contexts, complemented by the OCCDI and Proinrupaz studies focused on the products. The Christian Aid Colombia team, with methodological support from Christian Aid United Kingdom, collected all the data and wrote the final report. All parties shared and validated the results. This article is derived from the final report. By way of return, this article was to be translated into Spanish and shared with the Spanish-speaking associations that participated in the research. At all times, the anonymity of the participants in this study has been respected.

The research team consisted mostly of researchers from the third sector (OCCDI, Proinrupaz, UNODC, Christian Aid) who have worked with peasant communities and their organized platforms for long periods. The Christian Aid coordination team was made up of three researchers—two Colombian third-sector professionals and a Spanish academic who has previously worked in the third sector. All three have extensive experience working with peasant communities in Colombia and around the world.

The team had difficulties accessing the field to collect information given the security conditions, especially in Catatumbo, where it was only possible to enter once. According to comments from rural assessments, and unlike the Cimitarra River and Cauca Valleys, this area continues to live in conflict (and not postconflict), with armed confrontation between active guerrilla groups,<sup>11</sup> paramilitary groups, and the national army. In fact, leaders of local organizations that belong to ASCAMCAT have been killed; meanwhile, Catatumbo was the only area where it was possible to study the four value chains (cocoa, coffee, coca, and livestock).

## FINDINGS AND DISCUSSION

Coca continues to be the most viable value chain within the current conflict and postconflict situation. Of the legal crops studied, the Ecobúfalo Campesino of Valle del Río Cimitarra, and to a lesser extent the Café Soberano of Valle del Cauca are the most effective value chains within the Peasant Reserve Zones studied. They are preferred to cocoa, the substitute crop favored by the government in the Peace Agreement. Economic conditions and conditions linked to the culture of conflict strongly influence the development of the value chains studied.

### Coca remains the most viable value chain

The value chain of the coca base paste behaves like any other value chain, with its actors (armed groups, peasants, moneylenders, intermediaries) and services that provide inputs, labor, and food. The links in the chain include coca leaf production, processing into paste, transportation, and sale.

Over time, multiple advantages have consolidated the establishment and maintenance of coca base paste production. The peasants consulted in the Valle del Río Cimitarra and in Catatumbo list the advantages of this product compared to others (Christian Aid, 2019).

1. Stability of prices and demand by armed groups. In the absence of the state, armed groups have generated social norms and regulated the price and market of the coca base paste. Although some communities functioned under free supply and demand until the 1990s, this scenario changed due to the intensification of the armed conflict and the role production played in it. Coca enjoys a guaranteed trade and price stability thanks to a world market

- that consumes the product regularly and to a local armed “regulator.” Globally, the market is inelastic, with consumption affected little by prices or interdiction policies. Locally, the purchasing intermediary will have agreed on the percentage to be paid to the armed group that controls the territory before entering a village.
2. Fast, steady cash flow. A great advantage for the producer farmer is the speed in obtaining cash from a first harvest—6 months after planting, or even less time, depending on the variety of plant, the soil, rainfall, sunlight, and fertilizers applied. In Catatumbo and South of Bolívar, four harvests are obtained per year, and sometimes five or more, making coca a short-cycle crop that responds to constant demand. Such is impossible to obtain with other crops, according to the peasants consulted. For instance, cocoa gives its first harvest after 2 years and stabilizes at its highest income after 6 or 7 years (Proinrupaz II, in Christian Aid, 2019).
  3. Ease of credit and salaries, and complementarity with other activities. Having a coca leaf crop generates guarantees for lenders due to the security of return in coca, unlike other crops. The lenders are usually local food merchants who grant credit informally to small producers, either in kind or in cash. The chain has relationships of trust that facilitate regular informal credit. Many families have been able to obtain almost two living wages, which they usually use for education, health, and daily expenses. Whenever possible, the money is used to improve housing or for extra expenses, such as “buying a television or clothes.” Furthermore, the daily wage paid to a skilled picker is not comparable to that received by a day laborer in any other agricultural activity. In addition, coca only occupies part of the time per month and leaves free time for family labor to engage in other activities on the farm, for example, working on other farms, caring for animals, working other crops, improving the house, socializing with neighbors, or even meeting with the community and institutions.
  4. Ease of access to supplies. There is also easy access to seeds and material required for planting since residents of the same village give it free of charge. Therefore, production costs decrease. Future purchasers also supply free seed varieties to “new” areas to widen and consolidate the crop reach. In the mountains and jungles of Colombia, abundant sources of water are easily and freely accessible to producers, even in the most rugged terrain. Many producers also process the coca base paste (or acquire this service from someone who is usually part of the farming community). Petrol, cement, or lime reach the farthest corners of the country. If there are checkpoints, there are “traquetos”—smugglers who specialize in knowing how to get these products through using unmonitored roads or by paying the authorities a bribe. The prices of these inputs are high for the producer, but they have the advantage that they can almost always be obtained on credit.
  5. Ease of transportation. The local buyer or “chichipato” travels to the peasant producer's farm, so the producer does not have to incur expenses in moving the product to commercial centers, which is hardly ever the case with other products. By comparison, only a few companies that collect milk or cheese on-farm have incorporated part of this process. Occasionally, the producer may have to travel to the urban center, but it does not usually involve long distances. Furthermore, the product is easy to transport because it is not perishable and is small and light and resistant to deterioration, making it easy to carry by mule, car, or canoe, even where there are no roads.
  6. Productivity and quality control. The productivity of coca cultivation varies in the areas studied, depending on the plant used. With a strain called “caturra,” a yield of up to 40% is obtained in the transformation of coca base paste; with the “Bolivian” variety, 24%; and with the one known as “tinga,” 26%. Growers have learned to optimize their land. For example, they achieve a higher density by planting more seedlings in a smaller area or use better varieties for faster growth and larger foliage or leaves with a higher quantity of alkaloid. They have also managed to improve performance in the processing of coca base



paste. This paste is not subject to any sanitary and phytosanitary requirements for commercialization, although local buyers conduct a “quality test” to detect the presence of water or humidity, which would reduce its standard price.

7. Local development. Coca boosts the local economy directly (shops, bars, and transportation), which helps repair small infrastructure and supports the community's social fabric. Given the lack of state support in these territories, families sometimes allocate part of the resources to common funds for initiatives that benefit the community, such as fixing roads or improving schools. Unlike with other legal crops, youth and women are actively involved in the coca base paste economy.
8. Inclusion of young people. Coca is a stabilizing factor for the youth population in rural areas, who participate mainly as coca leaf collectors. “Coca completed my upbringing,” stated one COCCAM leader (Christian Aid, 2019). Coca is attractive to young people because of the prices paid, and it represents an opportunity to help with family and personal expenses. It is seen as an incentive for young people to remain in the territory and as a deterrent to the lure of joining armed groups. In one of the Peasant Reserve Zones, young people participated in a collectors' committee that regulated the coca leaf harvesting activity.
9. Inclusion of women. Women participate in most of the links in the chain. They manage the coca plots and the production accounts. They wash clothes, shop, and cook for the workers in the coca fields and “cambullones” (sites where the coca paste is processed). Many have their own plantations. The income has given women economic independence, a voice, and a vote vis-à-vis their peers, families, and communities. It allows them to provide more easily for the family when their husbands are murdered or arrested than do other economies, according to a female community leader (Christian Aid, 2019). The women also manage the voluntary community collections to improve conditions in the region and even invest in and lead processes such as the administration of community projects.

These points show that despite an adverse context of war and marginalization—or precisely because of that context—the illicit economy has remained the most viable economic option for peasant farmers. Such is the case despite the numerous risks, such as legal proceedings, stigmatization, murder, and displacement.

## Buffalo and coffee preferred over cocoa

Of the three licit chains studied, the *Ecobúfalo Campesino* in the Valle del Río Cimitarra and the *Café Soberano* in the Valle del Cauca stood out as viable and sustainable models of cultivation, even in times of conflict. On the other hand, cocoa production in Catatumbo showed greater weaknesses in its business development at a productive and commercial level, including costs and profit margins, product quality, product acceptance, labor effects, and number of workers. Still, future potential was observed.

This pattern is also observed at the sectoral level. According to the farmers, the Colombian Federation of Cattle Growers (Fedegán) and the National Federation of Coffee Growers (Fedecafe) have more affiliates and funds for investment than the National Federation of Cocoa Growers (Fedecacao). Fedecafe retains a historically advantageous position to influence public policies in the coffee subsector, while Fedecacao has a smaller regional presence and is not yet fully recognized by the farmers. Indeed, farmers identify more with the livestock and coffee sectors than with that of cocoa in the areas studied, particularly in the Valle del Río Cimitarra and the Valle del Cauca.

This reality contrasts with the fact that the government has favored cocoa for substitution in the context of the Peace Agreement, a decision based on the possibility of its cultivation in agroecological conditions similar to those of coca cultivation (Proinrupaz II, in Christian

Aid, 2019). In 2018, the government invested in the planting of 79,496 hectares, representing 45% of the total area planted with cocoa in Colombia, under the Alternative Development Program (see Christian Aid, 2019; Federación Nacional de Cacaoteros, 2023).

The *Ecobúfalo Campesino* initiative was created in 2000, to raise buffaloes (Proinrupaz III, in Christian Aid, 2019). Supported by the UNDP and the European Union, the project began with the creation of the farm La Bufalera in Puerto Matilde, Yondó, Antioquia. In addition to stopping the cultivation of coca leaf, the project has proven to be sustainable in a context of ongoing conflict since its inception, evolving into a company in 2015. Today, the initiative has consolidated—it comprises refrigeration equipment, technical assistance for farmers (a veterinarian specialized in buffaloes), and control over the intermediation and transformation of the product, which has diversified into milk, cheese, live cattle, and charcuterie. Given that the products have been well received locally, the current goal is to produce on a larger scale and improve quality control (for instance, by introducing barcodes).

Comparatively, Ecobúfalo benefits from the cultural acceptance of the livestock sector as a model of local development and from the collective action promoted by the ACVC, the oldest and most established peasant organization of those studied, which fights for the interests of small farmers. For example, ACVC provided training to people associated with the project via international funding, and thanks to its associative connections, presented the project for awards to gain commercial recognition (see Saiz, 2019). The lower restrictions and inertia of the livestock sector are another advantage as it is relatively new compared to the more established coffee and cocoa subsectors. Yet, Ecobúfalo is not the best option in terms of labor effects since it does not have a significant scope in terms of the number of people it benefits, according to those interviewed. While Ecobúfalo has a moderate number of members (some 80 people have joined in 20 years), Café Soberano already has a base of 400 members (Proinrupaz I, in Christian Aid, 2019).

Café Soberano was established in the 1980s and has enjoyed a local brand positioning for 3 years. The business is still in the process of consolidation since it does not yet generate profits. There is not enough labor for Café Soberano to buy coffee from producers, and there is a lack of technological development to increase volume. In many places, wet coffee is sold because there is no infrastructure for drying, which lowers its sale value. The departmental secretaries of agriculture (Municipal Units for Agricultural Technical Assistance called Umatas, the Colombian Agricultural Institute known as ICA, and the National Training Service known as Sena), as well as the Federation, have provided ongoing but limited support.

Unlike with Ecobúfalo, no processed coffee products have been developed (wines, shampoo), although a niche has been identified in instant and decaffeinated coffees, with the addition of flavors. On some farms, work is underway to generate organic and Fairtrade certificates, and micro-lot sales. As with the case of Ecobúfalo, the producers' aspiration is to take control of the transformation role in the chain and have their own roasting, grinding, and packaging plant to reduce costs. The potential of the product lies in its quality since it is in high altitude areas and could therefore obtain quality certification. Its robust associative nature is also a strong point for business development. The producers are organized in ASTRACAVA, which has a Soberano Coffee Board of Directors, composed of one producer per municipality.

Finally, the cocoa chain was positioned as the weakest in the analysis due to its greater production and marketing challenges in comparison with the other chains. First, the quality of production is low. It is necessary to eradicate aging plantations that do not perform, introduce improved crops, control pests and diseases, prevent moisture in the product, control its cadmium level as required by European markets, and ensure good postharvest handling, key for future performance, which would make it possible to increase quality of the product to the “fine aroma cocoa” that enjoys special price conditions. The product could diversify (for instance, into chocolate bars) and scale up, as the other chains have done or are seeking to do. Faced with these difficulties, small producers receive little or no technical support from

Fedecacao and sense indifference on the part of public authorities, who pledge funds that are subsequently not implemented.

Regarding the transformation of cocoa, more than 80% is concentrated in two companies (Casa Luker and Nacional de Chocolates) which, together with the intermediaries, determine the price. The association that was part of this study, ASCAMCAT, does not manage cocoa, but there is another nearby association called *Asociación de Asociaciones de Productores de Cacao del Norte de Santander y su región del Catatumbo* (Asoprocanor) that works with cocoa and with whom producers could cooperate. Asoprocanor has options to export to Germany and is negotiating collaborations with the company *Nacional de Chocolates*. For its part, ASCAMCAT provides producers with a solid social base, which is key to a better capacity for negotiation, communications, sales, and collective investments.

In general, there is a limitation to the national and international development of all these local initiatives due to the type of intermediaries and federal representatives. Regarding intermediaries, the opinion of farmers is negative in all the chains studied. On field visits, comments such as the following from a peasant leader were common (Christian Aid, 2019).

I'm not a raw cane sugar maker, but according to what I heard from the president of the association of raw cane sugar and coffee makers, they sell to the Mayer [family-run company] of Medellín, and that's the problem. Because although they set up very nice processing plants for them, the coffee is of standard quality and the Mayer are the intermediaries. How much do the Mayer get? They don't even know. They only know that they receive 14–15 million pesos from exports and that they share it all and are happy. I wasn't going to get into that little game, because I have a coffee brand and that's not a sin.

The same problem seems to exist in the more established federations (Proinrupaz I, III, in Christian Aid, 2019). Fedegán was mentioned in several workshops for promoting extensive cattle ranching, thereby encouraging large and medium-sized cattle ranches instead of benefiting small farmers. According to the farmers of Valle del Cauca, Banco Cafetero and Fedecafe emerged as private initiatives as a result of the growing presence of multinationals in the 1980s. Some have perceived the outcomes of Fedecafe as positive, and others, as negative. On the controversial side, the farmers interviewed recall that the Federation generated environmental problems and an increase in the aggregate debt of coffee growers, which resulted in the dispossession of land as a means of payment and the call for peasant mobilizations (Christian Aid, 2019).

## The culture of violence persists, hindering legal value chains

Besides the challenges covered, there are also limitations linked to a culture of violence that hinder the growth of legal value chains, including continued fumigation; the lack of basic goods, services, and infrastructure; the lack of peasant ownership of the land; and welfarist and counteractive policies to address poverty.

First, the fumigation policy for forced eradication persists even after the Peace Agreement has discouraged the planting of long-cycle or permanent legal crops such as coffee and cocoa, which are expensive and can be affected by fumigation (BBC, 2020). These crops can begin to be harvested 3 or 4 years after planting, so there is a high risk that farmers will invest in them and then watch them get fumigated (Ibáñez-Díaz, 2008).

Second, despite the Peace Agreement and programs such as PDET and the PNIS, there is still a lack of basic public goods and services not provided by the state, resulting in high production costs for farmers (Christian Aid, 2019). The peasants cited the precarious

infrastructure for marketing the products, the high transportation costs for loading and unloading, and the lack of technical assistance. During visits, the poor state of mainly tertiary roads and the lack of educational and health centers were observed. According to official statistics, this situation leaves rural communities at a disadvantage compared to large producers and maintains the urban–rural divide. The poor state of transportation is compounded by the geographic isolation of many of these areas. The lack of basic services and isolation increases the need for resources in cash or credit, which are easier to get with coca cultivation, as described above.

Third, there is a lack of land ownership, without which farmers struggle to receive formal financing and other resources derived from the Peace Agreement. This situation has generational effects. A member of the group of young people from Puerto Matilde in Yondó responded to the question as to why there was no generational change. “In general, interest is not generated since we [young people] don't own farms.” Another young person, responding to the question of why they want to stay, replied, “I want to be the boss of the farm, have what is mine” (Christian Aid, 2019). According to the results of the characterization of beneficiary families of the PNIS (UNODC & FIP, 2018), 58% of growers claimed to be the “owner” of the land where they farm, but only 13% have deeds. A total of 93% said they had never participated in property formalization processes by the state. Leasing does not seem to be an option—the owners prefer to lease to grow coca, not long-term legal crops. According to a PNIS community representative, owners claim that PNIS generates conflicts with their tenants over the possession of land (OCCDI, in Christian Aid, 2019). In the case of livestock, the areas need to be of a certain size to be sustainable. There are also historical problems in relation to the administration and documentation of official data.

Colombia is a country that does not have a cadastre for a large part of its rural territory. This is why it is so easy to dispossess, if people don't have deeds, much less the cadastre, much less registration. The cadastre must be linked to the registry, which is who finally tells you that you are the owner, and which issues you the certificate. Here, it is a mafia, because the registry has been used to legalize what was illegally obtained. In all countries, the cadastre and the registry tend to function as a single entity. Here, the registry is a mafia and there is no cadastre in most of the rural areas, or where there is one, it's not up to date. (Anzorc, in Christian Aid, 2019)

There are initiatives to counter this problem, such as those of the UNODC and the Government of Antioquia program, which aim to deliver 300 property deeds to peasant families in the South of Bolívar (UNODC, 2023). On the other hand, the population in Guaviare, Cauca, and Valle del Cauca have rejected some government actions on land ownership as they were considered an attempt at dispossession on the part of the state and as a coercive action against the strategy of the National Land Agency (MAPP & OEA, 2022). To complicate the situation, the Ministry of Justice and UNODC note that families assume the years they have spent occupying land grants them direct ownership of it (UNODC & FIP, 2018). The Agency has made progress in land-use rights contracts for the PNIS beneficiaries occupying Forest Reserve Zones, so that families can use them for a maximum of 10 years and extendable indefinitely, through activities in accordance with environmental regulations. Faced with this situation, the agency has proposed social dialogue and capacity building for the beneficiary communities so they understand the strategy and thereby counteract rejection.

Fourth, coca-growing areas are correlated with chronic poverty and food insecurity. Coca-growing municipalities are, on average, poorer than the rest of the country's municipalities (Zuleta, 2017; OCCDI, in Christian Aid, 2019). Table 1 compares poverty, education, and

**TABLE 1** Municipal multidimensional poverty index, low educational achievement, and barriers to access to health services for populated centers and dispersed rural areas, 2018.

Department	Municipality	Multidimensional poverty index, percentage	Low educational achievement, percentage	Health access barriers, percentage
Antioquia, Bolívar (Cimitarra)	Cantagallo	68.6	86.4	15.2
	Remedios	49.4	79.1	2.1
	San Pablo	66.3	85.2	14.8
	Yondó	52.7	78.2	4.0
Northern Santander (Catatumbo)	San Calixto	80.7	91.9	36.0
	Cúcuta	44.1	71.7	3.1
	Teorama	73.6	88.7	10.3
Valle del Cauca	Tuluá	24.5	64.6	3.5

*Note:* The DANE disaggregates data between “municipal capitals” and “populated centers and dispersed rural areas.” This study focuses on the latter.

*Source:* DANE (2018).

health data in the studied areas. Except for Tuluá, the municipal index of multidimensional poverty is between 44% and 80% in all areas studied (DANE, 2018). San Calixto, Teorama, Cantagallo, and San Pablo present the most concerning data.

Although Valle del Cauca does not suffer from a high rate of poverty, it stands out for its high rates of violence and concentration of land holdings. In 2019, it was the department with the second-highest homicide rate in the country (53.6 deaths per 100,000 inhabitants), behind Arauca, with a rate of 59.3 (DANE, 2021). Norte de Santander, Antioquia, and Bolívar also show relatively high rates (37.6, 35.5, and 19.1, respectively).

Some studies estimate that the highest concentration of land holdings in Colombia, measured with the Gini coefficient, occurs on the Atlantic Coast and the West of the country, especially in the departments of Quindío, Norte de Santander, and Valle del Cauca (IGAC, 2012). According to the Augustín Codazzi Geographic Institute (IGAC), only 5.6% of the rural area had an updated cadastral status in 2019 (Barney, 2022). This concentration in the hands of a few causes a dispute over land where the most favored groups are in flat areas with better conditions, and the poorest groups such as peasant, indigenous, and Afro-Colombian communities are pushed to hillside areas, which are increasingly isolated and where the best option is coca cultivation.

Finally, the road network situation is poorly developed in comparison with neighboring countries. Chile and Mexico have 530 and 560 miles of roads per million inhabitants, respectively, whereas in Colombia, the figure drops to 217 miles (Bolívar & Quintero, 2019, p. 15). In addition, the quality of the network is not great and has been progressively deteriorating due to a lack of resources for maintenance. Only 18% of the 39,615 km of inventoried departmental roads are paved (Bolívar & Quintero, 2019, p. 70), and an evaluation of 60% of the inventoried secondary network identified that only 13% of the network was in good condition. In departments with a high rural population, including Antioquia and Santander, the secondary road network in good condition is barely 20% (Bolívar & Quintero, 2019, p. 31). According to the same authors, Valle del Cauca is improving, with a considerable amount of both paved and unpaved surfaces, but with potential for more improvement (p. 96).

All these precarious factors of poverty, education, health, roads, land, and violence limit public policies and productive enterprises. Thinking about a long-term investment is much riskier for impoverished farmers under these conditions than for other, better-off groups.

Furthermore, state development and cooperation programs that have sought to respond to this situation of poverty have often replicated welfarist models through subsidies that cover even the cultivation of food for one's own consumption, creating a culture of dependency. Although some programs have donated resources for the functioning of local entities, ACVC and ASCAMCAT refer to the need for greater investment to reach a larger population and a better quality of work. Often, the resources provided are so limited that the associative teams are forced to split up and work overtime.

## Factors that promote legal value chains

Despite the business and sociopolitical difficulties studied, there are factors that favor the development of legal chains, such as widespread fatigue with the coca culture, the growing strength of associations in the areas studied, and a tentative initiation of government financing.

First, there is a clear commitment among farmers to abandon coca crops even though they are more economically advantageous. Such can be observed in the massive response to substitution programs (98% of families have eradicated) and in the substitution objectives pursued by peasant associations, such as Anzorc and COCCAM. The downsides of the coca economy are many. State persecution, the risk of being prosecuted, and the stigma of illegality add to the risk of concentration of armed groups and fumigations in areas that continue to grow coca.

In addition, although it is relatively simple to obtain credit for coca crops compared to legal agricultural activities, this situation can easily produce a “debtor's economy,” according to farmers, for those who have not had successful harvests, for example, after fumigation. Farmers also have a false perception of the excessive profit margin of coca. According to calculations by OCCDI (Christian Aid, 2019), farmers do not tend to include the costs of the value of their work in their expenses, as is the case with other family farming economic activity.

Likewise, the pricing of the coca market constitutes a restriction. Since there is only one buyer who sets prices within a chain of imperfect competition, a dependency relationship is forged, with little or no room for negotiation on the part of the farmers. Asymmetric relationships also exist between the owners of the land, plants and capital, and intermediaries, to the detriment of day laborers, collectors, and other hired labor (OCCDI, in Christian Aid, 2019).

Unlike in Bolivia and Peru, coca in Colombia is strongly linked to the financing of the conflict, which has created a perceived lack of cultural identity among Colombian peasants with the coca leaf as their own product (OCCDI, in Christian Aid, 2019). Although there are areas such as Catatumbo, where at least two generations have adopted and practiced coca cultivation as just another type of agriculture, most families claim to be dedicated to it due to the lack of alternative opportunities and say they are responding to substitution programs.

Another point that favors the development of licit crops is the growth of peasant associations in the areas visited that have promoted the development and financing of business models such as Ecobúfalo and Café Soberano. Such was observed in the Valle del Río Cimitarra and Valle del Cauca with ACVC and ASTRACAVA. In contrast, ASCAMCAT in Catatumbo is a younger association, and the situation of the armed conflict in the region is complex, with more than four armed groups, making the coordination between market players arduous and leading the associative management to focus on defending the rights of farmers (Proinrupaz II, in Christian Aid, 2019). External support to strengthen organizational processes is not always the most useful approach. One peasant leader noted,

There were some resources, and a process of developing capacities was taking place, because I would say that one of the most important elements of

organizations is really consolidating capacities, not through training courses or workshops, but rather through practical processes, which guide organizations, shape them, and people end up staying. (Christian Aid, 2019)

In the profiling of families under the PNIS program (UNODC & FIP, 2018), 59% of people surveyed participated in community meetings, and 58% in community work, such as repairing roads, bridges, schools, and sports facilities. In Cantagallo (Valle del Río Cimitarra), there were “community tolls” to collect funds for the repair of village roads (OCCDI, in Christian Aid, 2019). Most inhabitants of an area are affiliated to the Community Action Boards, where consensual decisions are made for the welfare of the community, which shows the high interest in seeking better conditions of community life beyond the individual and family.

On a financial level, resources from peasant associations and international aid continue to be the most affordable options for the farmers. Options such as bank loans are difficult to access, mainly due to the lack of regularization and deeds to the farmers' lands. No self-financing initiatives were found.

The financing of Peasant Reserve Zones also presents difficulties. Under the government of Juan Manuel Santos, Peasant Reserve Zones were not included in the budgets of almost any department, nor in any central government entity, with the exception of the Colombian Institute of Rural Development (Incoder).<sup>12</sup> A study by Incoder and the National University (Estrada-Álvarez, 2013) highlights that, despite the importance of the Sustainable Development Plans drawn up by the Peasant Reserve Zones, figures such as the Business Development Zones enjoy greater visibility and legislative progress in Congress. According to the study, there are also two opposing logics—of competitiveness and the external markets of public policies; and of farmers, based on self-subsistence and production oriented to the internal, local, or regional market.

In some cases, the national government has made social investments in Peasant Reserve Zones through associations other than ACVC, ASCAMCAT, or ASTRACA. Meanwhile, Ecobúfalo is awaiting financing to electrify housing and the cheesemaking plant at the La Bufalera farm. Previously, ACVC had received support from the Colombian Association of Buffalo Breeders (Asobufalos) in charge of organizing buffalo producers in the country. Although insufficient, the commencement of state financing creates a bridge of trust between the state and communities that has long been minimal or nonexistent. In this sense, it is revealed as a possibility to explore.

## CONCLUSIONS

Can voluntary substitution serve as an alternative model to forced eradication in Colombia? The short answer is, it depends on whether substitution goes beyond a simplistic model focused on trading one crop for another. Aerial spraying must stop, and substitution must be decoupled from the previous obligation to eradicate. Likewise, the state must work with the peasant associations to confront the business and socioeconomic limitations that hinder the development of legal crops. Otherwise, the literature consulted and the empirical analysis show that substitution, rather than an alternative, runs the risk of becoming a well-intentioned attempt at best, and a front for reinforcing inequalities and violence at worst (Mansfield et al., 2016; Vélez-Torres & Lugo-Vivas, 2021; Vélez-Torres et al., 2022).

First, eradication by aerial spraying and substitution cannot be carried out simultaneously, since the former directly limits the possibilities of success for the latter. In addition, the “prior eradication” requirement by which the state only invests in families that have previously eliminated their coca crops must be avoided. The literature shows that this model has not worked and that the *progressive* reduction of coca crops linked to productive alternatives is a

better option (see, e.g., Felbab-Brown, 2020; Yanoff, 2017). Farmers should not lose their income from coca cultivation before having consolidated other crops if they are to maintain their economic autonomy and avoid financial dependence on the state, international aid, or other external actors. The state has a historical debt to these impoverished communities, and it is the state that must take the first step toward building trust.

Second, it is essential to invest in solid technical support for production projects and to eradicate the culture of violence. No matter how efficient local production initiatives may be, structural causes such as the lack of public services—including education, health, energy, roads and transportation, security, and land titling—continue to be present and greatly limit development. Ignoring these factors creates an ideal breeding ground for the continuation or return of coca production once the credit from the substitution programs ends. The legalization and ownership of land is one of the Achilles heels of the Colombian state in the substitution processes. It is no coincidence that crops for illicit use are found in regions with little or no property rights over the land. Until these precarious conditions in rural Colombia are remedied in accordance with the Comprehensive Rural Reform (RRI) of the Peace Agreement, illicit economies will continue to have an advantage over any other form of agricultural production.

Third, the previous failed substitution experiences in Bolivia and Colombia (Yanoff, 2017) demonstrate that these initiatives must be implemented “from below,” collaborating with and reinforcing the base of organized peasant associations. An alternative crop or economic investment is unlikely to work if it is not accompanied by social and organizational investments, which is especially important in the context of absent states such as Colombia (Mansfield et al., 2016; Vélez & Lobo, 2019). The limited funding from the state and the federations given to the farmers in the areas studied does not allow this collaboration to be observed in the Peasant Reserve Zones visited, beyond the provision of some administrative and technical support, such as vaccines. Inertia seems to persist in financing medium and large production, which can lead to increased inequality and poverty if farmers are excluded from the markets. The Peasant Reserve Zones have Sustainable Development Plans that include economic activities; they should be the roadmap to follow, based on Law 160/1994 (Diario Oficial Colombia, 2023), which establishes the Peasant Reserve Zones as entities for planning land use.

Also related to the substitution “from below” model is the choice of the main substitution crop. If anything has been learned from comparing legal chains, it is that there is no one-size-fits-all solution, no magic-wand product. Farmers must play the leading role in choosing the product or products, always in harmony with the culture of diversification of the farming communities, which respects the land and the environment, and with the appropriate technical advice as to what might work best depending on the area and conditions. All three value chains studied show potential, and the most complicated barriers do not appear to be those of a business or entrepreneurial nature but rather those external to the business—the sociopolitical ones. In this sense, comparing and prioritizing productive initiatives from different regions is unfair since their associative, social, and productive development are not the same—Cimitarra is not Catatumbo. In other words, the initiatives must be evaluated one by one in terms of their ability to be viable from where they start, regardless of whether they are still in the pilot process or already in the scaling-up and expansion phase.

This study has sought to learn from the coca leaf value chain, explore alternative value chains, and contribute to accumulating evidence on the possibilities and limits of illicit crop substitution policies in Colombia. The success of substitution policies will largely depend on how they are carried out—from the bottom up or from the top down—and on whether they respond to challenges that go beyond business models and that are related to an endemic culture of violence, such as land and infrastructure inequalities. The state must increase its presence in the Peasant Reserve Zones because its current limited intervention only works well with forced eradication and interdiction initiatives (Felbab-Brown, 2020), an option that has for decades proven to be unsuccessful in putting an end to coca cultivation and poverty.



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## ENDNOTES

- <sup>1</sup> Anzorc, created in 2011, brings together 30 peasant organizations (see Anzorc, 2023).
- <sup>2</sup> COCCAM was created in 2017 and is a platform of peasant organizations, including Anzorc, that seeks a comprehensive solution to the problem of crops for illicit use, based on the Peace Agreement (Prensa Rural, 2023).
- <sup>3</sup> The Proinrupaz Foundation carries out studies and productive projects with rural communities. It has no website.
- <sup>4</sup> Felbab-Brown (2020) adds “interdiction” (arresting traffickers, destroying laboratories, capturing drug flows). While interdiction is applicable in conjunction with any of the other options, we have linked it with the option of eradication for simplicity purposes.
- <sup>5</sup> The Santos government admitted 130,000 families, but the Duque government reduced the number (Felbab-Brown, 2020).
- <sup>6</sup> Silvopastoral systems combine tree growing with the production of livestock.
- <sup>7</sup> The PAI is a package of resources that includes bimonthly bonuses for food for a year, food security, technical assistance, and productive projects.
- <sup>8</sup> The PDETs are planning and management instruments of the Colombian Government to prioritize sectoral plans and programs of the Comprehensive Rural Reform (RRI).
- <sup>9</sup> Primary or main activities involve the physical creation of a product or service and its sale or transfer. Support activities sustain primary activities by providing purchased inputs, technology, and human resources.
- <sup>10</sup> The *Juntas de Acción Comunal* are civic and nonprofit neighborhood organizations that meet to tackle community problems in a sector or neighborhood of a municipality in Colombia.
- <sup>11</sup> National Liberation Army (ELN) and Popular Liberation Army (EPL).
- <sup>12</sup> The Colombian Institute for Rural Development, Incoder, closed in 2016 and transferred its responsibilities to the National Land Agency and the Rural Development Agency.

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