The Power of Oil Palm:

Violence, Inequality and Alternatives in Colombia

by

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List of Acronyms

ANUC	National Association of Peasant Users
CENIPALMA	Research Center on Oil Palm
CNMH	National Center for Historical Memory
FEDEPALMA	Colombian National Federation of Oil Palm Growers
GVC	Global Value Chains
ICA	Colombian Institute for Livestock and Agriculture (national sanitary authority for agriculture and livestock)
ICPROC	Christian Institute of Peasant Promotion
INCORA	Colombian Institute for Agrarian Reform
SINTRAPROACEITES	National Union of Workers of the Vegetable Oils Crop and Processing Industry
PDP	Peace and Development Plan of Magdalena Medio
RSPO	Roundtable for Sustainable Palm Oil

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Abstract

Elaeis guineensis (oil palm) is native to the Gulf of Guinea, where humans have harvested its fruits for sustenance for millennia. In Latin America, palm oil seeds planted by enslaved Black people have provided an alternative source of sustenance and became a symbol of resistance. In contrast to these past contributions to autonomy, today the palm oil industry is known for its effects on environmental destruction and social dispossession. How did oil palm crops become such a destructive force? Who, and through which practices, can change this?

To explore these questions, I conduct a multispecies and ethnographic value chain analysis of palm oil, with a focus on Colombia — the fourth largest producer in the world. Among the top producers, Colombia is characterized by the high participation of relatively independent small-scale farmers as suppliers of oil palm fruit. The participation of these farmers in the industry reveals key relations of power that have transformed oil palm production from a subsistence activity into an extractive activity.

I argue that palm oil corporations have become powerful economic actors that produce the most consumed oil in the world by performing material transformations, rooted in colonial knowledge, to oil palm trees and using state and class violence against small-scale farmers and other farmworkers. Through these transformations and violence, palm oil corporations have produced controllable landscapes and impoverished workers that they can strategically exploit to extract palm oil on the most favorable terms for these corporations. My dissertation also finds that, despite this context, some small-scale farmers

in northeast Colombia have been able to forge alternative forms of production, building on agroecological knowledge and support from organizations at national and transnational scales.

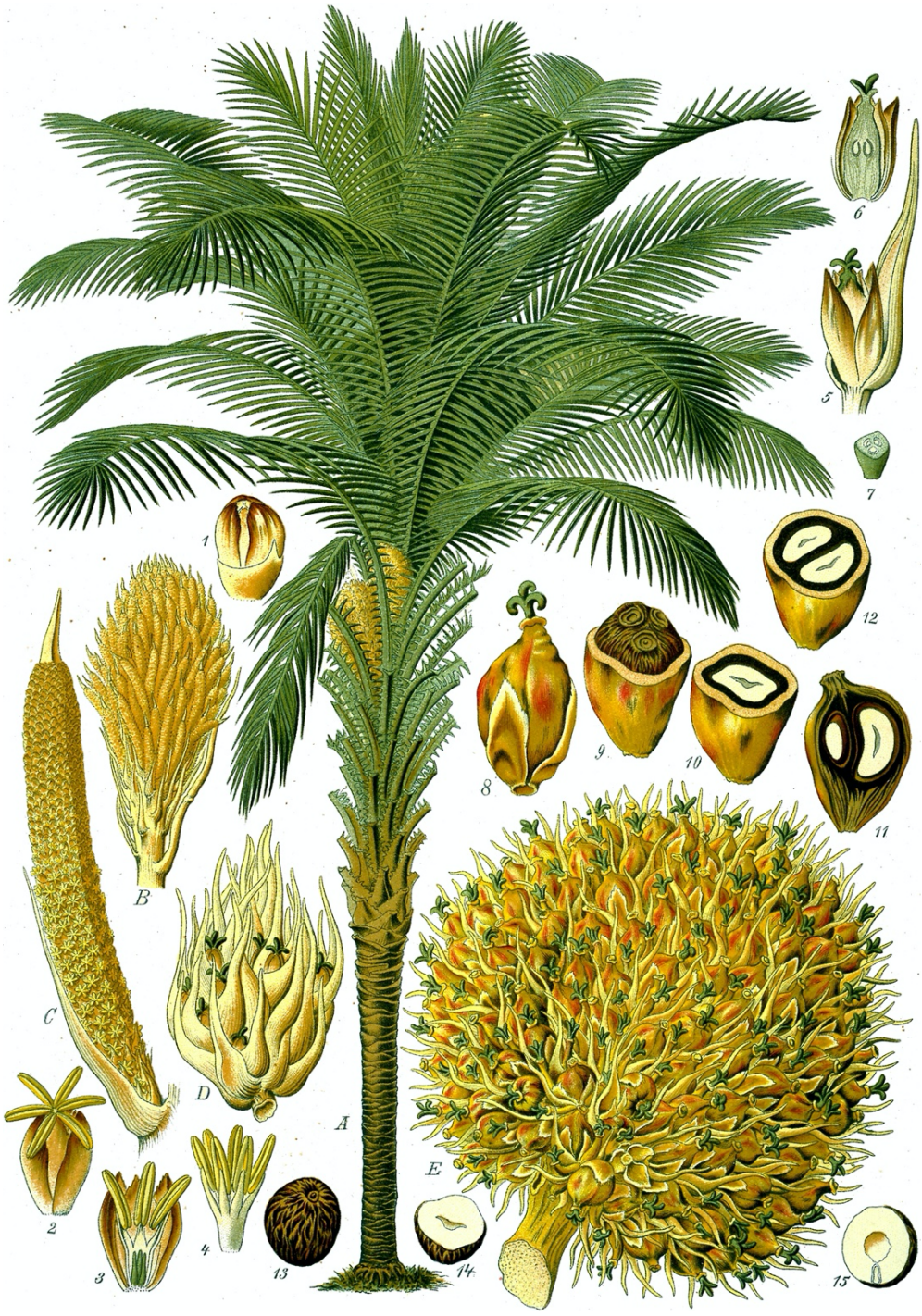
Through a dialogue between literatures on Global Value Chains (GVC), multispecies studies, and critical agrarian studies, this dissertation contributes to the sociological inquiry of how global economic relations produce local inequalities and how to forge alternative futures in food systems. It offers an alternative to the GVC literature's focus on intra-firm relations for conceptualizing forms of industrial organization, provides concrete tools for environmental sociology to study how social inequality shapes and is shaped by material transformations in ecosystems, and illustrates how the sociology of agriculture can identify possibilities of transition towards more sustainable and equitable food systems. The experiences of small-scale oil palm growers in Colombia illustrate how contemporary agriculture has become destructive for people and ecosystems around the world and provides clues about how to transform it.

Chapter One — The Multiple Trajectories of Oil Palm Crops

The denomination of oil palm as "the tree of life" by the Yoruba people in western Africa illustrates how, for more than 4,000 years, oil palm trees have provided key materials to sustain vital medicinal, culinary, spiritual, and economic activities across Africa. Its fruits can be crushed, macerated, and boiled to provide oil for cooking, burning fuel for light, and medicinal and ceremonial ointment. The shell of its kernel can also burn as fuel for fire, while the palm leaves can be used to make brooms, roofs, and mats and leave stalks are twisted to make ropes. The male flower stalk produces a refreshing drink that turns into palm wine when fermented and plays a central role in parties and ceremonies (Henderson and Osborne 2000; Watkins 2011). For millennia, this versatile tree has sustained biological and social life.

Image 1

Botanical Drawing of an Oil Palm



This drawing from 1887 identifies the different parts of the morphology an oil palm tree. A: plant's overall form, B: male inflorescence, C: single male flower, D: part of a female inflorescence, E: fruit bunch, 1-4: male flower, 5-7: female flower, 8-11: fruit, 12-15: seed. Taken from: Köhler 1887:161, available at: Wikimedia Commons 2020.

This tree of life also has a long history of supporting other species. Botanical evidence suggests that oil palm groves spread initially through nomad-human seed dispersal. These groves later formed part of agroforest and silvicultural systems across different parts of Africa. In these systems, oil palm trees are intermixed with multiple edible crops such as nut trees, yams, okra, or other semi-wild vegetation that provides food for goats, sheep, and cattle (Corley and Tinker 2016; Watkins 2011; Zeven 1972). The spatial coexistence of oil palm trees with a variety of other plants and animals builds a relatively diverse ecosystem that regenerates soil and provides habitat for multiple species beyond humans.

Among humans, these ecologically diverse agricultural — also called 'agroecological' — systems have provided tools for self-preservation and resistance by exploited groups. As Yoruba and other African peoples were enslaved and trafficked to Brazil between the 16th and 19th centuries, they used their cultural and environmental knowledge to transform failed colonial plantation projects into agroecological systems that gave continuity to African ritual and culinary practices in this "new world". Today, these agroecological oil palm groves remain in both Africa and Eastern Brazil (Watkins 2011). While the exact area these groves cover is unknown, oil palm industry leaders have calculated they occupy about 10% of the area planted with oil palm in the world (Corley and Tinker 2016; FAOSTAT 2020a; Omoti 2004)[1]. These groves provide evidence that

[1] Please note that I use both the term "palm oil industry" and the term "oil palm industry" throughout this document. The palm oil industry refers to the economic activities related to the production of palm oil. The oil palm industry refers to the portion of those activities that focus on industrial management of oil palm crops.

agroecological oil palm production that sustains human and other-than-human life is viable today (Watkins 2011). The historical trajectories that oil palm crops have followed reveal alternatives to the prevalent forms of production today.

Image 2

Oil Palm Intermixed Crop and Grove

Crop with oil palm trees intermixed with mandioc in Bahia, Brazil. The background shows a grove of oil palms and secondary Atlantic forest. Taken from: Watkins 2018:141.

Today, the overwhelming majority of oil palm follows a logic of increasing production that threatens life for humans and other species. Palm oil crops produce 75 million out of the approximately 207 million metric tons of vegetable oils produced globally every year (USDA 2019). Most of this palm oil is produced from monocrops organized in homogenous grid-like patterns that expand for about 25 million ha. 82% of these monocrops are plantations located in Southeast Asia, where conservative estimates suggest these plantations have led to the deforestation of at least 5.6 million ha, the

equivalent of the area of Brunei or the U.S. state of Iowa (Baron, Rival, and Marichal 2017; Corley and Tinker 2016; FAOSTAT 2020a; Vijay et al. 2017). At the local level, cutting down tropical rainforests and peatlands destroys the habitat of numerous now-endangered species, including orangutans and proboscis monkeys (Lustgarten 2018). At the global level, it has the potential to transform the climate on Earth. Biodiesel made from oil palm planted in previously forested land produces 129% more carbon dioxide emissions than fossil fuels and palm oil plantations on peatland produce around 0.5% of the total greenhouse gas emissions in the world each year (Cooper et al. 2020; Meijide et al. 2020). Activists denouncing abuses by the oil palm industry are often persecuted and human rights organizations have identified this industry as one of the main sources of violence towards environmental defenders (Global Witness 2020; Macintosh 2018). The palm oil industry is not only widely destructive but also persecutes those who denounce it as such. How did oil palm crops become such a destructive force?

Image 3

Oil Palm Plantation in Southeast Asia

Palm oil plantation in Indonesia, where this industry has caused the clearing of about four million hectares of forest (Vijay et al. 2017). Taken from: Sujana and CIFOR 2017.

Media coverage has identified economic and policy changes from recent decades as the main factors establishing palm oil as the most consumed vegetable oil. While the many functional parts of the oil palm tree beyond its fruit are not widely consumed today, the malleability of the oil extracted from this fruit makes this plant a valuable source of materials for a varied range goods, including packaged foods, fuels, soaps, and cosmetics. Palm oil consumption rose particularly during the final decades of the 20th century, surpassing soybean oil consumption around 2008 (FAOSTAT 2020b). One of the factors driving this demand is the increased consumption of packaged foods, and the possibility of using palm oil to replace less healthy trans fats (Goodman 2015). This oil can also be used to produce biofuels and— often ineffective — policies to reduce greenhouse emissions by promoting the use of biofuels have further boosted its use (Cooper et al. 2020; Lustgarten 2018). Finally, these demand-side factors have coincided with financial and production conditions. Corporations and financial investors are attracted to oil palm crops to diversify risks by betting on a crop with multiple uses (Borras et al. 2012). Additionally, on average, palm oil yields about twice the amount of oil per hectare as its main competitors, soy and rapeseed oils (Zimmer 2010). Over the late 20th and early 21st centuries, palm oil has emerged as a flexible and lucrative commodity that allows governments and corporations to fulfill multiple goals.

But none of the characteristics that purportedly make palm oil so special are unique to this oil. Multiple vegetable oils, such as soy and rapeseed, can also replace trans fats and are a healthier alternative than palm oil (Klonoff 2007). Cottonseed, rapeseed, and soy also have multiple uses and are commonly used as inputs for biodiesel and other products (U.S.

Energy Information Administration 2020). Furthermore, despite political promises about the environmental benefits of biofuels, recent research has revealed that even fossil fuels produce less greenhouse gas emissions than biofuels made from palm oil (Searchinger 2010). Additionally, oil palm does not naturally deliver higher yields than other vegetable oil crops; under low-input conditions this crop can be less productive than rapeseed (Corley and Tinker 2016; Stepien, Wojtkowiak, and Pietrzak-Fiecko 2017). If the conditions that supposedly make oil palm crops an intrinsically attractive and competitive source for oil are not that special, how has palm oil established itself as the most consumed vegetable oil in the world?

Making Palm Oil Cheap and Productive: Violence and Resistance

In this dissertation, I argue that the current position of palm oil corporations as powerful global economic actors that deliver the most consumed oil in the world is the result of the continued legacy of colonial material transformations to oil palm crops and the use of state and class violence against farmworkers and small-scale farmers. Through material transformations to oil palm trees, rooted in colonial knowledge and practices, and the use of violence against rural communities in places of production, palm oil corporations have produced exploitable landscapes and impoverished workers that these corporations can strategically utilize to produce palm oil on the most favorable terms for themselves. This dissertation also finds that, despite this context, some small-scale farming communities in northeast Colombia have been able to confront the economic and environmental risks posed by the palm oil industry through the mobilization of agroecological goals with support from organizations at regional, national, and

transnational scales. Small-scale oil palm growers in northeast Colombia reveal a possible path forward to confront the conditions of environmental degradation and social dispossession that the palm oil industry has created.

Returning to the question of what makes palm oil so popular today, these findings suggest that the answer is not related to a bundle of unique material characteristics. Instead, its particularities are derived from the interaction of material conditions and relations of power around oil palm crops. The characteristic of oil palm as a perennial tropical oil crop have interacted with the economic and political goals of corporations and imperial powers to capture value and control large extensions of land in tropical regions. Throughout the 20th and 21st centuries, powerful economic actors have actively turned palm oil into a competitive commodity. They have crafted the competitive character of this oil by lowering production costs and increasing productivity through the use of violence and colonial power to violently control peoples and landscapes in places of production. The perennial nature of this crop has further allowed imperial powers and corporate actors to institute the production of this commodity as a means for the long-term control and economic exploitation of those peoples and landscapes. Additionally, the tropical origins of oil palm create a distance today between industry buyers of palm oil in the Global North and producers of oil palm fruit in tropical regions. This distance obscures the violence and exploitation through which corporations and imperial powers have made oil palm a cheap commodity, making it hard for consumers to judge the validity of the sustainability claims often made by industry buyers. The success of palm oil in contemporary global markets is the result of power-driven tactics that today allow palm oil corporations to continue the

economic exploitation of distant lands that was initially made possible by colonialism and today gives continuity to colonial legacies.

Theory dialogues: Global Value Chains, Multispecies Studies, and Critical Agrarian Studies

Given that this exploitation is governed by distant relations that affect human and non-human beings, it is necessary to go beyond the human focus that characterizes sociological analyses and the farm focus that characterizes agrarian studies. I conduct a multispecies and ethnographic commodity chain analysis of palm oil, with special attention to the distributional effects this industry produces for small-scale farmers and other farmworkers — the people who do the work at the farm level. This dissertation builds a dialogue between literatures on Global Value Chains (GVC), multispecies studies, and critical agrarian studies to elucidate how global agricultural markets transform lives and landscapes in places of agricultural production today.

The GVC framework allows me to inquire about the organization of different activities in the oil palm industry and the relations of power that shape it. This inquiry involves identifying (i) the main actors involved in the production, transformation, trade, retail, and consumption of this product, (ii) the relations of power that allow some of these actors to impose labor, transaction, and policy conditions over other actors, and (iii) the social context that enables these relations of power (Bair 2009). The GVC framework involves both building a broad picture about transnational economic relations and analyzing how these relations touch down in people's lives at the local level (Collins 2003, 2005). In relation to the palm oil industry, the GVC approach provides tools to map the structure of

relations that take oil palm fruit from fields in the region of Magdalena Medio, Colombia, to households around the world. This approach also offers a guide to interpret how these relations have changed the lives of the workers who conduct the daily and exhausting work of care and harvest of the palms that bear such fruit.

Building on GVC scholarship, I analyze the social inequalities that the palm oil industry produces and benefits from, particularly around labor and livelihood opportunities for workers. I build on internal critiques — rooted in gender, labor, and agrarian studies — to the GVC framework. These critiques question the focus of the classical GVC framework on intra-firm relations and highlight the crucial role that gender and class inequalities play on firms' decisions about how to organize their activities. These decisions are not only based on the economic and knowledge conditions of firms and suppliers but also on corporations' possibilities to produce dispossession and to then exploit dispossessed workers, particularly women (Anner 2015; Bair and Werner 2011; Collins 1995). These critiques allow me to highlight the crucial role that violence and the production of social inequalities play in shaping the organization of economic production today.

Studying the varied forms of control that palm oil corporations apply over places of production also requires multispecies perspectives. These perspectives allow me to recognize other-than-human beings, such as oil palm trees, as subjects and mediators of relations of power, inequality, and resistance in agriculture. While the field of environmental sociology continues to be limited by the anthropocentrism and fears of biological-determinism that characterize sociology as a discipline, this field has opened important dialogues to consider the agency of other-than human beings to shape social relations (Bell et al. 2020; Carolan 2005b; York and Longo 2017). In particular,

environmental sociology opens possibilities of dialogue with multispecies studies. Multispecies studies take as a starting point of inquiry the intertwined ways in which beings from multiple species, including humans and trees, shape each other's lives and how power inequalities between humans shape these relations (Chao 2018; Haraway 2003; Tsing 2012). Building on multispecies perspectives, I study how powerful human groups — palm oil corporations in this case — have physically transformed palm oil trees, shifting relations of coexistence between humans and these trees to exploitation both within human groups (corporations over workers) and between humans and oil palm trees.

Finally, I build on critical agrarian studies to analyze the possibilities of persistence for small-scale farmers in this context, as well as possible pathways for transitioning towards forms of agriculture that are more environmentally sustainable and economically viable for these farmers. The critical agrarian studies literature exposes how expanding capitalist agriculture and initiatives to integrate small-scale farmers as suppliers of global markets often lead to debt and dispossession, ultimately eroding their livelihood possibilities (León Araya 2017; McMichael 2013; Ojeda et al. 2015). Such situation is particularly challenging for small-scale farmers in Colombia, who have historically experienced violent displacement, institutionalized limitations to access land titles, and organized violence against land reclamations (Bejarano 1983; Fals Borda 1982; LeGrand 2016). Despite this context, some scholars have identified examples and possibilities of small-scale farmers confronting the structural threats they face in relation to the expansion of capitalist agriculture and global markets. For example, agroecological production is characterized by diversified farming, based on local knowledge, and partially directed at subsistence and has allowed some groups of small-scale farmers to build autonomy and

resilience from the risks posed by globalized capitalist agriculture (Altieri and Toledo 2011; Córdoba Vargas, Hortúa Romero, and León Sicard 2020; Ploeg 2008). Political organizing, and the mobilization of agroecological goals at multiple scales, are also key factors to denounce and confront those risks (Gonzalez de Molina and Caporal 2013; Rosset and Martínez Torres 2016). Furthermore, critical agrarian scholars have claimed for the need to identify concrete pathways for small-scale farmers to confront and transcend the threats of expanding capitalist agriculture and global markets (Friedmann 2016). Responding to these calls, my research investigates concrete experiences and possibilities that different groups of small-scale oil palm growers face today for transitioning towards greater autonomy from palm oil corporations.

Research Design: Learning from Small-Scale Oil Palm Growers in Northeast Colombia

To inform the classical GVC framework, the question of non-human agency in environmental sociology, and the possibilities of persistence of small-scale farmers in the context of expanding capitalist agriculture, this dissertation adopts an Extended Case Method research design. This approach implies building on a specific case study with demonstrable links to a theory to inform and rebuild this theory (Burawoy 1998). I extend the case of the integration of small-scale farmers in northeast Colombia as suppliers of the palm oil industry. Through a constant dialogue between this case and the previously discussed theories in economic sociology, environmental sociology, and agrarian studies, this research contributes to a deeper sociological understanding of the past and future of small-scale farmers and farmworkers in relation to global agricultural industries. This case illuminates how violence shapes decisions of industrial organization, the role of other-than-

human beings in the production of social inequalities, and concrete pathways for small-scale farmers to confront the threats imposed by expanding capitalist agriculture.

To better understand the experiences of small-scale farmers in an industry dominated by large corporations, I trace how the workings of the oil palm industry as a transnational enterprise affect different farmers and farmworkers. This approach, known as "incorporated comparison", aims to understand any case within the historical relations that build it (McMichael 1990, 2000). Adopting this method leads me to interpret the conditions of workers, small-scale farmers, and large-scale farmers in the palm oil industry as relational and mutually conditioning parts of a singular phenomenon: the expansion of the palm oil industry in the world. This approach allows me to identify the main actors shaping the growth of the palm oil industry, as well as the role and experiences of these actors in that growth process.

I focus on the case of the Colombian palm oil industry — the fourth largest in the world — due to the high participation of relatively independent small-scale farmers in this industry. In this country, about 67% of palm oil growers are small-scale farmers with palm oil crops of 20 hectares or less (ha) (Fedepalma 2011a, 2019a). This proportion of small-scale oil palm growers in Colombia is lower to official data in Indonesia, Malaysia, and Thailand – the largest producing countries (Daemeter Consulting 2015; Fedepalma 2011a; Vermeulen and Goad 2006). However, the actual proportion of small-scale oil palm growers in Colombia becomes more than double than in Southeast Asia after filtering for

larger farms that are counted as smallholdings in official data in some countries.[2] The high proportion of small-scale oil palm growers in Colombia allows me to analyze the trajectories and experiences of small-scale farmers participating in an industry dominated by large-scale corporations.

Within Colombia, I chose to study the northeastern region of Magdalena Medio given the coexistence of small- and large-scale farmers in this region. There are approximately 2,300 small-scale palm oil growers in Magdalena Medio, who cultivate roughly 24,000 ha of oil palm and deliver its fruit to 15 nearby mills (Fedepalma 2019a). At the same time, 11 oil palm farms own 47,000 ha of land (Fedepalma 2011a, 2019a).[3] This high levels of participation of small-scale farmers in a crop usually run by large-scale corporations with access to capital deserves an examination into the political economy and ecology behind this participation.

The contrasting landscapes and the strategic location of the Magdalena Medio region have partially shaped its deeply unequal land tenure structure. The name of this region can be translated as "middle Magdalena", as it is located at about the midpoint of the Magdalena river course, which traverses Colombia from the southwest all the way to the

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[2] These farms include those that were once small landholdings and are now subsumed into plantations and larger farms of 20 to 250 ha sometimes counted as small ones in official data (Cramb and McCarthy 2016; Jelsma et al. 2017; Stokes 2017)

[3] I calculated some of the data in this paragraph based on the last oil palm census available, from 2011. I extrapolated data from 2011 to calculate the number of small-scale and large-scale farms more recently, as of 2018. To extrapolate the data, I used available information about the growth of the industry between 2011 and 2018. These calculations assumed that the number of both types, small- and large-scale farms, grew in equal proportions. My qualitative research interviewing both small- and large-scale farmers suggests that this assumption is reasonable.

Caribbean coast in the north. While in the 20th century the Magdalena River was replaced as the main transportation path in the country by roads, the highway — on the right bank of the river — now links the cities that developed along or near its course, so the eastern part of Magdalena Medio remains strategically connected to both large cities inland and the main ports on the Caribbean coast (Márquez Calle 2016). The well connected and flat lands on the right, eastern, bank of the river are highly valued and have historically been accumulated by agrarian elites; while small-scale farmers have been pushed to more marginal lands (Alonso Espinal 1992; Martin Peré 2016).

From the 1950s to the 1970s, agrarian elites displaced, likely through both violent and legal means, the early settlers who had opened the agricultural frontier on the eastern valley decades earlier. These settlers and other landless peasants then established on the more rolling and harder to access lands located about 20 km east from the river and the more peripheral left bank. Agrarian reform efforts from the 1960s to the 1980s, further solidified this unequal land tenure structure, leaving flat latifundia along the right bank in the hands of agrarian elites and distributing harder to access lands at or near market prices to landless and small-scale farmers (Alonso Espinal 1992, 1994; CNMH 2016; Martin Peré 2016).[4] This coexistence, under strikingly unequal conditions, between large- and small-scale farms in the region favored the integration of small-scale farmers in Magdalena

[4] Here, I am reproducing a common blind spot of Colombian agrarian history, manifested in placing the starting point for historical accounts at the arrival of the first white or mestizo settlers. This practice fails to recognize the existence of previous indigenous communities in Magdalena Medio and other regions. Going forward, I will look for histories of Magdalena Medio that illuminate this blind spot, as key figures in the field of Colombian agrarian history are recognizing this issue, and hopefully more work on this topic will be published over the next few years (LeGrand 2016).

Medio into the palm oil industry. While small-scale farmers in Magdalena Medio have been pushed to marginal lands, their location within about 50 kilometers from the large mills allows the companies who own the mills — and usually also own the largest oil palm plantations — to integrate these farmers as suppliers.

This research was also a self-elucidating process. I belong to a family of large-scale farmers, in a country were land accumulation follows a long and continued history of violent displacement. This social position has pushed me to reflect on my role in the multiple processes that extend and contest land accumulation and displacement. This dissertation is part of such reflection. This work is part of a sociological imagination practice linking the personal experiences of all those who, like myself and the many people I've met over the past three years of this research, are immersed in broader social relations of capital accumulation, dispossession, and expansion of global agricultural markets (Mills 2000). Putting my sociological imagination to use, I have simultaneously identified the political economy of oil palm, the biophysical conditions that support and are transformed by this political economy, and the personal experiences and possibilities of forging change of those involved in this research, including my own.

To better understand the broader set of relations in which each of us is immersed, I first trace the global value chain for palm oil. Methodologically, this practice involves mapping the main nodes in which the multiple inputs and production processes that make up the oil palm industry are developed and the spaces where the policies shaping these nodes are negotiated. This mapping exercise started in early 2018 by reading trade journals, oil palm textbooks, and media reports on palm oil, as well as consulting industry databases at the University of Wisconsin-Madison. It continued throughout my fieldwork by

attending two national congresses of the Colombian National Federation of Oil Palm Growers (Fedepalma); conducting interviews, reading trade, media, and academic publications on oil palm; and walking across multiple oil palm fields around Colombia. This GVC mapping exercise is summarized in figure one, in chapter two, and is ubiquitously present in the background of all the analyses that compose this dissertation.

I conducted a total of twelve months of multispecies ethnography from mid-2018 through 2019. This ethnographic approach aimed at building a model of interpretation for the ways different living beings act in the different contexts that form the palm oil industry (Chao 2018; Guber 2004). To build this model I conducted observations, participated in conversations, and regularly reflected on my multiple interactions in Magdalena Medio and other regions. These observations, discussions, and reflections aimed at better understanding the relations between humans and oil palm trees, focusing on the ways oil palm crops are organized in space by people, how oil palm trees and other non-human beings inhabit and transgress such organization, and how power relations among different human groups shape these forms of organization and transgression in oil palm crops (Salazar Parreñas 2018; Tsing 2015). In terms of power relations within humans, I focused on identifying the practices that build and display class distinctions, labor relations, gendered divisions of labor and access to resources, and decision-making power (Collins 2003; Ojeda *forthcoming*). These observations allowed me to better understand how power shapes decisions about labor agreements, the differential experiences of small-scale farmers in oil palm crops, and the factors that shape different trajectories for small-scale farmers in the palm oil industry.

My own identity and practice as a social scientist with mostly urban experiences — an outsider — allowed me to build conversations about apparently basic issues of the understanding different actors have about crops and the palm oil industry as a whole. These conversations and my own distance from daily life in this industry allowed me to inquire about, and contrast, the experiences and views that the diversity of people I was interacting with had around oil palm. My ethnographic practice was both illuminated and limited by the extended case method, incorporated comparison, and GVC approaches. These frameworks allowed me to search for the connections of people's daily lives with industry-wide and broader economic processes. However, my choice of frameworks also prevented me from conducting a deep and grounded exploration of the experiences of a specific person or community. I did not live with one group of oil palm growers for an extended period of time. Instead, the incorporated comparison approach led me to travel across different parts of Magdalena Medio and Colombia, and to also trace through different documents the workings of the palm oil industry as a transnational enterprise.

To conduct my observations and interviews, I traveled through different regions in southwest, central, northeast, and northern Colombia for the first two months of my research in 2018. These trips allowed me to paint a broad picture of the palm oil industry in Colombia. I then lived in Bogotá for two months at the start of 2019, where I met government officials, owners of large-scale farms, and visited the National Federation of Oil Palm Growers multiple times. From April to December 2019, I lived in Bucaramanga, a city in northeast Colombia from where I could reach different parts of Magdalena Medio through day trips. Occasionally, I spent a few days to a week in smaller cities and towns in Magdalena Medio. The itinerant nature of my fieldwork facilitated studying the

connections between beings who might be distant in space but incorporated within production and trade of palm oil.

Conducting 62 interviews with people in different roles along and around the palm oil value chain allowed me to contrast multiple accounts of the experiences of the different actors involved in the industry. Starting with people I met at the first oil palm congress I attended, as well as distant acquaintances who grow oil palm, I drew a network sample to conduct interviews. Interview participants included oil palm growers and company managers who control cropland ranging from 10 to 50,000 ha. These interviews also included farm and mill workers, workers' union leaders, agronomists, employees of regional NGOs and national and regional oil palm trade groups, as well as officials from local and national governments.

Given the nature of interview data as a testimony of what people are willing and able to share with a researcher at a particular time, I constantly contrasted, or triangulated, each interview account with information obtained through my observations, other interviews, and written documents (Guber 2004). This practice was particularly necessary for interviews with owners and managers at the large-scale companies who have led the process of integration of small-scale farmers into the industry, and with employees of the National Federation of Oil Palm Growers. Their accounts followed a tight and coherent discourse, supported by industry publications, regarding the social and environmental benefits of the palm oil industry in Colombia. However, these accounts often differed significantly from the experiences that many small-scale farmers and farmworkers narrated and from the findings of other agrarian scholars. Interviews not only allowed me to learn about people's experiences, but also about the way powerful oil palm corporations and

industry representatives have been able to shape public discourses in a way that conceals and disregards the troubled experiences of many people who conduct the work at the farm level.

Methodologically, this research is also guided by a participatory research approach, based on mutual collaboration with Sintraproaceites, the union of the workers employed by one of the largest and oldest palm oil companies in the country. As a participatory researcher, I worked with this union to build part of the research approach, using my research skills to support some of the union's goals and daily activities (Stoecker 2005). This collaboration started through the organization of a launch event for a report which focused on the historical reconstruction of the violence experienced by oil palm workers over the past six decades (see CNMH 2018). The report was developed by several oil palm workers' unions and an organization of victims of the Colombian armed conflict, in collaboration with the National Center for Historical Memory (CNMH), during the previous government administration. In 2019, the new government appointed a conflict-negationist historian to lead the center and this new director cancelled the launch event for the report. After this launch was cancelled, a group of unionized workers, activists, and academics — including myself — organized a launch event for the report at a university in Bogota in May 2019. Following that event, I built a close relationship with several members of Sintraproaceites, whose leadership broadly proposed the question that guides chapter two. I have published a media piece — in both English and Spanish — and participated in a public webinar, communicating the main empirical results of that chapter, addressing the question posed by the union leadership around how the company's current administrative practices relate to its overall anti-union behavior patterns.

This dissertation has both benefited from a close relationship with Sintraproaceites and aimed to contribute to their struggles for labor rights. For the past two years, the union welcomed me several times at their office in the town of San Alberto in Magdalena Medio. Its members agreed to be interviewed for this research, took me around oil palm fields in the region, and connected me with former colleagues who are now contract farmers. Throughout these interactions, they also asked me for support writing letters to government agencies, providing feedback to reports, and forging connections with other academics they wanted to consult. This sustained relationship has profoundly nurtured my research through continued conversations that have allowed me to be trusted with valuable information, see how labor relations in the industry have changed over these years, and find an additional layer of meaning and motivation for my work.

To build and interpret the data for my research based on the discussed ethnographic, interview, and participatory research methods, my epistemological approach is guided by a critical realist view of social and ecological relations. This view involves recognizing the material existence of the living beings and landscapes that form oil palm ecosystems and that such materiality is differently experienced by people according to their position in relations of social inequality at the local and global levels (Carolan 2005a; Escobar 1999). This critical realist approach acknowledges (i) the existence of socioenvironmental relations beyond my interpretations, (ii) multiple possible interpretations about those relations, and (iii) the possibility to judge between competing claims (Tezcan 2006). To judge between possible interpretations of the information I gathered, I contrast my interpretations of each testimony and practice with the content of those and other testimonies and observations, as well as with previous research in environmental and

economic social sciences. This epistemological approach allows me to simultaneously identify ecological transformations and analyze how they shape and are shaped by social inequalities.

Chapter Outline: Historical, Ecological, and Agrarian Threads to Transform Palm Oil

After chapter one, this dissertation is composed by three independent chapters written in journal-article format. I have done my best to edit these subsequent chapters to avoid repetition when read in combination, but my description of the context is repeated in slightly different form in each chapter. At the same time, reading this dissertation as a whole will hopefully give the reader more than the sum of its chapters. The following chapters not only individually discuss the historical, ecological, and agrarian threads of the contemporary oil palm industry. As a whole, these chapters illustrate how contemporary agriculture has become destructive for livelihoods and ecosystems around the world and provides some clues about how to transform it.

Chapter two examines why firms have incorporated small-scale farmers in a capital intensive, lucrative, and powerful global value chain. To address this question, I analyze the changing forms of labor relations in the Colombian palm oil industry. I focus on the case of one of the oldest palm oil companies in the country, which has taken a leading role in experimenting with forms of labor flexibilization in the industry. This chapter argues that the incorporation of small-scale farmers as suppliers of the palm oil industry responds to firms' possibilities of using state and class violence to produce social classes of weakly organized workers and impoverished small-scale farmers that they can then strategically exploit to produce palm oil on the most favorable terms to these corporations, while

capturing subsidies and offloading risks to marginalized communities. In the process, by outsourcing oil palm crops, these firms are concealing the violent and extractive means through which oil palm fruit is widely produced. Building on labor and gender analyses of agrarian change, this chapter offers an alternative to the GVC literature's focus on intra-firm relations for conceptualizing forms of industrial organization. Considering how relations of inequality have historically emerged in the palm oil industry is central for understanding GVCs in food and farming as it exposes the violent and contested processes that can shape the organization of agricultural production for global markets.

The third chapter asks, if monocrops are known to be inefficient and cause environmental harms, why do they remain so prevalent in contemporary agriculture? This chapter examines the pervasive use of monocrops, in relation to colonial and corporate actors' strategies for materializing their power through agriculture. Focusing on the Colombian oil palm industry, I ask, how have social hierarchies shaped the environmental transformations of oil palm crops over the past century? And how have these transformations affected inequalities between growers today? Over the past 100 years, industry actors have materially transformed the genetics and management practices of oil palm trees and crops. I find that colonial goals drove these transformations, which today are materialized in landscapes and facilitate value extraction for corporations while impoverishing small-scale farmers. In Colombia, small-scale independent farmers coexist with large-scale plantations and the recent spread of a common oil palm disease revealed the dramatically different distribution of risks between farmers with different crop sizes. In this chapter, I argue that the continued legacy of colonial material transformations creates a path dependency in the materiality of oil palm crops, which has resulted in an unequal

distribution of risks between small- and large-scale oil palm growers. Building on multispecies studies and agroecology scholarship, this chapter provides tools for the sociological study of the ways social inequality shapes and is shaped by material transformations of space and more-than-human-beings.

In chapter four, I examine the factors that have shaped different livelihood trajectories for small-scale oil palm growers in Colombia. While the livelihoods of many of these farmers have grown more precarious, compared to before they grew palm, others have more secure livelihood sources now. How has this second group of farmers been able to confront the risks posed by an environmentally damaging and capital-intensive industry? In Magdalena Medio, a story about local organizing traditions, agroecological knowledge, and national and international NGOs explains the unlikely persistence of these farmers through oil palm crops. My research suggests that the use of agroecological knowledge and practices by small-scale farming communities, together with the mobilization of agroecological goals through organizations at regional, national, and transnational scales, has helped farmers confront the economic and environmental risks posed by global agricultural industries. The experiences of small-scale oil palm growers in Magdalena Medio inform agrarian questions on the possibilities of transitioning towards strengthening peasant agriculture in a way that benefits workers and rural communities.

The final chapter discusses the contributions of this research to conceptualize and mobilize new tools for better understanding and confronting the production of inequalities in food systems. These contributions expand the GVC literature's focus on intra-firm relations for conceptualizing forms of industrial organization. They also illustrate how environmental sociology can recognize the agency of other-than-human beings without

falling into determinism. Additionally, this work reveals the potential of mobilizing agroecological goals at multiple scales to transition towards more sustainable and equitable food systems. The final chapter presents practical, and often unexplored, policy, business, and social movement tools to forge social and environmental justice through agriculture and global markets.

Chapter Two — Violence in Global Value Chain Governance: Producing Social Hierarchies and Value for Palm Oil Corporations

"A catastrophic decision for the nation" (La Hora de la Verdad 2019, my translation). With these words the host of a morning radio show described the news that Indupalma, one of the most emblematic companies in the Colombian palm oil Industry, had entered a voluntary dissolution process in November 2019. This news was a surprise for many, given the weight of Indupalma in the Colombian palm oil industry, and the current growth of this industry in the country — which is now the fourth largest producer of palm oil in the world. "Why did Indupalma dissolve?", was the radio host's ultimate concern. This chapter explores that question to reveal the role of this dissolution process in a long series of strategies used by palm oil corporations to control land and labor and make palm oil a productive and competitive commodity in global markets.

Colombia has emerged as an ideal site for the sustainable expansion of palm oil crops, in a context where many palm oil buyers have become increasingly concerned about the environmental effects of this crop in South East Asia. With a claimed rate of less than 1% deforestation and significant support to small-scale farmers once affected by an internal armed conflict, the Colombian palm oil industry has positioned itself as unique source of sustainable palm oil (Sociedad Sostenible 2020; Vijay et al. 2017). Today, 20% of palm oil produced in Colombia is labeled as sustainable, and about 67% of oil palm growers in the country are small-scale farmers (Fedepalma 2011b, 2019a). This strategy of incorporating small-scale producers as contract farmers for a global and profitable industry follows one of

the key recommendations by international institutions, such as the World Bank, to improve income sources for rural communities. At the same time, the support to marginalized small-scale farmers allows the Colombian palm oil industry to brand itself as a socially responsible actor. The stated rationale behind the promotion –by governments, private companies, and international institutions– of small-scale farmers' participation as suppliers of palm oil fruit is based on market mechanisms. Linking small-scale farmers to markets can increase income for poor farmers and allows the Colombian palm oil industry to differentiate itself from what is recognized as a damaging industry in South East Asia.

However, this market-driven rationale contrasts with a history of non-market forces, such as state and class violence against peasants and farmworkers, that has been central to the structure of the Colombian palm oil industry. Additionally, the market conditions of the industry have not changed significantly over the past 20 years, the period in which palm oil corporations have shifted from vertical integration between crops and mills to incorporating small-scale farmers as suppliers of palm oil fruit. This chapter discusses the mechanisms that have driven key decisions about the organization of the palm oil industry in Colombia, such as the incorporation of small-scale farmers as suppliers of the palm oil industry and the dissolution of Indupalma mentioned earlier. It analyses the often-overlooked relation between the market and non-market processes behind the organization of global value chains.

I argue that the organization of the palm oil value chain, including the incorporation of small-scale farmers as suppliers, goes beyond market mechanisms. It is a continuation of palm oil corporations' strategies to use state and class violence to produce social classes of weakly organized workers and impoverished small-scale farmers that they can then

strategically exploit to produce palm oil in the most favorable terms to these corporations, while capturing subsidies and offloading risks to marginalized communities. The possibilities that lead firms have for using violence to produce class differences and capturing key factors of production are central to the organization of global value chains.

As previously discussed, the characteristics of palm oil as a tropical commodity consumed all over the world, facilitate obscuring the links between violent extraction and purported sustainable consumption. The increased distance, or disintegration, between industry buyers of palm oil and the producers of oil palm fruit, allows corporations to distance themselves from the labor and human rights violations that are at the center of palm oil value chain governance. This distance, together with the use of sustainability labels, allows lead firms using palm oil as ingredient for final consumption goods to advertise themselves as contributing to environmental sustainability.

In Colombia, the country with the largest number of internally displaced people in the world and one of the most dangerous countries for unionized workers, the palm oil industry is associated with forced displacement and anti-union violence (CNMH 2018; International Trade Union Consideration 2018; Norwegian Refugee Council 2015; PNUD 2011; Rey Sabogal 2008). Furthermore, the state has played a key role in collaborating – or at the very least enabling — class violence against peasants and workers in favor of landed and corporate elites (Ballvé 2013; Fals Borda 1982; Gill 2007). This situation is particularly evident in the northeast region of Magdalena Medio, where palm oil companies reshaped land tenure conditions in the 1950s and 60s and farmworker unions were almost destroyed in the 1980s. This paper traces the history of the palm oil industry in this region and puts in historical context the incorporation of small-scale suppliers of palm oil fruit,

highlighting the continuities between different strategies that the palm oil industry has used for impoverishing field producers and undermining labor rights. I focus on the case of Indupalma, one of the oldest and historically largest companies in the business, which is also recognized as a lead firm in terms of experimenting with labor sourcing strategies in Colombia. Identifying common forms of labor relations, while also zooming into a prominent and leading case, allows me to identify broad processes of value capture in agriculture and the ways these processes have affected the life and work of specific groups of workers and farmers.

This chapter makes a contribution to the understanding of industrial organization by highlighting the central role that non-market factors, such as the use of violence to produce social differentiation, play in firms' decisions about the structure of global procurement processes. Several Global Value Chain (GVC) analyses have highlighted how contextual factors, such as policy, power, and inequality shape commodity chains (Anner 2015; Bair 2005; Bair and Werner 2011; Collins 2014). I build on this work to propose more structural transformations of the GVC framework considering how profound a role violence and the production of social inequalities play in the organization of global value chains, based on a situated study of the production of deprivations in the Colombian palm oil industry. My work also builds on agrarian studies, critical studies of natural resource conflicts, and Colombian agrarian history to highlight the prevalence of these relations beyond my specific site and industry of study (Le Billon 2001; Fajardo 2002; Li 2011). The historical lenses of the theoretical frameworks I build on also allow me to expose the incorporation of small-scale farmers into the palm oil industry as an adaptation of earlier forms of plantation violence for the neoliberal age.

The next section discusses how labor and gender analyses of agrarian change can inform the GVC framework. I then discuss the main transformations in the organization of the palm oil value chain in Colombia since the late 1950s, with particular attention to the ways farmworkers and small-scale suppliers have experienced these transformations. Next, I discuss how considering violence as central to the organization of industrial production provides a more comprehensive understanding of the transformations in the structure of the palm oil, and possibly other, industries. The conclusion discusses my contribution to better understanding the conditions of oppression experienced by, as well as the resistance of, labor in this context. Building on this chapter, chapters four and five later explore further possibilities of building more equitable production networks in the palm oil industry.

The Structure of Global Value Chains in Latin America's Agricultural Export Production

While value chain analyses are helpful to identify the connections between different actors involved in commodity chains, the most popular versions of these analyses nowadays overlook the role of violence and inequalities in molding networks of production and trade. In order to grasp the connections and contours of global economic relations it is crucial to identify the multiple forms of differentiation and control of the lives and landscapes that are central to commodity production and exchange, particularly in places of production. Studying the production of inequalities around dimensions such as land dispossession, gender, and labor control provides a key understanding of the ways resource extraction for global commodity exchange is enabled by multiple actors. This is particularly

true in Colombia, where corporations supplying global agricultural markets have inserted into, and benefited from, a decades-long armed conflict, with state support.

Studying the social relations that move commodities from production to consumption, the Global Value Chains (GVC) framework inquires how and why the multiple actors involved coordinate industrial operations in specific ways. Among other issues, GVC analyses ask, "what is produced, where, by whom" and what factors determine such organization (Collins 2003:9; Gereffi, Humphrey, and Sturgeon 2005). In an influential paper on the governance of global value chains, Gereffi, Humphrey, and Sturgeon (2005) develop a typology of different forms of power and control in the organization of value chains, which range from a vertically integrated industry where firms own all operations and build things from scratch to a completely disintegrated industry where each firm involved buys their inputs from other firms through market transactions. Tight vertical integration is exemplified by the electronics industry in the 1960s and 70s, which manufactured most components it used, while a good example of disintegration is the book industry where publishing companies, printing houses, and bookstores tend to be separate companies interacting through market transactions. An important characteristic of vertically integrated chains is buyer-driven power, or the ability of lead firms that market the product to establish prices and other trading conditions throughout the chain (Gereffi 1994). According to the classical GVC approach, outlined by Gereffi and his coauthors, the main factors determining the forms of coordination between or within firms along a value chain are the complexity of transactions, the possibilities to codify or standardize transactions, and the capacities of producers at the base of the supply chain. This proposition means that the organization of value chains depends on the characteristics of

the products and firms that compose the industry. The GVC approach has been widely used to study globalization and, particularly, the possibilities of firms, communities, and developing countries to "upgrade" or capture a greater share of value along the chain, often searching for possibilities of 'win-win' cooperation between firms and communities (Bair 2005; Gereffi 2018). Under this approach, firms are often understood as autonomous actors, disconnected from the social context in which they operate.

A subset of GVC scholars focused on labor and gender have exposed how the logic that defines the organization of industrial production goes beyond relations between firms and relates to the production of social inequalities. The possibility to access cheaper labor in places with weak enforcement of labor rights allows firms to minimize costs (Anner, Bair, and Blasi 2013; Barrientos 2013). Industries like apparel, fruit, and vegetables have profited from paying lower wages and intensifying labor requirements for women and small-scale farmers who have few choices outside those industries (Collins 1995, 2014; Freidberg 2004). At the local level, inequalities in places of production allow firms to exploit gendered or racialized bodies for capital accumulation. At the global level, these patterns of exploitation based on local differences enable capital accumulation based on distant corporate governance of local populations in places of production (Bair and Werner 2011; Dunaway 2014). To follow these patterns, GVC analyses must bring to the forefront what are often deemed "externalities" of production. These analyses must go beyond linear connections between firms and follow the broad relations, "the star of lines", in Collins' (2014:37) words, that encompass the extraction of value based on local forms of inequality. These internal critiques to GVC scholarship go beyond proposals to study the context in which firms operate (see Fine and Leopold 1993) by focusing on the fundamental role that

value chains play in producing and profiting from marginalization and inequality. To understand the organization of industrial production it is necessary to investigate the ways social hierarchies at the local level, on one hand, and localization of production for global industries, on the other, mutually shape each other.

Beyond local sites of production, the organization of value chains responds to and creates social inequalities between and within countries and regions. High value-added operations such as design, marketing, and product evaluation are often located within lead firms, often in higher income areas, while labor-intensive practices are outsourced to low income communities where cheap labor can minimize costs (Collins 2003; Gereffi et al. 2005). By tapping into existing inequalities, the organization of value chains reproduces the conditions of subalternity of already marginalized regions and groups within those regions. This production of global inequalities through unequal exchange between different nodes participating in the global flow of commodities was the focus of the world-systems commodity chain approach that influenced GVC analyses (Wallerstein and Hopkins 1986). However, in the mentioned 2005 paper by Gereffi, Humphrey, and Sturgeon, these authors explain that the GVC framework removed the world system's focus on geographic and social contexts in favor of parsimony (Gereffi et al. 2005). By doing so, this framework also removed its explanatory power for understanding global power differences (Bair 2005). To expose the relation between contemporary production of global inequalities, as encouraged by the world-systems approach, and the concrete forms of organizing industrial production, that GVC analyses explore, I build critical agrarian studies.

In agricultural value chains, power differences are continually reproduced through the control of crucial resources —such as land, labor, and state support—by lead firms.

Over the past decade, there has been growing academic interest in corporations' strategies to control land and labor to accumulate capital in the context of higher volatility of food, energy, and financial markets (Borras and Franco 2013). A key pattern are land grabs, where corporations, private investors, or sovereign wealth funds seek to gain control of large tracts of land for capital accumulation and resource extraction. These agricultural investments involve diverse approaches including controlling labor or controlling land without directly acquiring it (Borras and Franco 2013; Li 2011). Large-scale agricultural projects for capital accumulation often aim to produce for export markets and have an extractivist nature, as they rely on agricultural production without reproduction of the labor and the ecological resource base needed for carrying out such production (Li 2017; Pye 2017; Svampa 2015; Ye et al. 2020).

Grown at a large scale, the soy, oil palm, sugarcane, or corn monocrops that often compose these projects represent a continuation of many economic and social relations of colonial plantations (Taussig 2018). They afford no paths for social change as they offer fewer jobs than the types of farming they replace, and even when they do offer employment opportunities, these opportunities are based on corporate strategies to extract value by securing cheap labor (Castellanos-Navarrete, Tobar-Tomás, and López-Monzón 2019; Li 2011). The strategies for labor control can also involve relying on self-exploitation by contract farmers and outsourcing production risks to farmers (Alonso-Fradejas 2013; Li 2017). Apart from violent displacement, large capital investments in agriculture have built on everyday forms of disciplining, often as a continuation of violent strategies once the desired order has been installed by capital-intensive projects (Borras and Ross 2007; Ezquerro-Cañete 2016; Giraldo 2018; León Araya 2017; Ojeda 2016; Ojeda et al. 2015).

Displacement and control also create a "surplus population" without sustenance or employment, dependent on work opportunities offered by corporations and also dispensable to those corporations (Li 2009). Additionally, large-scale agricultural investors have access to significant support from different Latin American governments which enable the private appropriation of public infrastructure and offer other benefits to investors (Borras et al. 2012; León Araya 2017). The possibilities to access land, labor, and public support in the terms most favorable to capital accumulation in agriculture determine how and why firms decide to coordinate their operations and forms of ownership across space.

The use of state and class violence to control key resources in Latin America for export markets follows a long history of plantation agriculture, which is renewed and reinforced today through neoliberal approaches. History and anthropology studies on Latin America have documented the use of state violence and employer repression since the 19th century to control labor, expropriate land, and build social hierarchies to institute and protect plantation agriculture for export markets (Bourgois 1992; Paige 1997; Striffler 2001; Topik, Marichal, and Frank 2006). Over the past three decades, state-backed employer repression has adopted new forms of violence to support corporate restructuring around neoliberal policies of state privatization and labor flexibilization. These renewed forms of violence have enabled the expansion and relocation of production to secure cheap labor, resource control, or market access for exporting companies and transnational corporations (Anner 2015; Gill 2007; Silver 2003). Rather than being deterministically tied to the existence of natural resources, these violent conflicts emerge from the forms of governance of these resources. In particular, pursuing the centralization of extraction in favor of economic elites, the military force of the state allows for private control of local

peoples and landscapes to ensure production in places that allow access to key resources or markets (Le Billon 2001; Gill 2007; Watts 2004). Neoliberal forms of governance provide a renewed rationale for private state-backed violence that allows corporations to pay low wages, concentrate access to valued commodities, and replace state functions.

While economic violence is fueled by processes of capital accumulation and corporate restructuring that go beyond the frontiers of a single country, they become particularly evident in Colombia. In this country, different corporations have financed and benefited from a contested land-tenure structure and a decades-long armed conflict initiated by struggles over land. During the late 19th and into the mid-20th century, settlers in different parts of the country were opening agricultural frontiers, while landed elites, often with close alliances to state actors, extensively displaced earlier settlers who lacked land titles, consolidating large landholdings from newly cleared public lands and then obtaining a property title from the state (Fals Borda 1982; LeGrand 2016). Throughout the 20th century, some of the common threads of the different waves of armed conflict in the country were the struggle by landless peasants to access land and the formation of political goals to carry out those battles (Bejarano 1983; Vargas Velasquez 1989). While some laws in the 1930s and 1960s partially favored agrarian reforms, they were followed by counter reforms and political violence that allowed landed elites to consolidate large estates (Fajardo 2002; Fals Borda 1982; Zamosc 1986). Over the past two decades, companies have employed corporate social responsibility strategies as a way to address the stigma of violence in the region. Many of the companies actively fueling violence and displacement have relied on these strategies to focus on discretionary ethical commitments while avoiding legal and human rights responsibilities, often with state acquiescence (Lazala and

Romero 2017). Colombia's productive structure builds on a distinctly visible history of violent appropriation of land in favor of agricultural elites and corporations.

Scholarship on Colombian agrarian history also highlights how the region of Magdalena Medio follows a history of continual displacement, anti-union violence, and contestation over land. The deep-rooted conflicts over land in these and other regions, now fueled by drug trafficking, became a deadly battle between guerilla groups with peasant agrarian roots and landowner-backed paramilitary groups (Alonso Espinal 1992; Gutiérrez-Sanín and Vargas 2017; Molano 2000; Vargas Velasquez 1989). Different companies, especially in mining and export agriculture, have actively participated in the conflict, many providing payments to armed groups and benefiting from those groups' actions (Grajales 2011; Lazala and Romero 2017). Farmworkers, many coming from families of displaced peasants, formed unions and made important gains for labor rights in the 1970s, only to then become the target of paramilitary groups who pushed the narrative that they were guerilla collaborators. This new wave of conflict materialized as further peasant displacement and violent extermination of agrarian unions, as well as further land accumulation for the expansion of large-scale agricultural industries (Centro Nacional de Memoria Histórica 2018; CNMH 2015, Moreno Sarmiento and Zamora Aviles 2012; Rey Sabogal 2008; Thomson 2011). In this context of widespread violent displacement, the Colombian government passed legislation enabling land reclamations for violently displaced people, but only to those displaced after 1985 (Congreso de la República 2011). Historical conflicts over land have produced a long-standing and multilayered violence that current laws have failed to address.

Violence in the Colombian Palm Oil Industry: Capturing Land, Labor, and State Support

By historically analyzing land, labor, and government relations in the palm oil industry, it is possible to identify that the integration of small-scale farmers and farmworkers as suppliers is the most recent iteration of a long series of strategies to control key resources in the most favorable ways to this industry. Palm oil is a standardized globally traded commodity that occupies an important role in national economies and politics in producing countries. World production of palm oil has multiplied by six over the past 30 years (Corley and Tinker 2016; USDA 2020). The largest producers are Indonesia, Malaysia, Thailand, Colombia, and Nigeria (Corley and Tinker 2016). In those countries, palm oil exports represent an important export revenue and, as a result, the palm oil industry holds a significant role in terms of taxes and national politics. While Colombia only represents 2% of world production (with Malaysia and Indonesia together supplying more than 85% of the market), the industry in this country has expanded to almost 600.000 hectares and represents 11% of agricultural exports (Corley and Tinker 2016; DANE 2020; Fedepalma 2019a). This position, in addition to other direct connections with government actors, has allowed the palm oil industry in Colombia and other countries to shape legislation, access key state resources, and invest in public opinion campaigns to seek further support.

The seeds of the current palm oil industry in Colombia were, symbolically and literally, planted by the company Indupalma, founded in the northeastern region of Magdalena Medio in 1961. The meteorological and geographical conditions of Magdalena Medio make it an ideal site for a crop that grows best between 15 degrees north and south

from the equator, in elevations under 300 meters above sea level, and requires 1800 mm of water per year (Corley and Tinker 2016). Indupalma's investors, who already owned an edible oils company, started preparing the terrain in the late 1950s. Indupalma has been one of the largest and emblematic palm oil companies in Colombia throughout its history.

This company has not only shaped lives and landscapes in Magdalena Medio but has also been a template firm in terms of labor relations in the country. For instance, Indupalma was one of the first companies in the industry to create fake cooperatives, which were actually third-party contractors disguised as coops, to avoid employer obligations. Before this strategy was rendered illegal, it became a widespread practice in the palm oil industry during the decades of the 1990s and 2000s (Alvarez Roa, Fuerte Posada, and Suescún Barón 2017). Additionally, the pathbreaking experience of Indupalma integrating small-scale farmers and farmworkers as suppliers was cited by the then Colombian president as one of the main reasons to appoint the CEO of Indupalma as minister of agriculture in 2013 (Presidencia de la Republica de Colombia 2013). The company is also known for its involvement in violent labor control. In 2018, the National Center for Historical Memory published a report about anti-union violence in the palm oil industry, where the case of Sintraproaceites, Indupalma's workers' union, was one of three emblematic cases analyzed. The fact that Indupalma is an emblematic case for both its violent and innovative labor relations illustrates that violence is not a peripheral practice in the palm oil industry. It is central to the operation of a leading firm in this sector. In the following pages, the history of the Colombian palm oil industry and its illustration through the case of Indupalma reveals the integration of small-scale farmers into the industry as a strategy, enabled by the use of violence, to control land, labor, and state resources.

Late 1950s to late 1970s: accumulation by dispossession and precarious labor relations

Palm oil pioneers in Colombia had close ties with state actors, which were crucial to the power and expansion of this industry. Early palm oil producers were prominent industrialists and agricultural elites with close ties to the government. The industry was initially promoted by the Institute for Cotton Promotion, a federation of cotton growers highly supported by the Colombian government (Presidencia de la Republica de Colombia 1956; Vargas Tovar 2002). In the case of Indupalma, the prominence of the company in national politics is illustrated by the fact that the Colombian president at the time personally attended the inauguration of the company's mill in 1964 and Indupalma appointed a former minister of agriculture as CEO in the 1970s. According to Colombian agrarian history, these type of connections and the economic elite status of palm oil pioneers were crucial to obtain titles for public lands and to get state acquiescence for land dispossession and accumulation strategies (Fals Borda 1982; LeGrand 2016). These conditions enabled displacement and arbitrary labor control.

The first palm oil companies, of those that stand today, started accumulating land in the late 1950s. These companies were formed by large landholders with investments in cotton and other crops as well as businesspeople with no previous experience in agriculture. Oil palm grew from an almost non-existent crop in the late 1950s to 7.000 hectares in 1962, and 23.000 in 1974 (Vargas Tovar 2002). This expansion occurred mainly in Magdalena Medio, where Indupalma had accumulated more than 4,000 ha by 1966 and other companies were also expanding (Celio 2000). Before this expansion started, most of the land in Magdalena Medio was public lands, some of it settled by farmers with no land

titles. Workers' testimonies gathered in different books and interviews describe the lands that the company eventually occupied as composed of primary jungle, as well as mixed crops and cattle fields of earlier settlers (CNMH 2016, 2018, Interviews, San Alberto and Bucaramanga, April-September 2019). Indupalma informally bought from or threatened each of these earlier settlers and additionally settled on newly opened lands. The 1950s and 60s were a period of high displacement of small-scale farmers by landholding elites in Magdalena Medio (Alonso Espinal 1992; CNMH 2016). The conflicts that emerged between Indupalma and communities of early settlers continue today. For example, displaced communities frequently occupy the company's plots to graze their cattle, while security personnel from Indupalma retain their cattle (Marin-Burgos 2017). In their early years, palm oil companies were not only planting the seeds for this crop, but also for conflict for displaced communities in the region.

In these early years of the industry, the activities of Indupalma and other pioneer palm oil companies were vertically integrated between crops and mills, requiring significant labor to plant, harvest, and process thousands of hectares of oil palm. While the 1950s saw advances in terms of formal labor rights in Colombia, at that time the Magdalena Medio region was a hinterland with low state presence and no formal local authority jurisdiction (Avella 2010; CNMH 2016). From the late 1950s to 1977, the main labor hiring mechanism in Indupalma was through external contractors, whom the company paid to subcontract workers. Workers received a daily or a piece rate, which after arbitrary discounts for food and shelter, often meant getting no pay (Centro Nacional de Memoria Histórica 2018, Interviews, multiple municipalities, April 2019). Workers were migrants from other areas where the agricultural frontier was closing, as well as previous settlers in

Magdalena Medio from whom the company bought the land, "gave them work for a few days and then fired them claiming that no, at their age they weren't productive anymore" (former worker testimony, cited in: CNMH 2018:36, my translation). Apart from displacement, arbitrary firings, and wage theft, workers at the time faced unsafe working conditions, with no equipment or medical assistance, in a crop that involves handling heavy and spiny fruit bunches that fall from high altitudes, and walking through scrubland (CNMH 2018).

In response to these conditions, workers started organizing a union in 1963 with support of other local and agrarian unions, but they were systematically persecuted, as the company fired workers, accused them of being guerilla members, and eventually demolished the union headquarters in 1971. Union board members were jailed for five years, accused of a crime they were later absolved from (CNMH 2018). With more than 1,000 people working for Indupalma, most with indirect informal contracts, unionization was a high stakes matter for both the company and workers. Beyond Indupalma, other palm oil companies used a diversity of approaches to avoid unionization, including firing workers and selling a firm when the union was forming to start a new one (CNMH 2018; Interview, San Vicente de Chucurí, June 2019). The first decades of the palm oil industry in Magdalena Medio were a constant and obstructed struggle for labor rights.

Late 1970s to mid 1980s: strengthening of labor unions and the palm oil industry

During this period, the palm oil industry worked to further strengthen its influence on national politics. For example, after the national government lowered taxes on oil imports to 1% in 1979, the National Federation of Palm Oil Growers lobbied to implement

benefits for the industry and increase import barriers. In 1981, the government raised import taxes for all oils to 40% and mandated a minimum price for all oils and fats in the national markets. By then, most seasonal oil crops, like soy and peanuts, had disappeared as growers rapidly responded to the 1979 crisis by shifting to other crops. Palm was established as the main source for oil in the country. Reacting to the results of their lobbying efforts and overall favorable conditions, the then federation's board vice-president, declares "I couldn't believe it! Could so much beauty be a dream? But it was a reality and it gave way to the 80s decade, also known as *the golden years of palm* in Colombia" (Vargas Tovar 2002:92, my translation, emphasis in the original).

The palm oil industry was growing. By 1978, palm oil crops in Colombia extended for 33,300 ha. Indupalma was the largest company in the country and had one of the few mills. Other companies were building their own mills and importing new palm oil extraction technologies (Vargas Tovar 2002). Some of these companies started implementing a dual sourcing strategy. While Indupalma continued to be vertically integrated, processing oil from its own crops, other companies in Magdalena Medio started sourcing from third party suppliers to complement their own production and fill their mill processing capacity (Interview, Bucaramanga, July 2018). This strategy coincided with increased labor organizing and unionization efforts, so it allowed companies to avoid hiring more labor that could fuel these efforts.

In the late 1970s, there were structural changes in terms of possibilities to organize for labor rights. In a context of widespread popular discontent due to rising living costs and stagnant wages produced by government free market policies, in 1977 trade unions organized the largest strike in Colombian history. Characteristics like the size and regional

spread of the strike, as well as the diversity of groups participating, hindered the governments' possibilities to violently suppress this action and momentarily created a more favorable atmosphere for labor organizing (Archila 2016; García 2017). Following the strike, industrial salaries increased 16% and the government issued a decree protecting the right to union organizing (Toro 2016). For palm oil workers, the strike and subsequent activities meant a surge in labor organizing. Many employers were forced to recognize labor unions, while other palm oil investors continued implementing union avoidance strategies, such as selling a company to start a new one or shifting their expansion strategy to third party suppliers rather than company-owned crops (Centro Nacional de Memoria Histórica 2018; Interviews, Bucaramanga, July 2018; San Vicente de Chucurí, June 2019). As a result of union organizing, Indupalma agreed to hire more than 1,000 workers who, until then, worked as subcontractors. Additionally, the company formally recognized the union and over the next decade secured benefits for workers in terms of access to credit for housing and health insurance. The union of Indupalma's workers also became an important actor in local politics as it pressed the local government for housing policies and some of its members were even elected for council and major positions (Interviews, Girón, April 2019; Rionegro, April 2019). By the mid 1980s, the union of Indupalma's workers started joining a trade union of palm oil workers, Sintraproaceites, which represents workers of this company until today (CNMH 2018). The late 1970s and early 80s were a time of material gains, industry-wide organization, and labor stability for palm oil workers.

Lates 1980s-late 1990s: Violent response to labor organizing and fragile union persistence

(Note to the reader: please be aware that this sub-section contains explicit discussions of violence)

The late 1980s to the late 1990s was a time of violence and loss of previously gained rights for organized labor. The government and private companies supported paramilitary groups to suppress labor organizing in a more decentralized way that was hard to trace in a context of rising overall armed conflict in the country. This conflict was fueled by the conjunction of political struggles and drug trafficking (García 2017; Reyes Posada and Bejarano 1988). According to available data, 1,714 unionized workers were killed between 1988 and 1999. Ninety one of them were palm oil workers (Archila et al. 2012). As Archila et al. discuss, this peak period of violence following labor gains in the palm oil industry reveals "the reiterative vicious circle observed in other labor sectors: collective actions in pursuit of gaining minimum working conditions, aimed at overcoming 'primitive' [labor] relations, almost immediately provoke violence from the opposite party, in this case in a somewhat lagged manner" (Archila et al. 2012:274–77). After other union avoidance strategies by palm oil companies in the previous period (like selling companies with unions to start a new company or expanding palm oil production through fruit produced by suppliers rather than company crops) did not stop labor struggles, this period saw a turn to violence against workers. In the case of Indupalma, more than 60[5] unionized

[5] Please note that the source for this figure is different from the source of the previous figures mentioned in this paragraph. The figures for the total number of murders of unionized workers and palm oil workers come from the reconstruction of national data by the research center CINEP, based on media coverage of murders and data from multiple human rights organizations. This data is likely underestimated (Archila et al. 2012). The figure for members of Indupalma's union who were killed or went missing is based on a

workers, including 5 union presidents, were killed, or are still missing, and hundreds were violently displaced (CNMH 2018). While this was a time of generalized violence throughout Magdalena Medio, paramilitary violence was especially targeted at unionized workers of Indupalma, with support from people employed by the company. Different reports and judicial testimonies reveal that "the main palm oil company that employed workers who were murdered, missing, or victims of other violations, was Industrial Agraria la Palma (Indupalma S.A.)" (UNDP 2011:129) and Indupalma's representatives collaborated with paramilitaries during this time (Juzgado 56 Penal del Circuito 2011). Violent repression was a response to labor gains and Indupalma's workers were key targets of this response.

While historical reconstructions and statistical analyses of violence against palm oil workers have concluded that violence was systematic and a response to workers' organizing efforts (Archila et al. 2012; PNUD 2011), at the time the deep conflict between countersubversive paramilitary and guerilla groups enabled companies to conceal anti-union violence as part of the more general violent conflict that affected palm oil regions. In fact, Indupalma repetitively accuse unionized workers of inciting the conflict. Workers recall being constantly accused of being part of guerilla groups and the company pushed this narrative in national media (CNMH 2018; Semana 2000). By labelling workers as guerrilla collaborators, the company was able to define them as active parties, rather than victims, of the conflict.

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reconstruction by the National Center for Historical Memory going through union records and other sources that enabled this work to estimate a more accurate figure (CNMH 2018).

Attacks against organized labor were a systematic state-backed strategy enabling extractivism. Indupalma's claims about unionized workers being guerilla collaborators were in line with State approaches to organized labor. As a document released by the Colombian Commission of Jurists explains, "social and opposition movements, and particularly unions, were considered by the official [State] Armed Forces doctrine as 'internal enemies' and union activities as the spearhead of 'the subversive' [guerillas]" (Gallón, Rodríguez, and Abonía 2013:27). Being a union member was effectively criminalized by the State. For Indupalma's workers, state acquiescence to violence against them was obvious in their everyday life. They could see the military base that is surrounded by the company's plantation and also experienced how the existence of the base did not stop workers' murders that also occurred within the plantation. Multiple testimonies illustrate how the soldiers from this base routinely searched workers' dormitories and accused them of being guerilla collaborators (CNMH 2018). The Colombian State has also enabled alliances between companies in oil palm, banana, mining, and other extractive sectors to finance and launder money for paramilitary groups and persecute unions (Ballvé 2013; Grajales 2011; Lazala and Romero 2017). State-corporate alliances in palm oil and other extractive industries in Colombia have subjected workers to State-backed military and paramilitary violent forms of discipline.

In this context of employer repression, Indupalma and other established palm oil companies in Magdalena Medio forced their unions to renegotiate labor agreements, arguing financial hardship after losing part of their domestic market share to imports facilitated by neoliberal reforms favoring free trade (CNMH 2018). At the same time, the violence exercised against labor forced worker assent. During the negotiations, the houses

of three union leaders were burned, several members were killed and went missing, and paramilitaries attacked the union headquarters. Part of the union leadership fled town fearing for their lives (Interviews, various municipalities, April-September 2019). Under these circumstances the union accepted the company's conditions for a new labor agreement. As a result of this agreement, more than 200 workers were fired and the company implemented a new hiring system, through so called 'associated worker coops', which were third party contractors supposedly owned by workers. These contractors performed key duties for the company, were paid by results, and had to pay for their own tools, transport, and State-mandated social security contributions. These strategies allowed palm oil companies to reduce costs in an expanding industry that had more than 14,000 ha in Magdalena Medio by 1988 and over 20,000 by the end of the 1990s (Forero Rueda 2020; Vargas Tovar 2002). Shifting from direct labor to third party contractors also weakened unions. By the early 2000s, the local chapter of Sintraproaceites, the union which groups Indupalma's workers, had only 170 members, down from more than 1,000 in the 1980s (CNMH 2018). Indupalma, on its part, had recovered to be a profitable and stable company again.

Besides producing a new hierarchy between direct and contracted workers, palm oil companies deepened and benefited from gender inequalities through indirect employment arrangements. Plantation field work is mostly available for men. Contractors, who are paid by piece rate, often take their wives, daughters, and sisters to collect from the ground the pieces of fruit that fall from the bunches men are harvesting. As Ojeda narrates, in plantations women "go in groups walking behind the men and picking up the fruit (…). They have no protection, usually wearing flip-flops, unlike men who get high rubber boots

as part of their personnel provision" (Ojeda *forthcoming: 22*). These women, called 'peperas', experience harsher working conditions and are paid at their male relatives' discretion (Ojeda *forthcoming*). Despite changing conditions for men's formal employment in palm oil plantations throughout the history of this industry, the conditions for many women in palm oil fields continue the patterns of the first period: piece work, arbitrary payments, and no working equipment. At the same time, informal women workers conduct the crucial job of collecting even the very last pieces of oil palm fruit on the ground, while getting little or no pay. Through the flexibilization of labor conditions for men, the palm oil industry has produced and benefited from the precaritization of gendered labor.

The late 1980s to late 1990s, also saw a sharp rise in violent dispossession for palm oil crops. While violent displacement for land concentration has been a constant dynamic for land accumulation in Colombia, more than one million people were violently displaced between 1995 and 1999, marking the beginning of the peak period of this phenomenon in Colombian history (Rojas and Hurtado 2015). The Magdalena Medio region was one of the main sites of expulsion (CINEP 1996; Fajardo 2002). Indupalma and other large-scale companies in the region were already settled by this time, but many of their suppliers and other entrepreneurial palm oil projects were expanding. Additionally, new investors, some of them with links to State-supported narco-paramilitary groups, were opening new lands for further oil palm developments through violent displacement (Ballvé 2019; Grajales 2011). The displacement strategies under which palm oil companies had accumulated thousands of hectares in earlier decades continued as this crop expanded geographically and in terms of the amount of palm oil fruit supplied for mills.

The State agenda supported the economic recovery of the palm oil industry and the continued violent control of land and labor by companies in this sector. Land dispossession through paramilitary groups in favor of palm oil growers was largely supported by the army and enabled by the State. In 1994, the government "allowed the use of assault weapons by security firms operating in rural areas, and the training of their members by the military" (Grajales 2011:778). Many of these security firms were composed of members of previously illegal paramilitary groups, blurring the distinction between army, private security, and paramilitaries (Grajales 2011). Additionally, the government and the legislature passed different reforms that prohibited granting land to land squatters, effectively ending the possibilities of marginal land reform efforts of the previous three decades. Several laws enabled flexibilization of labor and minimized the role of the state in social security (Guevara 2003). Neoliberal reforms not only involved a privatization of land and state security, but also favored the control of cheap labor by agrarian capital.

Late 1990s-late 2010s: labor flexibilization and weakened unions

In the context of weakened palm oil workers' unions, many large palm oil companies shifted their expanded procurement strategy to the incorporation of small-scale farmers. These companies, including Indupalma, increasingly relied on a dual procurement system. Following this strategy, palm oil companies continued sourcing oil palm fruit from their own crops and expanding those crops into new frontier lands, while they also encouraged oil palm crop expansion in previously colonized areas through third party suppliers, particularly small-scale farmers. The incorporation of small-scale farmers follows two main formats. Some companies and NGOs encourage small-scale farmers to

plant palm on their own land, while other companies invite groups of farmworkers to buy land, either from the company's plantation or from a third party, to set up their own crop based on projects designed by the company. Additionally, many of these programs to incorporate small-scale farmers and farmworkers as suppliers of the palm oil industry have received subsidies from the government and foreign aid (Alvarez Roa et al. 2017). In addition to capturing subsidies, these approaches allow palm oil companies to avoid unionization. As former managerial employee at Indupalma explained,

> When you have a large extension of palm, you need people for maintenance work, to harvest, to fertilize, right? That's how things worked before the 90s, and that's how unions and collective bargaining agreements started. So, what was the analysis that palm oil businesspeople made? 'Our problem is getting the fruit (…). If I have my own crop, I can earn a few [profit] points more, but I have a whole labor problem, disease problem, a big problem if the crop is damaged and that kind of stuff'. So, what did they say? 'no, what we need is fruit, we don't need the crop'. (Interview, Bucaramanga, November 2019, my translation)

Outsourcing crops to procure fruit from third parties delivered at mills allows palm oil companies to capture profits while avoiding labor responsibilities and offloading risks. After oil palm labor unions were weakened and almost annihilated in the previous period, palm oil companies like Indupalma continued shifting from direct employment contracts to a variety of hiring mechanisms. By 2013, there were 1,779 indirect and 536 direct workers in Indupalma (Alvarez Roa et al. 2017; Indupalma 2014). From the crops that the company was overseeing in Magdalena Medio that year, 7,088 ha were contract farming crops, and 10,576 ha were company owned crops (Indupalma 2014). The company had shifted from a direct ownership model to heavily relying on indirect work and contract farmers.

Additionally, the palm oil industry has received significant public support and subsidies for the incorporation of small-scale farmers and farmworkers as suppliers. The

palm oil industry has secured this support through public policies directly designed and promoted by members of this same industry. In 1998, Carlos Murgas, the owner of one of the largest palm oil companies in the country, was appointed minister of agriculture. During his tenure, Murgas instituted a policy to promote and subsidize 'Productive Alliances', the policy of integration of small-scale farmers into the industry led by palm oil companies (Rutas del Conflicto n.d.). In 2013, Indupalma's CEO, Ruben Darío Lizarralde, left the company to become Minister of Agriculture. During his tenure, the ministry expanded Productive Alliances and applied this model beyond the oil palm sector (Contexto Ganadero 2013). While he is no longer the minister of agriculture, and the government he was part of is no longer in power, Productive Alliances are supported by the ministry in palm, rubber, and many other sectors. Through this and other policies, the palm oil industry received USD $473 million from the government between 2010 and 2015 through direct transfers, credits, and subsidized interest rates, well above the support received by any other agricultural sector in the country (Alvarez Roa et al. 2017). Given the buyer driven power in the relation between mills and small-scale farmers, palm oil mills can capture the benefits of these subsidies. Additionally, the palm oil industry has received state support to secure demand for their product in national markets, via a mandated minimum content of biofuels in diesel fuel. Biofuels use at least 27% of the palm oil produced in the country. This policy, together with import tariffs inflate palm oil prices in the country, which in 2018 were 2% higher than in international markets (Fedepalma 2019a). As governments have changed over the past two decades, their support to the production and demand of palm oil, as designed by members of this industry, have become a State policy.

Indupalma has promoted at least five Productive Alliance projects, that together provide palm oil fruit from 5,600 ha of crops (Indupalma 2016, 2017). Apart from securing inputs without incurring in labor responsibilities through these projects, Indupalma has widely advertised this strategy as an example of corporate social responsibility favoring small-scale farmers. In the most common form of integration by this company, Indupalma identified lands suitable for the expansion of palm oil crops and designed each project in the following way: the company selected a portion of its workers, terminated their contracts, had workers form a company together, did the necessary paperwork for this new company to obtain a loan, and initially controlled the operation. For the first 15 years, Indupalma was the logistical operator of at least one of these projects, named El Palmar, and Indupalma's CEO simultaneously was CEO of this project. Indupalma's expansion strategy included the goal of managing 55.000 hectares of its own and third-party crops, while also processing the fruit produced in this vast area. The company made several investments to reach this goal, including building new mills (Interview, San Alberto, November 2019; Indupalma 2011, 2017). From about 2000 to 2014, Indupalma was highly invested in expanding their area of control and the transformation of workers into contractors was a central part of this strategy.

Around 2016, the company started claiming financial hardship due to high labor costs and its strategy shifted to disinvestment. Union leaders explain that Indupalma split some of the new investments into separate companies, but the debts remained charged to Indupalma (Interviews, San Alberto, July 2019). The company leadership and many public figures have continually blamed the union, and the now diminished labor benefits it had secured, for this financial situation (La Hora de la Verdad 2019). At the same time, the

union has denounced the strategy of claiming financial hardship as a way to debilitate and formally (but not actually) dissolve the company and as a final administrative move get rid of the union. Violent attacks on unionized workers diminished, possibly due to their now weakened position, but discursively and administratively Indupalma kept attacking the union. With a diminished labor movement, during the first two decades of the twenty-first century Indupalma was able to expand its area of influence for land control while experimenting with different labor and corporate arrangements.

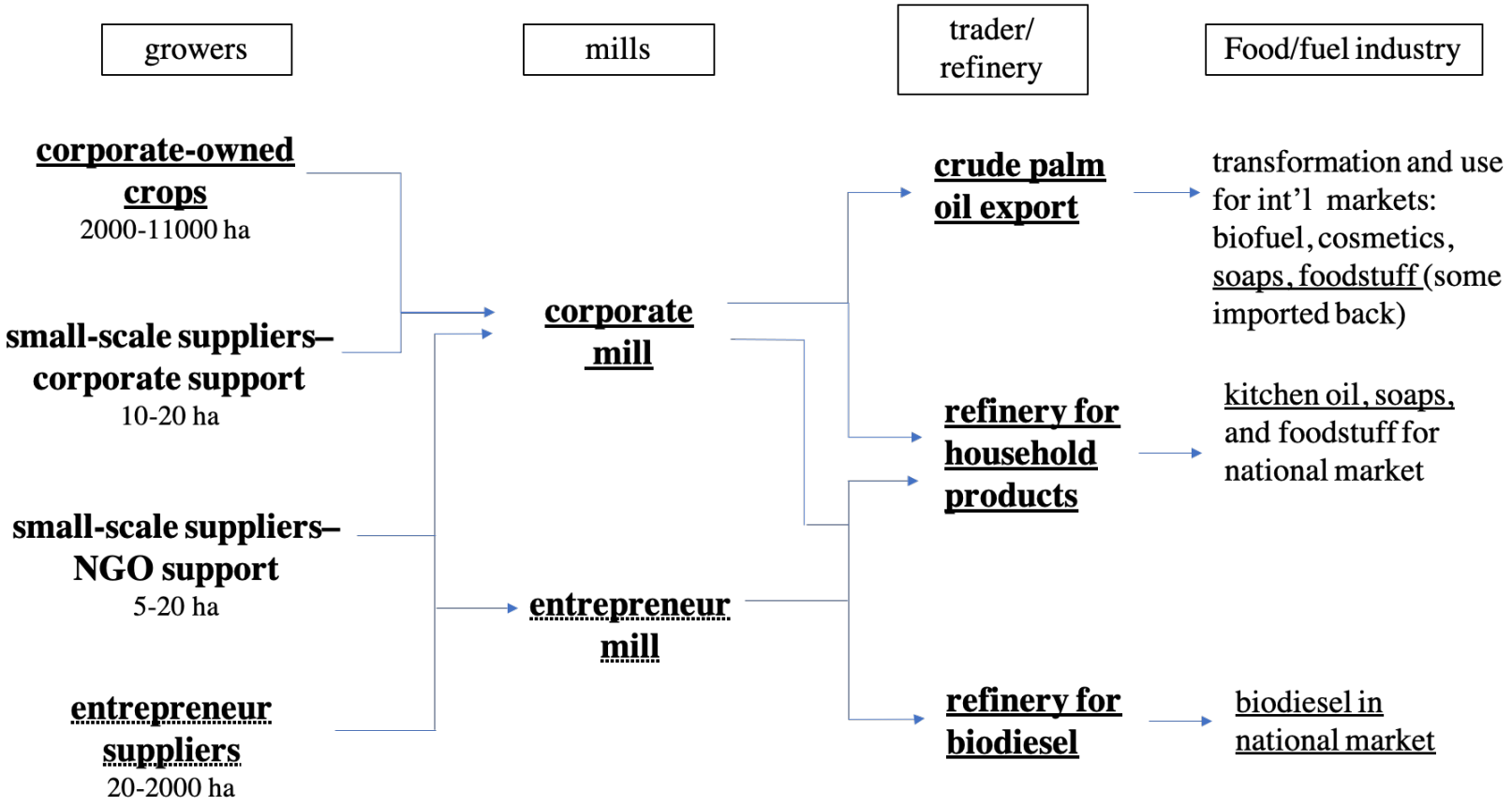
The palm oil Industry today: 'Destroy the company to save it' and trembling labor endurance

In late 2019, Indupalma announced its voluntary dissolution. This subsection maps the current state of the palm oil industry before returning to the circumstances that workers and suppliers are facing today as a result of the company's dissolution. The current situation is the result of the decades-long process to control key resources, as described in the previous parts of this section.

With the integration of small-scale farmers and entrepreneur suppliers over the past twenty years, the palm oil industry has changed its former structure of mostly tight vertical integration between mills and oil palm crops. Many palm oil companies in Colombia continue following a dual sourcing strategy, in which a portion of their palm fruit comes from their own crops and another portion from third parties. At the same time, mills have maintained, and in some cases increased, ownership of downstream activities such as production of biofuels, soaps, and kitchen oil. The diagram in the next page maps the structure of the palm oil industry in Colombia today. The industry is

composed of four main types of actors: growers of oil palm fruit, mills that extract crude palm oil from the fruit, palm oil refineries, and industries that use refined palm oil for different products. In the diagram, a type of underline (dotted and straight) marks a series of activities in which companies or corporate groups are vertically integrated.

Figure 1 — Structure of The Palm Oil Value Chain in Colombia Today



I Identified four types of growers through ethnographic observations that included growers' accounts about their own identities and relations with the industry: the companies that produce the palm oil, small-scale farmers supported by these companies to start oil palm crops, independent small-scale farmers supported by NGOs, and independent entrepreneurs.[6] Corporations only send fresh fruit from their crops to their own mills, and the small-scale farmers supported by these companies are under contract to sell the fruit to these mills. However, due to breach of contract conditions on both or either part, some of these farmers eventually sell part of their fruit to other mills. Most mills are owned by palm oil corporations, although some entrepreneurs have recently started independent mills to process oil palm fruit from their crop or as a standalone business. Mills can sell the crude palm oil to export companies or refineries that turn it into usable inputs for specific industries, such as fuels or household products. The final industrial users of this oil are in diverse businesses and locations, as palm oil is an input for biofuels, cosmetics, packaged foods, and soaps and detergents produced all over the world. Fifty two percent of the palm oil produced in Colombia is exported as crude oil, 27% is used for biofuels in the country, and 21% is used domestically for kitchen oils, foods, and other uses (Fedepalma 2019a). As the straight underline in the diagram shows, some companies and corporate groups are highly vertically integrated throughout the whole chain.

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[6] Entrepreneur suppliers are often professionals or small-business owners who work outside the farm and invest on 20 to 2000 (usually around 50) ha of oil palm crops as a side business, but their company is not an incorporated company. In figure 1, the crop sizes below each type of grower are typical values based on my observations and interviews, but some exceptional cases may not fit these values. These crop sizes differ from the values mentioned in the next chapter, as here I am characterizing growers according to their integration with mills and whether their business is an incorporated company (corporations) or an individual or family business (small-scale farmers and entrepreneur farmers). In the next chapter I characterize growers according to their farm size and access to capital.

In the case of Indupalma, this company is part of a corporate group that has complex and changing forms of organization behind an apparently disintegrated but, in reality, hierarchically organized value chain. This group is involved in activities going from crop to kitchen counter, passing through shipping boats and trading ports. Indupalma itself owns more than 10,000 ha of oil palm crops. Through contract farming, it controls 7,088 additional hectares and also buys from independent suppliers. The corporate group also owns palm oil mills and refineries, as well as factories and brands of edible oils, animal feed, and soaps and detergents (Indupalma 2017; Revista Dinero 2015). Another of the subsidiaries of Indupalma's corporate group is the second largest palm oil broker in Colombia, which exports about 220,0000 tons, 14% of the palm oil produced in the country (Cedetrabajo 2020; Fedepalma 2019a). Palm oil produced by Indupalma and other companies exported by this broker is certified by the Roundtable for Sustainable Palm Oil (Acepalma C.I. n.d.; RSPO 2017). In total, Indupalma and the subsidiaries of its corporate group export 28,6% of the palm oil exported from Colombia (Cedetrabajo 2020; Fedepalma 2019a). Among other places, this palm oil is sold at the Rotterdam port, the main marketplace for palm oil in the world (Fedepalma 2015). While transactions at the Rotterdam port are complex and hard to trace, this is one of the main places where multinationals, such as Nestle, Unilever, and Procter and Gamble buy their palm oil input (van Gelder 2004; Manibo 2014; Port of Rotterdam n.d.). So, it is likely that the oil produced and traded by Indupalma and its corporate group ends up in the Kit-Kat bar, Dove soap, and Gillette shaving gel that millions of people consume around the world. The palm oil broker partially-owned by Indupalma's corporate group also imports 50% of the fertilizers used in palm oil crops in Colombia, the transport company that ships out palm oil around the world and ships in fertilizers, and is the majority shareholder of the politically contested

Port of Tumaco in southwest Colombia (Revista Dinero 2013). Indupalma's value chain is a thread that connects the pantries of millions of consumers around the world with the lives of farmers and farmworkers in Colombia.

However, these threads are hard to trace. For example, 95% of Indupalma belongs to Palmas de Oro. According to press coverage, for tax purposes this company is based in Panama, and is owned at the same time by two other companies, which are represented by a person who manages or represents more than 11,000 companies and is linked to mismanagement of public funds in Spain (CM& 2013). As Indupalma became owned by foreign companies, it still publicly presents itself as a family company, owned by the decedents of its founder, Morris Gutt, and the board of directors is mostly composed by members of this family (Cedetrabajo 2020; Revista Dinero 2015). This situation suggests that the transformations in Indupalma's foreign ownership can be a façade for tax purposes and the actual people behind the company's ownership and control have not changed. The company and its investors use administrative mechanisms to avoid multiple responsibilities.

The National Federation of Oil Palm Growers has been instrumental in supporting Indupalma and other companies facing criticism for this and other matters. For instance, as Indupalma has faced allegations of violent displacement and anti-union violence, the national federation of palm oil growers has launched a media campaign to showcase the industry's commitment with peace and sustainable development. The campaign includes frequent TV and radio ads, as well as billboards, showcasing small-scale palm oil growers grateful for the support from the industry. The integration of small-scale farmers as suppliers of oil palm fruit has allowed this industry to secure government support and position itself as a socially responsible actor.

Image 5

Image of the media campaign Colombian Oil Palm is Life

Image deleted due to copyright restrictions. You can see this image on page 60 of the following link: https://publicaciones.fedepalma.org/index.php/palmas/article/view/12668.
See image description below.

Official image of the media campaign *Colombian Oil Palm is Life*, by the Colombian National Federation of Palm Oil Growers. The image presents two small-scale oil palm growers looking off-camera with the following quotes: "The palm oil crop, to me, is happiness"—Celmira. "Palm crops are the best thing that anyone has brought to the Bolivar region"—Marcos. Inside the image, a heading states that "Colombian oil palm is life". The image background is composed of oil palm leaves and a shining light further back (Peña 2018:60).

While the above image claims that palm oil is life and is also the best thing that has happened to small-scale farmers, this has not been the case for all small-scale palm oil growers and farmworkers. Apart from a variety of difficulties that small-scale farmers around Colombia are facing, Indupalma's small-scale suppliers are in a difficult financial situation today due to the company's decisions. Indupalma announced its voluntary dissolution in November 2019, while owing USD $1.7 million to El Palmar, one of the worker-owned companies created by Indupalma. In the words of the worker-owned company CEO, "A 1.7-million-dollar debt puts the company in thin ice, because the cash flow… you are left without cash flow" (Interview, San Alberto, November 2020, my translation). This company owned by 136 former workers of Indupalma has been supplying fruit to Indupalma's mills since 2004. In 2017, when Indupalma was claiming financial hardship, it started defaulting on payments and breaching the contract with this worker-owned supplier company. Through a sustained and sizable debt, Indupalma is putting in jeopardy the promises that it has continuously offered for workers to be profitable business owners.

At the same, the company continues blaming members of Sintraproaceites, which represents Indupalma's unionized workers, for its financial situation and the board's decision to dissolve the company (La Hora de la Verdad 2019, Interview, by phone, February 2020). In the meantime, the union has been decimated, with about 80 members left by late 2020. In the dissolution process, Indupalma offered a voluntary resignation with 30% additional severance for those workers who accepted before 30 days. More than 300 workers accepted the offer. The company also started a court process to remove the union leadership's labor protection rights and requested permission from the ministry of labor to do a massive layoff. The company has continued using the threat of violence, as private security guards have visited workers' houses to deliver dismissal notices. The remaining union members are invested in defending their case in courts and the ministry of labor to keep their jobs, as well as looking for international solidarity to defend the union (Interview, by phone, February 2020). Throughout this process, they have denounced the dissolution of Indupalma as a façade to get rid of the union and continue operating under a different name, as a sort of approach to *destroy the company to save the company* from the union.

The hypothesis of the dissolution process being a façade has been confirmed by statements of industry representatives, such as the president of the National Federation of Oil Palm Growers, who recently acknowledged in a national radio show that Indupalma's plantation will continue operating after the dissolution (La Hora de la Verdad 2019). The remaining 80 unionized workers are working to keep their jobs and union jurisdiction under a potential new company that operates the plantation, but Indupalma's legal actions against the union make this an uncertain possibility. Current actions against workers and small-scale suppliers by a company that has operated as a

template for experimenting with different violent and bureaucratic forms of controlling labor, land, and state resources, produce additional concern about the future of workers and suppliers throughout the palm oil industry.

Violence and the Production of Inequalities in the Organization of the Palm Oil Industry

Analyzing the emergence of historical and current inequalities in the palm oil industry reveals the integration of small-scale farmers into this supply chain as a continuation of the strategy to control land, labor, and state resources, first through violence and now through acquiescence. The channels that the palm oil industry has created for dispossessed communities to become business owners are far from an opportunity for farmers. These channels are usually designed by palm oil companies in the most favorable terms for the company and outsource production costs and risks to worker- and small-scale farmer-owned crops, such as El Palmar. Peasants and farmworkers who agree to participate in productive alliance projects are in a position of vulnerability produced by the displacement and violence exercised for decades by large landholding elites in alliance with the State.

The specific forms of industrial organization in the palm oil industry have been dictated by the arrangements through which firms can capture land, labor, and state resources. After decades of accumulation by dispossession and control of labor through decimating unions, Indupalma and other companies were able to tap into weakened workers and small-scale farmers through less confrontational forms of control. The successful organizing efforts by Indupalma's workers in the late 1970s and early 1980s were retaliated against by State and employer-sponsored violence leaving the union almost inoperative in the early 90s. In the context of a weakened union the company

forced members to renegotiate their collective bargaining agreement, which opened the door to new forms of labor flexibilization, including a new wave of labor outsourcing and the incorporation of small-scale farmers and farmworkers as suppliers. As Latin American agrarian scholars highlight, following the establishment of the order desired by extractive industries, companies can turn to more ordinary forms of control that appear less violent (León Araya 2017; Ojeda et al. 2015). The integration of small-scale farmers into the palm oil industry was facilitated by previous violence against workers and early settlers.

Furthermore, the integration of small-scale farmers into the palm oil industry is an adaptation of previous regimes of violence on plantations for the neoliberal age. Palm oil companies expand their production through old forms of violence that achieve new goals. These companies externalize agronomic risks and labor costs while claiming to promote the wellbeing of rural populations. By doing so, companies are able to streamline production processes, lower labor costs, devolve risks, and privatize state roles. The strategy of integrating third party suppliers, including small-scale farmers, in previously settled lands and acquiring and incorporating large landholdings in frontier lands enables expansion while avoiding the risks related to conflict and land reclamations in previously settled lands, as the industry outsources risks to small-scale and some entrepreneurial farmers. Additionally, this strategy allows palm oil companies to reframe labor flexibilization as corporate social responsibility contributing to peace and sustainability. This framing, coupled with the neoliberal policies of privatization of State roles in the late 1990s, presented the integration of small-scale farmers as a private scheme that achieves public goals and, therefore, is deserving of government support. While State support is given in the form of subsidies to small-scale farmers, the buyer driven power of mills allows palm oil companies to capture these benefits as profits by

imposing lower prices to farmers. As a result, palm oil companies end up benefiting from the subsidies that industry actors, such as Indupalma's and other palm oil company CEOs, designed when acting as government officials.

What reproduces dispossession in this context is the use of neoliberal governance strategies that renew and maintain old forms of plantation violence inserted in a region suitable for the production of a highly desirable commodity and a country with a State that favors land accumulation by dispossession. Conflict, in this context, is not intrinsic to palm oil or a region suitable for its production, but to the forms of governance to secure the centralized and extractive capture of value from people and landscapes in Magdalena Medio (Le Billon 2001; Watts 2004). Additionally, this form of resource governance depends on the control of large tracts of land and the production of social hierarchies (Paige 1997; Topik et al. 2006). The palm oil industry has produced dispossession and labor precarity to create a surplus population on whose lives they could decide (Li 2009). Today, the Colombian government and private forms of governance support the maintenance of the social order that supports the current structure of the palm oil value chain.

An uncritical and ahistorical application of the GVC framework that assumes the organization of global value chains only responds to inter- and intrafirm relations partially explains the incorporation of small-scale farmers but also obscures the key relations of power behind this process. The palm oil industry deals with a standardized product, with codifiable information (e.g., through certifications), and base producers, like small-scale farmers, capable of growing oil palm and delivering its fruit to mills. These characteristics fulfill the conditions of a vertically disintegrated industry according to the GVC framework and could, therefore explain the existence of small-scale farmers in this lucrative, capital-intensive, and powerful global value chain.

However, this explanation is insufficient for at least two reasons. First, the characteristics of standardization, codifiability, and base producing capacity have not significantly changed over the past decades as the Colombian palm oil industry has shifted from vertical integration to heavily relying on small-scale farmers for its expansion. Second, the violence exercised by palm oil companies, in alliance with the State, is all too evident to dismiss as a central factor in the organization of the palm oil industry.

The case of Indupalma, and many other palm oil companies, is part of the expansive academic, journalistic, and State records of palm oil and other agribusinesses taking a leading role in —and benefiting from— the Colombian armed conflict (CNMH 2018; Forero Rueda 2020; Grajales 2011; Lazala and Romero 2017). The focus of these records on the role played by the State in enabling the private use of violence against workers and small-scale farmers also echoes the emphasis of agrarian change literature on the widespread State support that large-scale agricultural production has received in Latin America and the relation of this support to disciplining, displacement, and fear as strategies to control land and labor (Borras et al. 2012; León Araya 2017; Ojeda et al. 2015). Firms create and benefit from local forms of inequality and discipline in places of production (Bair 2005; Collins 2014; Freidberg 2004). The creation of these inequalities and forms of control is a key determinant of the way these firms organize their production and the overall structure that value chains take. GVC literature cannot ignore the role that non-market mechanisms, such as the use of fear and violence, play in the organization and reorganization of global value chains.

Apart from the focus of classical GVC analyses, key characteristics of the oil palm industry also contribute to obscuring the role of non-market mechanisms in shaping the structure of this industry. The use of sustainability certifications and

narratives of corporate social responsibility contribute to conceal the displacement and anti-union violence that have been central to the organization of this chain. Distance between consumers of palm oil products around the world, on one side, and farmers and farmworkers in places like Magdalena Medio, on the other, allows visible multinational companies such as Unilever, Ferrero, and Archer Daniels Midland to produce sustainably labeled soap, chocolate, and fuel, while hiding the violence exercised in places of production to deliver those products. At the same time, corporations use social responsibility strategies, such as the incorporation of small-scale farmers and sustainability labels to avoid criticism and legal responsibilities (Lazala and Romero 2017). Labels, narratives, and distance play a crucial role masking exploitation and violence as social and environmental responsibility.

In order to overcome the concealment of the role that industrial organization decisions play in the production of inequalities, it is necessary to go beyond classical GVC analyses. Critical implementations of the GVC framework have revealed key factors shaping the organization of economic activities such as violent labor control, reproduction of gender inequality, and impoverishment of working communities (Anner 2015; Bair 2005; Collins 2014). Analyzing the different links along a value chain, the non-market factors that shape them, and the way those non-market and intra-chain links have shaped each other is crucial for comprehensive GVC analyses. This proposal means going beyond inquiries about input-output, geographical distribution of production-consumption, and power relations, to consider how those relations emerged. For the GVC framework to be revealing of the mechanisms that determine "who produces what and where" (Collins 2003:9) it needs to pay attention to how firms have come to access key factors of production and support in different places. Feminist labor analyses stress that to access these factors of production different industries tap into,

and even produce, local forms of inequality that enable firms to control labor and extract value in places of production (Collins 2014; Dunaway 2014). The literatures on agrarian change, critical studies of production, and Colombian agrarian history have identified the violent capture of land, labor, and subsidies as a pattern of agribusinesses in Colombia and elsewhere in the Global South (Le Billon 2001; Borras et al. 2012; Fajardo 2002; León Araya 2017; Ojeda et al. 2015). These bodies of literature, and their illustration through the incorporation of small-scale farmers into the palm oil global value chain in Colombia, make evident the need to consider how firms access key factors of production and support, with a special focus on possible uses of violence to secure this access.

In Lieu of a Conclusion

It's hard to conclude a story that is currently unfolding for workers in the palm oil industry. Indupalma is in the midst of its dissolution process and the farmers and farmworkers who depend on this company for a living are facing an additional layer of uncertainty in the context of a pandemic and a shrinking economy. At the same time, there is an open question about the effects of this dissolution process for the palm oil industry as a whole. Indupalma has been a pioneer in terms of experimenting with labor relations throughout its history. It has become a template firm for other companies in the industry. If it is successful in its plans to dissolve the company and, as workers fear, continue operating under a different name just to get rid of the union, will other companies follow?

Another part of this story undergoing a possibly structural change is the context of armed conflict and land tenure in Colombia; the context of conflict in which the palm oil industry is inserted. In 2016, the Colombian government signed a peace agreement

with the largest guerilla group. In the previous years, Congress passed several pieces of legislation to back up the agreement, including a land restitution law for people who have been displaced and the creation of a national center for historical memory. While these measures have opened important paths for change in a country with an armed conflict that has lasted more than 50 years, they have failed — for the time being — to produce structural change around the agrarian roots of conflict. The National Center for Historical Memory is led today by a negationist historian of the Colombian armed conflict who cancelled the launch of the report that narrates the experiences of violence of palm oil workers. He also expressed in writing his desire to support the National Federation of Palm Oil Growers to continue telling their side of the story, now under the auspices of a government institution (Rojas 2019). The land restitution law, for its part, has provided a path for many people who have been displaced to recover their land. At the same time, it sets an arbitrary date to only recognize those displaced after 1985, in a way, providing a path for legitimizing the widespread and structural trajectories of displacement that occurred before that date. In this context, recently opened possibilities for change continue to be meager and the land tenure structure in Colombia still provides a fertile ground where corporate actors seeking to extract key resources can insert themselves to stir and benefit from conflict.

In this context of ongoing uncertainty and transformation, both in the palm oil industry and Colombian politics overall, the question about the historical organization of agrarian value chains becomes particularly important. This is especially true in the case of the palm oil industry, which has framed some of these strategies as a contribution to society, has funded media campaigns to advance this narrative, and counts with State support to tell its story. In contrast to the industry's narrative, this chapter reveals value chain restructuring in the palm oil industry as a continued strategy

by corporations to control land and labor, backed by the State to use violence and other forms of disciplining. In a context of global and national debates about the viability of the palm oil industry and the role of different industry actors in the exercise of violence, my hope is that this paper and my work with the Sintraproaceites union can support labor efforts to persist as an organized force. Building alternative futures in agriculture requires analyzing the historical production of inequalities. Chapter four of this dissertation builds on this analysis to identify ways some small-scale palm oil growers are confronting the risks posed by the palm oil industry.

Chapter Three — Materializing Inequality: The Production of Environmental Risks for Small-Scale Farmers in the Palm Oil Industry

As I took the picture below on the left, Carlos – a manager at a palm oil company in northern Colombia — explained to me that this image represents the disobedience of many small-scale palm oil growers. In the field that appears in the picture, oil palm is intercropped with corn. Carlos is in charge of the relation between the palm oil company he works for and several small-scale farmers incorporated by this company as suppliers of oil palm fruit. One of his tasks, is to disseminate best agricultural practices, including growing oil palm as a monocrop, without any other edible plants like corn or pineapple in-between rows of oil palms. Carlos, like other representatives of large-scale palm oil companies in Colombia, explain that in order to be productive and healthy palm should be grown as a monocrop, meaning a crop of a single edible plant species (such as the crop on the picture on the right). This recommendation has shaped around 25 million ha of oil palm crops in the world, which are grown as monocrops (Corley and Tinker 2016). However, this same recommendation is fundamentally questioned by agroecology scholarship.

Image 6

Intercrop and Monocrop Oil Palm

Field in northern Colombia where oil palms are intercropped with corn (left) and field in northeastern Colombia where palm is grown as a monocrop (right). Taken by the author.

Conventional explanations for the prevalence of industrial monocrops in agriculture cite the supposed higher productivity of this agricultural system compared to diversified farming, but this prevalence is better explained by relations of power. Today, monocropping, or growing a single crop in an area of land, dominates agricultural landscapes in some of the world's largest crops. For example, oil palm produces the most consumed oil in the world and 89% of the planted area is cultivated in monocrops (FAOSTAT 2020a; Omoti 2004). Composed by perennial plants — meaning plants that live several years — oil palm monocultures form plantations, which last for several decades. According to conventional agronomic estimates, monocrops are more productive — per area of land — than agroecological, or diversified, farming. But, as agroecology scholarship has discussed, these estimates are often based on an exclusive focus on the output of the main commercial crop rather than the total yield of all planted crops (Perfecto and Vandermeer 2010). Additionally, industrial monocrops erode the ecological base of agriculture, while diversified farming aims to constantly renovate this

base (Gliessman 2015). Agroecological research has exposed that, when considering this broader context, the technical arguments for the alleged superiority of industrial monocrops seem dubious.

So, why are monocrops so dominant in agricultural systems around the world? This paper investigates the role of power relations in the prevalence of this type of agriculture today. It exposes how the spread of monocrops may respond to the production of material qualities — what I refer to as 'materialization' in this chapter — through social hierarchies. This materialization occurs as powerful actors, such as corporations or imperial powers, produce controllable agricultural landscapes to extract and capture value from these spaces (Harvey 1996; Tsing 2012). In order to better understand the material organization of agriculture it is necessary to consider both how relations of power are materialized in landscapes and how landscapes reproduce social hierarchies. This chapter examines these processes through the case of oil palm crops by asking, how may social hierarchies have shaped the environmental transformations of the palm oil industry over the past century? And how have these transformations affected inequalities between growers today?

I argue that the material transformations in the genetics and management practices of oil palm trees, produced by industry actors over the past 100 years, follow colonial goals of territorial control by imperial powers and today facilitate value extraction for corporations while impoverishing small-scale farmers. The colonial origins of the oil palm industry have historically shaped, or produced a path-dependency for, the materiality of oil palm crops today.[7] These material transformations produced

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[7] I use the term 'path dependency' in a broad sense to acknowledge that the concrete historical trajectories of oil palm crop expansion circumscribe options for growing this crop today. Similarly to the common definition of this term in the political science literature, which refers to institutional inertia (Greener 2005), my use implies that material transformations of palm oil crops by imperial and

by the industry have resulted in higher productivity and risks that growers with access to capital can cope with through investment diversification outside of agriculture, while leaving small-scale farmers exposed to risks that can result in losing their land. Small-scale farmers incorporated as suppliers of the palm oil industry are forced to adopt the management practices developed by and for corporations, which limit these farmers' possibilities of managing risks in their own farms through crop diversification. Inequalities between small- and large-scale oil palm growers are mediated by the materiality of oil palm trees.

In order to investigate this situation, this chapter traces the origins of the industrialization of oil palm crops back to colonized regions of Africa and South East Asia at the start of the 20th century. It connects this process to the current inequalities in agriculture, which the palm oil industry has produced through the application of agronomic practices originally developed by imperial powers that enable value extraction from agriculture for palm oil corporations. To explore how this global industry transforms lives and landscapes today, I focus on the Colombian palm oil industry, the fourth largest in the world. Oil palm crops in Colombia extend for over 550.000 hectares (ha), producing about 2% of the palm oil in the world (Fedepalma 2020). More than in the three largest producing countries (Indonesia, Malaysia, and Thailand), in Colombia small-scale independent farmers coexist with large-scale plantations, with cropland holdings ranging from 5 to 11,000 ha (Fedepalma 2011a,

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corporate actors limit the long-term available options for farmers in terms of tree genetics and organization of oil palm crops. However, my use of this term does not imply that the options about how to organize oil palm crops and source genetic materials are given. As I discuss in this and the following chapter, the paths that imperial and corporate actors have carved for oil palm crops are sometimes contested by various farmers and organizations.

2019a). This context enables me to study the differential impacts that ideas and practices developed in colonial contexts, and that corporate actors continue using today, have on different growers.

This analysis contributes to the study of environmental transformations from a sociological perspective, considering the material context in which humans are embedded as a *subject*, not only as an *object*, of focus. While there is a growing recognition in sociology about the relations between the material and social aspects of our world, environmental debates in this discipline continue grappling with the question of how to consider the agency of other-than-human beings without falling into determinism (Carter and Charles 2018). This paper builds on multispecies studies and agroecology scholarship to better understand how transformations to living beings beyond humans, such as oil palm trees, are mediated by systems of social governance, like imperialism, corporate power, and racism. Concurrently, it exposes how these environmental transformations differently affect and are experienced by social groups, in this case small- and large-scale farmers. Such an understanding exposes often unexplored aspects of environmental transformations, like the distribution of risks across social hierarchies. This analysis of differential impacts and experiences transgresses the common dualism between material and social aspects, proposing a socially mediated understanding of biophysical transformations and their effects; hence, overcoming physical determinism.

This chapter is organized as follows. The literature review explores how multispecies perspectives and agroecology can complement environmental sociology literature by opening up considerations of the agency of non-human entities in agriculture. The following section presents the origins of oil palm, its main historical physical transformations, adaptations in Colombia, and effects of these historical

legacies for farmers of oil palm. The discussion highlights how colonial and corporate powers have materially shaped oil palm crops and how these crops enact power today for the production of new social hierarchies. Finally, the conclusion suggests that acknowledging the agency of the material world does not make sociology less, but more relevant, as this consideration enables sociologists to better inform issues related to the materialization of power in the environment.

Towards a Material Understanding of Inequalities in Sociology

Over the past four decades, multiple fields in sociology have debated how to study the material aspects of our world without falling into biological determinism or overlooking relations of power between humans. To address this challenge, environmental sociologists have proposed an understanding of relations between social and physical aspects of the world as a conjoint constitution, in which human experiences and material forms are conjointly produced (Freudenburg, Frickle, and Gramling 1995). Building on this recognition of a mutual constitution, differentiating between biophysical entities and people's experience of those entities further allows researchers to study the way social and material aspects shape each other while also recognizing the specificities of the social and the material (Carolan 2005). Additionally, the literature on animals in society has broadened the scope of the concept of agency by highlighting that it is not unique to humans. All material objects and subjects have agency, not uniquely determined by their material existence but also by how this materiality interacts with other objects and social and cultural constructs (Carter and Charles 2018; York and Longo 2017). These conceptualizations are crucial to understand significant social transformations, such as war or colonialism. For instance, Nibert discusses how, historically, the physical characteristics of domesticated animals

have enabled military power for war and fueled the land invasions that were necessary to sustain large groups of these animals (2013). To fully understand social relations, the sociology canon needs to more fully consider the relations between the social world and its material context, while continuing to recognize the distance between materiality and the ways people experience it.

A field that is defined by an expanded view of agency beyond the human realm is multispecies studies. Its point of departure is the inseparability of nature and culture, or *natureculture*. This idea highlights that human (as well as other-than-human) relations are formed by both biophysical and social aspects. Focusing on only one of these aspects means falling into "misplaced concreteness" (Haraway 2003:6). The study of *natureculture* considers the multiple ways history and biology are articulated and how culture shapes these articulations (Escobar 1999). This idea recognizes the agency of the material entities that form the environment in which humans and other species live, while also acknowledging that the way human groups experience this agency is mediated by social hierarchies and historically changing conceptions of the biophysical world.

Multispecies perspectives have been particularly valuable to better understand how social differentiation and biophysical arrangements in plantation agriculture have shaped each other. Building on these perspectives, Tsing (2012) proposes that the historical relations of humans with edible species explain key aspects about the production of social hierarchies:

> In forging a new antagonism to plantation plants, humans changed the very nature of species being. Elites entrenched their sense of autonomy from other species; they were masters not lovers of nonhuman beings, the species Others who came to define human self-making. But for planters this was only possible to the extent that human subspecies were formulated and enforced: Someone had to work the cane. Biology came to signify the difference between free *owners* and coerced *labour* (Tsing 2012:149, emphasis in the original).

Extensive plantations demand increased labor, compared to individual smaller farms, and have driven the creation of a supposed biological differentiation within humans, between white owners and laborers of color. Large-scale transformations of agriculture through plantations rely on accumulation by dispossession, which implies capital accumulation through the appropriation of non-commodified spaces such as peasant farms (Harvey 2003, 2005). Besides the appropriation of new lands for capital accumulation, this process generates disposed laborers willing to work under strenuous conditions (Friedmann and McMichael 1989; Moore 2016). Plantation agriculture and the related production and spread of pathogens also overburdens working people of color with the work and hazards of controlling these pathogens. This situation produces and deepens racial and income inequalities as companies expand their crops to new lands to escape pest-infested farmland, creating further dispossession. Additionally, already marginalized farmworkers are often burdened with pesticide applications which can affect their health (Galt 2014; Soluri 2005; Soluri, Leal, and Pádua 2019). Homogenized and carefully arranged large quantities of trees require amounts of space and types of care that imply dispossession and strict discipline for the people and landscapes that make plantations possible.

Multispecies studies expose oil palm crops, in their contemporary forms, as materializing and exercising a violent reconfiguration of landscapes against local communities and modes of sustenance across tropical regions around the world. Oil palm plantations have produced a simplified environment that destroys relations of coexistence between indigenous communities in places of production and the forests around them. These plantations create dispossession and ecological loss for both humans and non-humans in ways that radically transform the relations between humans and other species from care to domination (Chao 2018; Salazar Parreñas 2018). In order

to make way for palm oil plantations, corporations and governments promoting this crop control land and bodies in places of production. They exercise violence to limit peasant agriculture and other non-standardized forms of human-environmental relations (Li 2017; Taussig 2018). These forms of violence and control perpetuate colonial practices that enable the control of landscapes and communities in places of agricultural production even in the absence of an imperial government. Oil palm plantations have radically reorganized human-environmental relations from coexistence to the exploitation of multiple life forms (Salazar Parreñas 2018). By permanently disrupting ecosystemic relations and materializing imperial goals in space, this reorganization of life and landscapes has shaped human-environmental relations in the long-run, well beyond the end of formal imperial rule over a territory.

In contrast to the colonial forms of power materialized in plantations, other types of relations with edible organisms afford a source of resistance. For instance, the ecological growing conditions of Matsutake mushrooms, which emerge in disturbed pine forests, in unexpected places and moments, support the livelihoods of marginalized populations that have been expelled to the margins of capitalism (Tsing 2012, 2015). Furthermore, enslaved Black communities in Brazil have relied on subspontaneous palm oil trees in agroforest systems as a source of sustenance and even resistance to slavery through self-sufficiency (Watkins 2011). These oil palm trees, however, are materially different from those found in plantations. For example, their seeds spread through the traffic of enslaved people, maintaining similar characteristics to the trees found in their native environment of West Africa, rather than being modified for the purpose of colonial extraction (Chao 2019; Watkins 2011). What marks the contrasting effects on social organization between plantations, on one side, and wild mushrooms and oil palm agroforestry, on the other, is not only the type of human adoption of these

edible organisms, but also the productive and organizational requirements imposed by the transformed materiality of plantation trees.

Monocrops, and particularly plantations, may be viable agricultural arrangements for actors with access to capital but produce vulnerability for the farming communities that rely on them as a source of sustenance. Agroecology is a scholarly field with roots in agronomy and agrarian social thought that offers key tools to study the material relations between agriculture and the ecosystems in which it is immersed, as well as the ways these relations affect different farmers. Taken together, different strands of agroecology scholarship study ecological conditions, farming practices, policies, and equity and sustainability issues around food systems (Gonzalez de Molina 2013b; Holt-Giménez and Altieri 2013; Méndez, Bacon, and Cohen 2013; Sevilla Guzmán and Woodgate 2013; Wezel et al. 2009). According to this field, compared to diversified farming, monocrops have detrimental effects on the ecological conditions of surrounding ecosystems and the long-term productivity of agriculture. Apart from establishing homogenous landscapes, monocropping involves the absence of buffer zones and intense use of synthetic pesticides and fertilizers. These patterns often result in reduced biodiversity, higher risks of pest infestations, and soil degradation (Gliessman 2015; Nicholls and Altieri 2004; Perfecto and Vandermeer 2010). Due to the intense use of commercial inputs and their detrimental effects on ecosystems, monocrops require access to large amounts of capital and reduce the long-term agricultural productivity of land.

The biophysical arrangements of plantation monocrops shape the resilience capacity of different farming communities. The concept of resilience, as used in the socio-ecological systems literature, refers to a systems' capacity to withstand shocks without losing its basic structure (Córdoba Vargas et al. 2020; Walker and De Salt

2006). In relation to the experiences of marginalized farmers, this concept has been adapted by social scientists emphasizing not only individual but also collective capacities, and not only possibilities of maintaining a structure but also of changing it. In this context, the concept of resilience, as informed by social scientists, involves community-based forms of social organization that allow marginalized farmers to confront adverse conditions affecting their community in a way that advances decision making power and access to rights and key resources (Córdoba Vargas et al. 2020; Walsh-Dilley, Wolford, and McCarthy 2016; White 2018). This conception of resilience at the community level bridges concerns about inequality and vulnerability from the social sciences with the recognition of constantly changing ecosystems from the ecology literature (Walsh-Dilley et al. 2016; White 2018). It also builds on the focus by the field of environmental justice on differential exposure to environmental harms and further considers differential exposures to injustices-in-waiting, based on multiple forms of inequality and the possibilities of marginalized communities to confront them (Caniglia, Frank, and Vallée 2017; Pellow 2017). A resilience focus is useful to analyze the long-term possibilities that different farming communities have for facing the risks associated with specific agricultural arrangements, such as oil palm crops. Together, resilience perspectives, agroecology scholarship, and multispecies studies can inform environmental sociology to address the relations between material transformations and social inequalities in agriculture.

Material Arrangements in the Oil Palm Industry and Their Consequences for Farmers

Two origins of palm oil crops: white imperial plantations and Black agroecology

Palm oil crops have followed two main patterns: agroecology for sustenance and local trade of Black communities, on the one hand, and plantation agriculture for global trade by predominantly white imperial and corporate groups, on the other. In their native environment in West Africa, and their expansion to Central Africa through human seed dispersal, palm oil trees are part of wild and semi-domesticated groves, intermixed with food crops and grazing cattle. For millennia, these groves have provided materials to make cooking oil, medicines, brooms, wine and other products for groups ranging from West Africa to Egypt, and were particularly important for the subsistence and material culture of the Yoruba people (Henderson and Osborne 2000; Lynn 1997; Watkins 2011; Zeven 1972). These integrated agroforest and silvopastoralist systems, follow the precepts of agroecology as they are composed of intermixed crops that benefit from animal manure fertilization and offer a variety of foods such as beans and tubers, in addition to oil palm trees (Corley and Tinker 2016; Gliessman 2015; Watkins 2011). The origins of oil palm suggest this crop can offer possibilities of sustenance for local communities in places of production.

While palm oil trees have expanded throughout tropical regions around the world, only in the Brazilian region of Bahia they have followed the pre-colonial agroecological patterns that still exist in parts of West and Central Africa. As discussed in the introduction to this dissertation, during the period of transatlantic trafficking of enslaved people from the 16th to the 19th century, Portuguese enslavers and merchants transported palm oil fruit and seeds as provision for enslaved people and for attempted

plantations. While the plantations did not materialize in this period, these seeds, together with the environmental culture that African people brought to Brazil, enabled them and their descendants to plant oil palm as a subsistence crop. Shaping 'new world' landscapes according to African cultural traditions afforded partial autonomy and self-sufficiency in the context of the extreme brutalities of slavery. Today, more than 30,000 ha of agroforest groves planted and cared by Afro-Brazilian communities in Bahia provide cooking oil for local consumption and a model for sustainable agroecological systems around oil palm (Watkins 2011). These groves are a historical and contemporary evidence that oil palm polycultures can be a means of sustenance and resistance for rural communities.

In contrast to the polyculture patterns set by colonized and enslaved Black people, most of the oil palm expansion around tropical regions has taken the form of plantations that initially facilitated the extraction of wealth for white empires. Palm oil plantations were established in the 1910s by the Dutch, French, Belgian, and British empires in different parts of Africa and Southeast Asia (Corley and Tinker 2016; Henderson and Osborne 2000). Plantations allowed European empires a precise control of landscapes to centralize value extraction from colonized territories (Tsing 2012). According to Tsing, "*plantations were the engine of European expansion*. Plantations produced the wealth— and the modus operandi—that allowed Europeans to take over the world" (2012:148 emphasis in the original). Controlling landscapes for the intensified production of palm oil allowed European empires to maximize the extraction of wealth from tropical regions.

Apart from centralized value extraction, plantations facilitated the achievement of other imperial goals such as promoting industrialization in the metropolis and controlling colonized peoples. As the British parliament prohibited, in the early 19th

century, the trade of enslaved people in its empire, British traders of enslaved populations sought alternative ventures, using previously created slavery routes to trade palm oil (Henderson and Osborne 2000). The rise of palm oil trade in the 19th century fueled the rapidly rising demand for the many industrial products that can be manufactured with this oil. Starting in the 1830s, palm oil became a widely used ingredient in Europe for manufacturing soap, candles, and lubricating oil, apart from having multiple uses in photography, pharmacy, and other industries. Urbanization, scientific developments, industrialization, and imperial government support for specific products positioned this multipurpose oil as a valuable commodity (Henderson and Osborne 2000). With the end of the trade of enslaved African people by the British, plantations also ensured the continuation of control of African populations. Plantations ensured the territorial control of displaced communities, who were then turned into surplus population who had to work for a living in the highly controlled environment of plantations (Li 2009). Palm oil plantations have historically enabled the regional inequalities that are characteristic of colonialism.

These colonial relations based on oil palm crops were later continued by corporations. Imperial plantations included projects that eventually turned into current industrial conglomerates, such as William Lever's venture in the Congo, which formed the basis of today's Unilever corporation. The methods of centralized value extraction and tight managerial control, developed in imperial plantations, were later adopted by other corporations. In the Americas, the first palm oil plantations were established by the United Fruit Company in Honduras and Costa Rica in the 1940s (Corley and Tinker 2016). The imperial origins of palm oil crops created a social and material infrastructure that continues to shape today's palm oil industry.

The transformation of oil palms through imperial and corporate projects: maximizing production and minimizing resilience

To achieve the goals of controlling large areas of land, research for palm oil plantations has sought to modify palm trees and their environments in two main ways: the organization of plantation monocrops and seed selection. This scientific knowledge was initially produced in imperial research centers such as the National Institute for Agronomic Study of the Belgian Congo, the Department of Agriculture of the British Malaya, and the French Research Institute for Oils and Oilseeds (Corley and Tinker 2016). According to imperial scientific knowledge produced in these centers, the forest fringes and water banks that form the native habitat of oil palms are suboptimal because, in these environments, palms produce smaller inflorescences and fruit bunches, compared to plantation arrangements (Zeven 1972). By arranging oil palm trees on flat lands in a grid pattern each tree is able to receive the exact same amount of direct sun light, ensuring higher and homogenous yields. These patterns also enable "tight managerial control of routine tasks carried out efficiently" (Corley and Tinker 2016:22). The organization of oil palm crops in plantations results in labor and ecological arrangements around standardized production lines, which require less knowledge and skills, compared to agroecological systems, and facilitate controlling people and landscapes.

At the same time, the goal of maximizing production of a single crop while minimizing maintenance costs in plantations, affects the long-term production possibilities of agriculture. For example, the clearance of forests, pastures, or polycrops for palm oil plantations; the disappearance of cover crops after the palm canopy closes and prevents sun light from reaching the ground; and the common practice of clearing the area around each tree erode and compact the soil. These effects result in decreased

long-term productivity of soil (Hartemink 2005). Additionally, "it is likely that soil nutrients decline due to palm uptake and retention exceeding fertilizer applications" (Hartemink 2005:15). Finally, compared to more diversified agriculture, monocrops provide a favorable environment for the incidence and spread of pests. By providing low diversity habitat, they can host a limited number of species. In this context, some populations lack natural controls and can become pests. Additionally, the absence of physical barriers between numerous trees of a single species facilitates the aerial dispersal of organisms such as the protist *Phytophthora palmivora,* which likely causes the bud-rotting pest that has destroyed around 14% of palm oil crops in Colombia and similar numbers in other Latin American countries (Martínez et al. 2014; Mesa 2014; Nicholls and Altieri 2004; Romero Angulo 2019). The monocrop patterns that European empires and different corporations have expanded throughout the tropical world can lead to maximizing production from a single plant species but exhaust long-term production possibilities and augment the risks of losing an entire crop.

Furthermore, the palm oil industry has selected seeds from a narrow genetic pool to maximize production. Today, commercial oil palm seeds can be traced back to a few mother palms planted at the end of the 19th century in the Bogor Botanic Garden, in Java, part of the then Dutch Indies. These palms produced the seeds for the first plantations in South East Asia and are even part of the ancestry of the seeds that later sowed imperial plantations in back in Africa. The institutionalized research that has produced commercial seeds for the past century was carried out on seeds from this origin starting in the first decades of the 20th Century (Corley and Tinker 2016). While breeding programs have incorporated genetics from palms from other origins, these programs have "a narrow genetic base and can be traced back to only a few palms" (Corley and Tinker 2016:152). Additionally, oil palm seeds have been further selected

to maximize the weight and amount of fruit bunches, as well as the oil content of fruit. This selection was initially conducted based on planting seeds from palms that produced fruit with a thick mesocarp. By the 1940s, agronomists at the National Institute for Agronomic Study of the Belgian Congo identified the gene, later named SHELL, which determines fruit type. This scientific development enabled genetic selection of seeds for plantations starting in the 1950s. This process does not involve genetic modification, but exclusively breeding pollen from palms with a one of the two versions of the SHELL gene into the inflorescence of palms with the other version of this gene (Corley and Tinker 2016; Nyouma et al. 2019). Commercial palm oil propagation methods have led to a narrow genetic pool and "the need for new material of sufficient genetic variability to provide scope for future breeding progress has been widely acknowledged for a long time" (Corley and Tinker 2016:152). The goals and historical trajectories of the palm oil industry have turned industrial oil palm crops into standardized arrays of genetically similar trees narrowly selected for the maximization of production.

As a result, palm oil crops are highly productive but also highly vulnerable. In particular, the concrete forms that selection processes have taken in the palm oil industry can impact these crops' vulnerability to disease. Some of the selection efforts have pursued goals not related to increasing productivity, such as tree height and drought and disease resistance, but these objectives have received less attention (Corley and Tinker 2016; Nyouma et al. 2019). Additionally, in some cases, selection for disease resistance can compromise productivity (Brown 2002). Therefore, it is not surprising that being a lower priority item, and sometimes in contradiction with the main goal of maximizing yields, the palm oil industry has partially neglected pursuing oil palm resilience to pests.

Development of the Colombian palm oil industry: building on imperial projects and neglecting farmers' knowledge

The development of the Colombian palm oil industry exemplifies the spread and materialization of oil palm crops that replicate imperial goals even without direct imperial control. Colonial knowledge and genetic materials provided the basis for the Colombian palm oil industry. A Belgian botanist brought the first seeds from the Congo region in the 1930s. During this and the following decades, seeds were also imported from Honduras with lineage to the Bogor Botanic Garden palms that produced the seeds for the first plantations in South East Asia (Corley and Tinker 2016; Díaz Moreno 2016). During the following decades, some research and commercial plantations arouse, but the industry did not lay strong foundations until the 1960s, after research financed by the government concluded that oil palm was the optimal crop to increase the production of oils in the country and that large scale plantations were the best way to organize these crops to exploit the potential of oil palms. This work was carried out by Maurice Ferrand, a French expert from the United Nations Food and Agriculture Organization who had previously worked at the Research Institute for Oils and Oilseeds — the French center in charge of the study of oilseeds in French colonial territories (Díaz Moreno 2016; Escobar 2010; Surre 1993). Technical assistance and seeds that can be traced back to colonial oil palm plantations laid the groundwork for this industry in Colombia.

These imperial seeds and knowledge were later spread with support from the Colombian government and foreign aid. In 1956, the government had instituted the oil crops promotion program, which included increased tariffs for imported oils and fats. Following Ferrand's conclusions, government funds were assigned to establish palm oil crops in alliance with private capital. At the same time, the Colombian government

received funds to support these programs from multiple international organizations such as the International Bank for Reconstruction and Development (Díaz Moreno 2016; Vargas Tovar 2002). This was not, however, a situation unique to Colombia, as multilateral organizations were simultaneously financing palm oil projects in Costa Rica, Malaysia, and other countries (León Araya 2017). By the mid-1960s, Malaysia, the Democratic Republic of the Congo, and other former colonies with imperial plantations had gained independence (Singh and Mukherjee 1993; Young 2015). But the efforts of spreading palm oil plantations previously championed by imperial powers were continued by international organizations in alliance with national governments and businesspeople in these and many other countries. By the second half of the 20th century, the strategy of controlling large amounts of land and rural peoples through standardized plantations, as characteristic of colonial projects, was applied by corporations, with State support, seeking to extract value from agricultural areas around the tropical world.

Even when Colombian institutions built their own research capacity, they relied on knowledge initially produced by European empires in the first half of the 20th century. The Colombian National Federation of Oil Palm Growers (Fedepalma) was founded in 1962. Since its early years, members of this organization have repeatedly travelled to Malaysia to bring knowledge and technology on industrial and commercial innovations from the palm oil business in South East Asia. As previously discussed, the South East Asian industry had been built and shaped by European empires. The library of Fedepalma was stocked with bibliographic material coming mainly from Malaysia. In the 1980s, the French Research Institute for Oils and Oilseeds advised the creation and operation of an agronomic taskforce to address disease outbreaks in Colombia. This taskforce formed the basis of what, in the early 1990s, became Cenipalma—

Fedepalma's research center (Mesa 2013; Vargas Tovar 2002). Between the available agroforestry and monocrop plantation models for palm, Colombian industry and State actors narrowly pursued and instituted the latter one.

Today, oil palm research continues emphasizing the imperial goal of increased productivity above other considerations, while secondarily addressing the threats of pests and disease that have come with oil palm plantations. The creation of the research center Cenipalma, by the National Federation of Oil Palm Growers, in the early 1990s was driven by a second wave of the bud rot disease, which was severely affecting some of the largest plantations in the country at the time. This disease had already wiped out many of the pioneer crops in the 1960s (Benítez and García 2014; Mesa 2013). By 2020, this disease has affected most palm oil crops in Colombia. Over the last decade, about 14% of these crops in the country were wiped out by the bud rot disease (Mesa 2014; Romero Angulo 2019; Sarria Villa et al. 2016). Cenipalma has made important progress in this regard. Scientists from Cenipalma have contributed to the crucial debate on the causes of this disease, supporting the thesis that the protist organism *Phytophthora palmivora* is the main causal agent (Benítez and García 2014; Martínez et al. 2013). However, despite the central role that oil palm diseases played for the creation and operation of Cenipalma, and the severity of their incidence in the Colombian industry, many of their efforts prioritize a focus on productivity. For example, in the manual of best agricultural practices that Cenipalma distributes to farmers for free, the first chapter is devoted to productivity. Issues of pests and diseases are limited to a subsection of the third chapter explaining how to manage crops and, again, emphasizing monocropping as the only adequate arrangement (Cenipalma 2017). Attention to pests and disease has been mostly in reaction to the problems that come with the drive for

augmenting productivity, and research efforts have avoided addressing this drive as a central cause for palm diseases.

Notably absent from Cenipalma's efforts is research on intercropping or any other perspective that has the potential to change standardized monocrops. No research on intercropping with edible crops is carried out at any of the four experimental fields of this center (Interview, Barrancabermeja, July 2018). This situation contrasts with the high interest that several small-scale palm oil growers express in diversifying their crops. Discussing the pressing need to plant other crops one of them rhetorically asked, "what if, at a certain moment, even if it is not the bud rot, another disease or pest comes and leaves us with nothing?" (Interview, San Vicente, July 2018, my translation). Like him, many small-scale farmers worry about the risks of investing all they have on a risky monocrop like oil palm. Additionally, as a former grower explained, "when you plant palm, you always plant one here, another one nine meters apart, and then the next one at nine [meters]. Since [the palm is initially] small, it spans one to two and a half meters. So, there is free space and you can plant there" (Interview, Puerto Wilches, August 2019, my translation). A relatively common practice by small-scale farmers is planting corn or pineapple between rows of oil palms to take advantage of this space over the first 5 to 7 years (before the palm canopy closes the entrance of sunlight). This practice allows farmers to diversify risks, have alternative income sources, and provide subsistence crops for their families. Despite the institutional reluctance by Cenipalma to conduct or disseminate research on agroforestry, small-scale farmers often implement spatial and temporal diversification strategies within oil palm crops. Additionally, small-scale farmers often let spontaneous palms (i.e., those that grow from seeds that fall from planted palms) grow, contradicting Cenipalma's recommendations. However, in contrast to the support that farmers can get for oil palm monocrops sowed with

commercial seedlings, they receive no agronomic guidance or access to credit for growing polycrops or spontaneous palm.

Consequences for farmers: profits for large-scale corporations and risks for small-scale farmers

The support for palm oil monocrops, rather than agroecological systems, leaves crops highly exposed to disease. As discussed, the lack of habitat diversity, genetic variation of palms, and natural barriers between trees, make monocultures an ideal ecosystem for the spread of pests. The approximately 75,000 ha that have been destroyed by bud rot, are mostly concentrated in two of the highest producing municipalities in the country where this disease destroyed more than 85% of the area planted with oil palm (Alegria et al. 2015; Fundación Fruto Social de la Palma 2015; Romero Angulo 2019). No data seem to be available on the distribution of the incidence of the disease by farm size. However, my field research in one of these municipalities and its surrounding region suggests that the distribution of bud rot is associated with the difference between monocrops and agroecological farming, rather than farm size. While, a representative study would be needed to test this hypothesis, this finding is consistent with agroecological propositions about the fact that pests spread more easily in monocrops (Nicholls and Altieri 2004). For example, in Puerto Wilches, where small-, medium- and large-scale farms are arranged in monocrops connected through thousands of hectares, 87% of the crops were affected (Fundación Fruto Social de la Palma 2015).[8] In contrast, about 20 km away, in the lower San Vicente region where

[8] I have inductively defined the categories of small, medium, and large-scale farmers based on farm sizes and the salient differences in terms of livelihood sources I noticed during my fieldwork. By small-scale farmers I refer to those with less than 20 ha oil palm (usually around 10 ha) and little or no capital outside their farm. These farmers usually work on their own farm and rarely employ paid

palm oil monocrops are usually planted in small patches of about 10 ha surrounded by agroecological farming, farmers reported that, at the time of highest incidence, the most affected farm had an incidence of about 30% of bud rot.

What most differentiates the experience of small-scale farmers with crops infested with bud rot and other diseases, in relation to other palm oil growers, is their low capacity to recover. This condition is most prominent for those small-scale farmers who have been forced to follow the industry's guidelines, planting solely palm oil monocrops instead of keeping some diversified agriculture alongside palm. As a report from a local NGO in Puerto Wilches states, apart from losing their crops, small- and medium-scale farmers in the region have faced "a lack of resources to fight the disease and little attention from multiple perspectives" (Fundación Fruto Social de la Palma 2015:5). These farmers usually have little access to capital outside their farm and are often in-debt for several years after paying for the costs of establishing the palm oil crop, (which amounts to about US $6,400 per ha) (Mosquera Montoya et al. 2017). After losing their main source of income to the disease, many of these farmers were unable to pay for the costs of eradicating the crop and starting over. Many small-scale farmers migrated, faced foreclosure, lost their pension, or sold their land at a low price or are trying to sell it.

The small-, and to some extent medium-, scale farmers who managed to maintain their crop were those who had diversified their investments before the bud rot

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labor. Medium scale farmers are often professionals or small-business owners who work outside the farm and invest on 20 to 200 (usually around 50) ha of oil palm crops as a side business. Finally, by large-scale farmers I refer to investors who have accumulated significant capital and have more than 200 (often close to 1,000) ha of oil palm crops. This categorization is different from the one in the previous chapter, where I grouped farms according to their integration with mills and the nature of the business these farms belong to.

crisis. This diversification often occurs outside the farm (e.g., starting a motorcycle repair shop or a bar). For a few small- and medium-scale farmers who have the autonomy from oil palm corporations to decide what to plant, this diversification can happen within the farm, planting multiple crops alongside palm or outside the oil palm crop. Having investments outside the farm or, as discussed in the next chapter, having other crops to rely on allows small- and medium-scale growers to navigate periods of decreased palm oil production.

For large scale farmers, their access to capital outside the farm made the story dramatically different. All the large-scale farmers I met, and — as outlined in the table below — all the largest palm oil traders, have oil palm crops as one of many capital investments:

Table 1 — Investments of Largest Palm Oil Trading Groups in Colombia

Company ranking[9]	Palm oil trading company	Parent or sister companies that own oil palm crops	Other sectors where the parent or sister companies of these crops operate
1	C.I. Biocosta S.A.	Palmagro S.A., Extractora Palmariguaní S.A., El Roble Agrícola S.A., Extractora Frupalma S.A.	Courier and transport services, biofuels, chemical agricultural inputs
2	C.I Acepalma S.A., Grupo Grasco	Indupalma ltda	Cooking oils, soaps and detergents, flowers, real estate
3	C.I. Mira Ltda.	Palmeiras de Colombia S.A.	Transport services
4	Bio D S.A.	Palmasol S.A.	Cooking oils, real estate
5	Ecodiesel Colombia S.A.	Agroince ltda, Palmas del Cesar S.A., Palmas Monterrey S.A., Palmas Oleaginosas Bucarelia S.A.S	Digital technology

Sources: Biocosta S.A. n.d.; Curaduría Urbana No. 4 2019; Data Axle 2021; Estrada and Herrera 2019; Lombana Coy et al. 2015; Mantilla 2016; Novus Civitas n.d.; Open Corporate 2021; Palmagro S.A. 2020; Rabage n.d.; Vanguardia 2019.

[9] Ranking in terms of palm oil volume traded in Colombia

These companies are able to hedge the risks of the palm oil business with investment diversification outside agriculture. As the CEO and partner at an oil palm company with investments in technology, fuel, and oil palm extraction businesses explains "if you don't have alternative sources of income and your only income source is your piece of land, then you should not get into the [oil palm] business" (interview, Bucaramanga, July 2018). In response to bud rot, his company and other four large companies in the area put together a task force with their agronomic teams to control the spread of disease in their crops and those of their suppliers. Other companies expanded southward to new frontiers for oil palm where the bud rot was not present. These strategies are expensive, and investors need access to capital to implement them. Today, the three largest palm oil corporations in Puerto Wilches have eradicated their disease-prone crops and planted with hybrid disease-resistant varieties (Arévalo Peña 2016; Torres 2015). While for small-scale farmers palm diseases often imply losing their main source of livelihood, for large oil palm corporations diseases are a temporary loss, which they have managed to recover from through technical fixes or territorial expansion.

Despite the differential impacts for farmers derived from oil palm diseases, responses from the National Federation of Oil Palm Growers and government institutions follow a singular recommendation: replant monocrops. Over the past decade, the national agricultural sanitation authority issued several decrees on the required responses from farmers with incidence of bud rot in their crops, including the complete removal of crops with more than 20% incidence and allowing farmers to replant palm varieties resistant to this disease (ICA 2013, 2014). These sanitary measures involved chemical and mechanical treatments requiring high investments and were opposed by small and medium-scale farmers but not large-scale ones. In the words

of one of the leaders of these oppositional movement, large-scale farmers did "really, nothing (…) Large-scale farmers were affected, but the ones with the biggest problems were medium scale farmers because they had to pay loans and also the small-scale farmers" (Interview, Bucaramanga, August 2019, my translation). The government's measures narrowly attended to the needs of agribusinesses interested in rapidly eradicating the disease and restarting production as soon as possible.

Less expensive and longer-term treatments for the bud rot disease, favored by small- and medium-scale farmers, were disregarded by the government and the National Federation of Oil Palm Growers. One of these treatments was developed by a local farmer in Puerto Wilches, in alliance with microbiologists from a nearby university. This treatment involves improving soil nutrients through promoting microorganism diversity in soil. Several farmers who applied it report a 90% recovery of sick palms after six years (Interviews, Puerto Wilches and Bucaramanga, August-September 2019). But this treatment has not been approved by the government or the palm research center, Cenipalma. In contrast, the government approved more than US $100 million to subsidize eradicating and replanting practices that followed the sanitary authority's specifications (Almario Chavez 2013; Portafolio 2013). Other organizations have further promoted measures favoring large-scale and low-diversity monocrops. For instance, a study by a market advocacy think tank and a regional development bank suggests that in order to solve the economic and social crisis spurred by the eradication of more than 25,000 ha of palm due to bud rot in one municipality in southwest Colombia, it's necessary to replant palm monocrops, this time the bud-rot-resistant version (Tobón and Cajamarca 2018). Institutional responses to the negative effects for farmers' livelihoods created by monocrops, promote planting more of these crops rather

than addressing the root causes of the problem by transforming agricultural production systems.

Producing Inequalities in Agriculture Through the Materialization of Colonial Goals

In Colombia, the expansion of the oil palm industry has built on the legacies of colonial knowledge and practices, facilitating centralized value extraction for corporations and dispossession for small-scale farmers. Despite the opportunities that agroecological groves offer for farming communities, the expansion of oil palm crops has been dominated by industrial plantations in the hands of imperial powers, first, and agribusinesses later. About 89% of oil palm crop area in the world is composed of industrial monocrops planted from seeds initially selected to fulfill goals of colonial extraction and territorial control (Corley and Tinker 2016; FAOSTAT 2020a; Omoti 2004). Today, these goals are materialized in oil palm crops around the world and continue shaping lives and landscapes in producing regions. In Magdalena Medio, Colombia, the continuation of these colonial material arrangements, now in the hands of corporate governance, has produced social inequalities through increased risks for small-scale farmers and business opportunities for palm oil corporations.

By literally preparing the land for the centralized extraction of value, colonial relations created a path dependency enabling the subsequent control and expansion of oil palm crops by corporations. While some of the corporations, like today's Unilever, were born of colonial plantation enterprises, others later benefited from colonial landscape transformations, knowledge, or legitimization of plantation agricultural practices. In Colombia, the government and early oil palm businesses brought seeds and technical assistance specifically from research and corporate centers with clear links to

imperial oil palm crops. These genetic materials and technical assistance advanced the goals earlier pursued by colonial powers in crops now managed by Colombian corporations. This legacy allows corporations to capture the value produced by peoples and lands in regions like Magdalena Medio, further strengthening their power and foreclosing the possibilities of agroecological farming and overall local control of resources.

The path dependency of industrialized agriculture rooted in colonial relations has produced an uneven distribution of risks between small-and large-scale farmers in Colombia. The monocultural approach with imperial roots implemented by Colombian agribusinesses created an ideal environment for the start and spread of the bud rot disease. This approach, therefore, implies increased risks, compared to agroecological farming (Córdoba Vargas et al. 2020; Méndez et al. 2013). These increased risks have not threatened the existence of oil palm corporations in Magdalena Medio, as they diversify investments outside agriculture. For small-scale farmers who often own little, or nothing, beyond their farm, monocrops have not only produced risks but have also foreclosed possibilities of hedging risks, or building resilience. As risks materialize into harms, like the bud rot disease that has wiped out thousands of hectares of oil palm crops in Colombia, the risks that small-scale farmers are exposed to translate into dispossession. At the same time, through the integration of small-scale farmers into the oil palm industry, oil palm corporations have benefited from maximizing profits, devolving risks, and publicizing the integration of small-scale farmers as a corporate social responsibility practice. The uneven distribution of risks through oil palm monocrops has deepened economic inequalities and further solidified social hierarchies in Colombian agriculture.

The promotion of monocrops as the most efficient agronomic approach to palm oil fruit production is a self-fulfilling prophecy that forecloses equity and sustainability in agriculture. Agroecological farming is not only better equipped to ensure the long-term productivity of agriculture but has also allowed small-scale farmers in Magdalena Medio to diversify risks and build resilience within the frontiers of their farm. However, agroecological approaches are deemed suboptimal by hegemonic agronomic knowledge (Perfecto and Vandermeer 2010; Zeven 1972). Promoting industrial agriculture, governments, international organizations, and corporations legitimize colonial agronomic knowledge. By allegedly creating commercial opportunities for small-scale oil palm growers, the support to industrial agriculture by the Colombian government and international organizations has placed these farmers in a vulnerable position. This manufactured vulnerability has further facilitated the penetration of industrial agriculture in Magdalena Medio. It has also produced dispossession for small-scale farmers, who are precisely the ones equipped for, and interested in, practicing agroecology (Córdoba Vargas et al. 2020). The prevalence of oil palm monocrops in Colombia, over agroforest systems that include oil palm trees, has been enabled by feedback loops between the materialization of colonial and corporate goals in these monocrops and the dispossession produced by the materiality of these crops, which then enables the expansion of industrial oil palm crops.

The role played by the materialization of colonial goals in producing these inequalities, means that in order to comprehensively study inequalities in agriculture, sociology must grapple with the agency of other-than-human beings. In Magdalena Medio, the ecological organization of oil palm trees has exposed different farmers to unequal risks. Arguably, it is not these trees by themselves who act to produce these differential risks, but the colonial and corporate-state relations that have transformed oil

palm trees and are now embedded in the environmental organization of these trees in the Colombian oil palm industry (Moore 2016; Tsing 2012). However, these contemporary plantation oil palm trees do carry material characteristics that enact colonial and corporate goals at the farm level without the need for the physical presence of corporate agents at the farm. In Magdalena Medio, industrial oil palm trees are producing risks and disproportionately exposing small-scale farmers to these risks. Recognizing the physical agency of trees is necessary to identify the unequal distribution of risks and the enactment of colonial governance in contemporary agriculture.

Finally, acknowledging the agency of industrial oil palm trees and monocrop arrangements does not, however, mean falling into physical determinism. Instead, by acknowledging the material agency of crops, social scientists can explore the *natureculture* of oil palm crops; that is, the socially mediated ways in which the materiality of other-than-human beings affects people and social hierarchies (Carolan 2005b; Carter and Charles 2018; Haraway 2003). This acknowledgement enables us, social scientists, to consider the power relations – such as racism, imperialism, and corporate governance – that define the material organization of our world. Considering the agency of the material also allows social scientists to better understand how farmers occupying different social positions, for instance in regard to access to capital, are differently affected by physical arrangements. This consideration is crucial to better understand the production of both old and new hierarchies based on the material organization of landscapes.

Conclusion: New Avenues for Sociology

Plantation monocrops are not just a way of organizing agriculture but a way of organizing society. These physical arrangements of plants embody the goals of colonial

agriculture and today allow corporations to control distant peoples and lands for the purpose of profit extraction. These arrangements contribute to the impoverishment of rural communities and the production of new inequalities mainly between small-scale farmers and large-scale corporations. The case of the Colombian oil palm industry and its historical roots reveals social hierarchies around agriculture in this country, and possibly other producing countries, as the result of a deep-rooted process in which powerful actors have shaped the relations between humans and plants to consolidate their own power.

This case highlights how considering the agency of other-than-human beings opens new avenues for sociology and expands the relevance of this discipline. Sociological scholarship may be wary of falling into biological determinism by acknowledging the agency of oil palm trees. Concerned with the study of social relations, and particularly relations of social inequality, in the 20th century this discipline has distanced itself from the biological deterministic ideas that had surrounded the study of social relations in the previous centuries (Alexander, Thompson, and Edles 2016). This move has made sociological scholarship take distance from the study of material aspects of the social world like bodies or trees (Catton and Dunlap 1978). However, this distance does more than allow sociologists to avoid biological and physical determinism—it also leads us to ignore the materialization of social relations. Far from a deterministic view, acknowledging the agency of trees and other beings opens possibilities to study crucial aspects of society like the socially mediated ways that the material world shapes social relations. Multispecies ethnographic methods and perspectives can allow sociology to identify specific relations beyond the human realm that are shaping and materializing social hierarchies. By considering the materiality of ecosystems sociology will be better equipped to address its core foci.

Chapter Four — Small-Scale Farmers Growing Oil Palm: Mobilizing Local Knowledge to Confront Global Risks

Palm oil is the world's most-consumed oil, and its production has transformed lives and landscapes around the globe. For instance, for Gerardo, a small-scale oil palm grower in the northeast region of Magdalena Medio, Colombia, owning an oil palm crop has meant going from having a secure unionized job to having a fluctuating income, owing loans and taxes, and hoping to quit farming if anyone dares to buy his pest-damaged cropland. For Cecilia, another small-scale farmer in the same region, planting palm has meant being able to provide for her family and having the prospects to diversify her cash-crops, while also caring for the ecological sustainability of her land, which she hopes to be able to pass on to her kids. What shapes these contrasting stories?

Palm oil crops are praised for providing economic growth opportunities for rural areas, but they also create vulnerability for farmers and farmworkers. For more than 100 years, the palm oil industry has modified the *Elaeis guineensis* (oil palm) species through genetic selection and habitat modification to increase production, at the expense of disease resistance (Nyouma et al. 2019). Thousands of hectares of connected plantations composed of genetically similar palms selected according to a narrow set of traits form an environment highly susceptible to pests and diseases (Altieri and Rosset 2018). Additionally, planting palm requires large investments related to drainage, fertilizers and pesticides. In Colombia, the fourth largest producing country in the world, an average crop requires investing US $6,400 per hectare (Mosquera Montoya et al. 2017). This means a farmer needs to invest, usually through debt, USD $64,000 to plant a 10-ha crop, like Cecilia's or Gerardo's. If a pest hits their crops, or yields are lower than expected, farmers can face the risk of losing their land, often used as a loan

collateral. Oil palm crops, in their current shape, can be very productive, but equally risky.

Besides economic and environmental risks, in Colombia oil palm crops have been at the center of violent displacement and anti-union violence. Spatial analyses show a significant increase in displacement, particularly by paramilitary groups, in regions where palm oil crops have expanded in Colombia (Hurtado, Pereira-Villa, and Villa 2017). In this country, palm oil crops have served as a tool to reconfigure agrarian landscapes; producing dispossession for local populations and accumulation of land for palm oil corporations (Ballvé 2019; Ojeda et al. 2015; Taussig 2018). In the case of the Magdalena Medio region, several NGOs and research centers have denounced systematic violence against palm oil farmworkers (CNMH 2018; Salinas Abdala 2008). The palm oil industry has played a major role in producing vulnerability for agrarian livelihoods in Colombia.

The fact that the oil palm industry is capital intensive, causes environmental degradation, has displaced farmers, and attacked farmworkers for the profit of the industry, explains Gerardo's precarious livelihood. But what about Cecilia, who runs what she defines as a successful farm? There are around 4,000 small-scale farmers in Colombia who grow less than 20 ha of palm (Fedepalma 2011b, 2019a). Traveling throughout the Magdalena Medio region, I've met many of these farmers with contrasting stories, like those of Gerardo and Cecilia. While some have been impoverished due to the adverse conditions for small-scale farmers posed by the oil palm industry, others have created economically viable livelihoods and strengthened their peasant modes of farming through a crop that offers higher incomes than

available alternatives.[10] In relation to this second group of farmers, this chapter asks, how have some small-scale farmers been able to confront the risks posed by an environmentally damaging and capital-intensive global value chain, such as the palm oil industry?

I argue that the mobilization of local knowledge and practices by small-scale farming communities has been an effective tool to confront the economic and environmental risks posed by global industries. Protection by regional and transnational NGOs, as well as the State, has been crucial to ensure this outcome. This argument expands debates on agroecology and the persistence of the peasantry by exploring the possibilities of transcending the risks posed by capitalist agriculture, including risks related to the capital-intensive, violent, and environmentally damaging nature of oil palm and other industrialized crops. By following calls from multiple scholars to study possible paths for agricultural transitions (Friedmann 2016; Silva Santisteban 2017; Tsing 2015; White 2018), it provides a better understanding of how small-scale farmers growing oil palm have managed to sustain economically viable and environmentally sustainable livelihoods under adverse conditions. In this process, my research informs what the path forward might look like for the millions of small-scale farmers who are still resisting in the face of the threats of capitalist agriculture and trade, and may hold the keys to transcending

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[10]I use the word 'peasant' to refer to farmers who recognize themselves as *campesinos,* literally meaning someone from the countryside but also referring to someone with agrarian traditions of working the land. I use the word 'small-scale farmer' to refer broadly to farmers with a landholding that is relatively small for their area; this reference includes peasant farmers and other small-scale farmers who don't recognize themselves as peasants. All the farmers you will hear from in this text work their own land, don't employ paid labor on a regular basis, and have a farm that is relatively small for their region, fitting definitions by van der Ploeg (2008) and others about peasant farmers. While not all the farmers I interviewed consider themselves peasants, their experiences can be valuable to inform theories on the possibilities of peasant farming.

those conditions. Learning from peasant communities is crucial for confronting current challenges related to agrarian livelihoods in the context of global capitalism.

In the next section, I discuss the challenges and opportunities, as well as possibilities of transition towards greater autonomy, that small-scale farmers face around the expansion of capitalist agriculture. I then discuss key characteristics of the palm oil industry in Colombia, focusing on two aspects: first presenting the context of small-scale palm oil farming in Colombia and then returning to the experiences of Gerardo and Cecilia mentioned earlier. In their communities, each of these two farmers is the currently operating most affected farmer by the realization of risks brought by the palm oil industry; focusing on their experiences allows me to magnify my abilities to analyze the tools different small-scale farmers have for confronting such risks. I then discuss the conditions that have allowed some small-scale farmers to build the necessary autonomy to confront the vulnerable position in which the palm oil industry has put them. The final section considers how these issues inform the possibilities of transition towards more equitable and sustainable forms of agriculture in connection to global value chains.

Agrarian Questions and Transitions Today

The struggles of small-scale farming: dependency and dispossession

There is extensive recognition that the expansion of capitalist agriculture threatens peasant farming. While peasant farmers hold varied characteristics in different places, they often share a reliance on personal labor and relations of reciprocity to cultivate land as their main livelihood source (Ploeg 2008; Shanin 1971). According to what is known as the "disappearance of the peasantry" thesis of the peasantry, this mode

of farming is destined to vanish. Apart from continuous accumulation of land for agribusinesses, capitalist agriculture leads to class differentiation among small-scale farmers participating in capitalist markets; some become business farmers and expand their landholdings, while the majority of others are disposed, becoming proletarians (Araghi 1995; Bernstein 2010; Paré 1991). Even scholars who support the opposite, "persistence thesis" of the peasantry recognize the many threats that this livelihood mode faces today. A chief strategy championed by numerous governments, private companies, and international organizations to purportedly support small-scale farmers in this context involves integrating these farmers as suppliers of global markets. However, some have argued this strategy intensifies marginalization through dispossession, debt, and other mechanisms that produce dependency for small-scale farmers (Giraldo 2018; McMichael 2013; Ploeg 2008). The integration of these farmers into global markets and other agrarian accumulation strategies also relies on differential exploitation of gendered labor (Collins 1995; Ojeda *forthcoming*). This exploitation deepens dependency on capitalist markets by fracturing and, at the same time, benefiting from gendered relations of peasant sustenance, facilitating further dispossession (León Araya 2017). The accumulation and exploitation strategies that are central to capitalist agriculture today intensify marginalization of, and within, peasant communities.

In addition to the conditions that the peasantry faces in the context of a global capitalist economy, in Colombia, colonial land tenure patterns, State policies favoring landholding elites, and organized violence against the peasantry have resulted in deep marginalization of peasant farming. Colonial tribute labor systems developed into a dichotomous land tenure structure in the republican period; with extensive latifundia, on one side, and on the other, a class of small and micro-scale farmers pushed to the

agricultural frontiers, formed by exploited and marginalized groups of mixed indigenous, black, and white peoples. Additionally, state restriction of access to formal land titles for small-scale farmers have limited formal landownership for these farmers, even in the agricultural frontier (Bejarano 1983; Fals Borda 1982). Agrarian reform efforts to address these issues in the 1930s and 1960s were marginal, eventually amended in the interest of landholding elites, and further pushed small-scale farmers to marginal lands (Martin Peré 2016; Zamosc 1986). Additionally, violent displacement by elites has been a mechanism for their land accumulation, while organized efforts by the peasantry to claim land have faced systemic violence by State and paramilitary groups (Ballvé 2013; Grajales 2011; Osorio 2015; Vargas Velasquez 1989). In Colombia, extractive agrarian capitalist relations impose particularly arduous conditions for peasant farming due to deep-rooted anti-peasant legislation and organized violence.

Opportunities for small-scale farming: agroecology and political engagement

Even in the context of continuing structural threats to peasant persistence, peasant farmers have actively confronted dispossession and differentiation. Multiple scholars have identified agroecological production and political mobilization as key factors to build economically viable and environmentally sustainable livelihoods based on small-scale agriculture (McMichael 2008; Ploeg 2008). Agroecological production involves diversified farming, based on local knowledge, and partially directed at subsistence. In contrast to monocultures and other forms of output maximizing agriculture, agroecology emphasizes working with the ecological base of farming to develop sustainable agricultural ecosystems. This ecological base is constituted by basic elements of an ecosystem such as soil nutrients, water sources, and plant species. Relying on this base, farmers can have relative autonomy from market transactions,

while regenerating resources needed for farming, preserving biodiversity, maintaining soil health, and preventing the spread of pests (Altieri and Toledo 2011; Nicholls and Altieri 2004; Ploeg 2008; Watkins 2011). While the conceptualization of agroecology is a disputed ground, my analysis follows its understanding as an action-oriented and participatory approach directed at the transformation of agrofood systems based on peasant farming knowledge (Méndez et al. 2013; Sevilla Guzmán and Woodgate 2013). In this vein, agroecology is not only composed by the fulfillment of the previously described practices, but also by partial steps in the transformation towards those practices (Nicholls and Altieri 2018). Agroecology, as a path towards reliance on the ecological resource base of agricultural ecosystems, can afford peasants some autonomy from market relations and possibilities to confront the threats related to the dependency produced by the expansion of capitalist markets.

While peasant farming is based on local knowledge and practices, its viability is shaped by relations between actors at multiple scales. Apart from relations with the State and global markets, small-scale farming is affected by issues ranging from a neighbors' decision to spread pesticides that can reach nearby crops, to World Trade Organization rules, transnational corporations' sales strategies, and climate change. For these reasons, La Via Campesina, and other transnational social movements bring together local peasant communities to organize at the national and transnational scales where the challenges each community is facing in their local context are created (Desmarais 2007). However, in Colombia and other places, the consolidation of cohesive peasant movements has faced difficulties articulating diverse local conditions and interests, as well as violent extermination (Zamosc 1986). Apart from social movements, the viability of peasant farming today depends on support from consumer groups, NGOs, and States to build partnerships towards agroecological sustainability

(Gonzalez de Molina 2013a). In Chiapas, Mexico, for instance, active efforts of farmer organizations, support from the State, and access to farming in communal lands have been key determinants of small-scale farmers' possibilities to benefit from oil palm crops (Castellanos-Navarrete and Jansen 2018). Although peasant farming is often defined by local ties to land, in the current context of transnational relations shaping agriculture, the perspectives of peasant communities depend on the opportunity to articulate the multiple goals of these communities with organizations at multiple scales.

Transition pathways towards autonomy in peasant farming

Analyzing how some farming communities have been able to confront critical threats posed by expanding capitalist agriculture is crucial to envision possible paths forward for peasant farming. According to Ploeg (2008), repeasantization has emerged as a viable alternative in the face of expanding forces of marginalization and exploitation. Some farmers have decided, or been forced to, rely on ecological and reciprocity relations to gain autonomy from market relations. Ploeg understands peasant farming as a multidimensional process of struggling for autonomy, sometimes completely fulfilled but more often partially fulfilled, that does not necessarily fit strict categories of persistence and disappearance. In this context, it is crucial to investigate localized processes of change around the peasant condition and how these processes fit into possibilities of broader transformations towards autonomy in food and farming (Friedmann 2016). The key here is to recognize these processes as dynamic paths that can hold multiple possibilities, if not a complete a realization for the time being, towards autonomous farming. Apart from reliance on an ecological base and labor relations of reciprocity, other important components of this autonomy are farming communities' possibilities to fulfill their sustenance needs and decide about their own

food systems (Borras 2008; Gudynas 2011). Given the diversity of contexts that peasants face around the world, struggles for autonomy follow multiple combinations of these components. The carved pathways that hold possibilities for peasant transitions may be dynamic and partial but identifying them and their potential is crucial to better understand and support possible transitions. An important place to investigate these possibilities is where broad and deep transformations to lives and landscapes are taking place, such as the palm oil industry.

Small-Scale Palm Oil Farming in Colombia

Context and genealogy

In this section I discuss three main factors of the palm oil industry and its context shaping small-scale farmers' opportunities: the structure of land tenure, available schemes of participation in the industry, and transnational oversight of the palm oil industry. The relative distribution of land in different municipalities in Magdalena Medio has shaped the type of integration into the oil palm industry that farmers and farmworkers have had access to in each site within the region. Palm oil landscapes in Magdalena Medio have been shaped by accumulation of flat, mechanizable, lands by large scale owners and displacement of peasant communities to more marginal, rolling, lands. This region is located on the Middle Magdalena River Valley. It's composed by plains around the river, where the municipality of Puerto Wilches is located. With more than 40,000 ha of palm crops and three major companies, oil palm crops in Puerto Wilches form an extensive tapestry of palms expanding for miles (Ministerio de Agricultura y Desarrollo Rural 2018). About 20 km away from the river, where San Vicente de Chucurí (San Vicente for short) is located, the landscape

turns hilly. Oil palm crops in San Vicente are concentrated in the lower western lands of the municipality, which are suitable for a crop that grows on land elevations below 500 meters above sea level. The expulsion of peasant communities from the plains around the Magdalena River, mainly in the 1950s, drove small-scale farmers to less valued lands with road access difficulties, like those of lower San Vicente (Alonso Espinal 1994; Martin Peré 2016). Palm projects in San Vicente have grown on a patchwork of peasant farming, where pastures, separated by plots of subsistence agriculture and mixed hedgerows, have been replaced by oil palm crops. Today, there are about 7,000 ha of oil palm crops in San Vicente, owned by more than 350 farmers (Fedepalma 2011c; Ministerio de Agricultura y Desarrollo Rural 2018). While less than 10 km apart, Puerto Wilches and San Vicente are home to dramatically divergent experiences for small-scale farmers growing oil palm.

Image 7

Contrasting Landscapes in Puerto Wilches and San Vicente

Landscapes in Puerto Wilches (left) and the lower San Vicente (right). Taken by the author.

An important determinant of these contrasting land tenure conditions is the history of peasant mobilization, which shaped the results of agrarian reform efforts in each municipality. The institute for agrarian reform – INCORA – focused on granting titles in newly colonized lands and buying large estates that this institute would then sell

to landless peasants at or near market value with credit (Arango Restrepo 1986; Martin Peré 2016). So, this policy did not entail a structural land redistribution program, but it did result in a path for peasant movements to make enforceable claims for land.

In Puerto Wilches, the absence of a strong peasant movement and the presence of landed elites who used and benefited from political violence in the 1950s to displace peasant communities, resulted in a lack of pressure for INCORA to engage in deeper agrarian reform efforts (Alonso Espinal 1994). During the late 80s and early 90s, a series of anti-agrarian reform legislations shifted the role of the state from granting land to landless peasants to giving subsidies and, at most, promoting access to land through market transactions (Fajardo 2002). Possibilities for land redistribution further shuttered. The concentrated land tenure structure in places like Puerto Wilches, where agrarian reform was absent in previous decades, was consolidated.

San Vicente, on its part, was one of the municipalities with the most land granted by INCORA in Magdalena Medio (Levy Carrillo 1996; Martin Peré 2016). Land titling by INCORA, in San Vicente and other places, was in large part the result of peasant coordinated efforts that included occupying latifundia and underutilized land, as well as occupying INCORA offices (Tribunal Superior de Bogota 2015; Zamosc 1986). These efforts were coordinated through national movements such as the National Association of Peasant Users – ANUC, or regional ones, like the Christian Institute of Peasant Promotion — ICPROC (Martin Peré 2016). Part of the land assigned by INCORA in San Vicente was granted to peasant families coming from other areas (Interviews, San Vicente, June -October 2019). Peasant mobilization in San Vicente and surrounding areas put pressure on INCORA to distribute land for small-scale and landless farmers, while the absence of this kind of movement helped preserve latifundios in Puerto Wilches.

Confronting agrarian reform efforts, landowning classes, in alliance with State actors, have used legal and violent means to stop and reverse peasant gains around access to land. A series of modifications to agrarian reform laws, introduced from the 1970s to the 1990s, rendered land reform largely moot (Thomson 2011; Zamosc 1986). During the 1970s, the palm oil industry was growing in Magdalena Medio. By the second half of the 1980s, it was at the center of terrain disputed by guerilla groups, paramilitary groups, the State army, and drug dealers (Alonso Espinal 1992, 1994). In Magdalena Medio and elsewhere, palm oil companies fueled and benefited from this conflict, using paramilitary forces to displace farmers and control workers (Ballvé 2019; CNMH 2016, 2018; Grajales 2011; Martin-ortega 2008; Ojeda et al. 2015). Peasant and farmworker movements were forced to shift from struggling for land or workers' rights to struggling for their life (CNMH 2018; Martin Peré 2016). Through legal and violent means, the short window that allowed some landless farmers to claim land through agrarian reform legislation shut by the mid-1990s.

The relative distribution of land that had resulted in San Vicente and the high concentration in Puerto Wilches shaped contrasting possibilities of integration into the palm oil industry for small-scale farmers in each site. The two most common forms of integration for small-scale farmers in Colombia are "Productive Alliances", led by large-scale oil palm companies, and "Peasant Palm" projects, led by a regional NGO. While both types of arrangement have been common throughout Magdalena Medio, Productive Alliances are concentrated in areas with presence of large-scale oil palm companies, such as Puerto Wilches, and Peasant Palm projects are located in predominantly peasant areas, such as the lower San Vicente and hard to access areas of Puerto Wilches. The following table summarizes some common key characteristics of Productive Alliances and Peasant Palm projects, discussed in the following paragraphs:

Table 2 — Characteristics of Productive Alliances and Peasant Palm Projects

Dimension	Productive Alliances	Peasant Palm
Organization designing the project	Palm oil corporation	Regional NGO
Land Access	Land bought from a palm oil corporation or third party, or own land (accessed through agrarian reform or through the market)	Own land, often accessed through agrarian reform
Mode of agricultural production	Palm monocrops, rarely alongside other crops	Palm monocrops, typically alongside agroecological production of other crops
Source of financial support	Bank loan processed by a palm oil corporation in favor of an association. Many associations have dissolved and the loans are assumed by individual farmers	Bank loan processed by a regional NGO in favor of an association created by the NGO
Actor handling relationships with banks and suppliers	Farmers' association when operating, individual farmers for dissolved association	Farmers' association
Previous relation with other members of the farmers' association	Vary. E.g., former colleagues at palm oil plantations, neighbors, or no previous relation	Neighbors
Contract with fruit buyer	25-year contract that forces farmers to sell oil palm fruit to the oil palm corporation	No fixed contract. Farmers establish, often stable, sales relations with nearby mills, based on price and payment conditions offered

This table is based on data gathered through 62 interviews with different actors participating in the palm oil industry.

Productive Alliances are led by an oil palm company that enables access to oil palm crops for a of group of small-scale farmers or company employees. The company requires this newly created group of small-scale farmers to constitute one or more associations. A Productive Alliance is proposed and initially managed by the company,

usually following the same principles of large-scale plantations. The company prepares the necessary paperwork for prospective small-scale oil palm growers to access credit and subsidies to pay for the land and inputs to plant the crop. The company also makes a long-term contract (usually for 25 years) to buy palm oil fruit from these farmers. While the company takes care of most of the paperwork, all the risks and responsibilities fall on the small-scale farmers. These responsibilities include paying the loan, land taxes, and all crop-related costs. These costs, without considering land, amount to about US $64,000 for a 10-ha crop, for the first three years, which is the time oil palms take to produce the first bunch (Mosquera Montoya et al. 2017). The stated goal of Productive Alliances is to promote the transformation of farmworkers and small-scale farmers into businesspeople through oil palm. This projects also allow oil palm companies to reduce fixed labor costs, avoid risks related to palm oil diseases, and access palm fruit from areas with intense armed conflict without facing the risks of violence.

Peasant Palm projects were sponsored by the Peace and Development Plan of Magdalena Medio (PDP), an NGO formed by the catholic church and a regional labor union, that encouraged small-scale farmers in Magdalena Medio to plant oil palm in their own land. PDP takes care of making loan arrangements with banks, channeling government subsidies, and finding mills that can buy the oil palm fruit from small-scale farmers. The associations that participate in this program are formed by small-scale farmers in a geographically bounded region who have usually known each other for years. PDP has taken care of mediating with banks, private companies, and the government when farmers have faced difficulties. So, while the responsibility to pay loans and land taxes falls on the farmers, PDP intervenes to make the project more viable for them. Some of the requirements to participate in Peasant Palm projects are

having access to land and planting no more than 10 ha of palm per person as a family project. PDP also encourages farmers to keep diversified agriculture alongside palm. The stated goal of Peasant Palm projects is to create a shield from the displacement that many small-scale farmers were experiencing, at a time when oil palm agribusinesses were expanding and small-scale cash crops were insufficient for most farmers to sustain themselves. According to one of the PDP's administrators at the time the palm project started, "we don't want them [small-scale farmers] to [only] become palm oil growers. We want palm to be a means for them to improve their quality of life and, above all, so that they don't sell [the land]" (Interview, Bogota, May 2019, my translation). The idea of this project was for palm to provide complementary income to make small-scale farming economically viable. However, PDP has been criticized for facilitating the penetration of the oil palm industry into the remaining pockets of peasant farming (Molano 2009).

Today, the results of Productive Alliances and Peasant Palm projects are showcased by the Colombian oil palm industry to position itself as a socially responsible actor, both nationally and internationally. Around the world, the oil palm industry has come under scrutiny, mainly due to severe deforestation in Southeast Asia to clear land for oil palm crops. Different transnational NGOs have engaged in projects and campaigns to enforce more sustainable practices in the oil palm industry (Pye 2010). These campaigns, together with research about the social and environmental consequences of oil palm crops, have influenced policies such as the European Union's Renewable Energy Directive, which bans biofuels that have, directly or indirectly, produced deforestation (European Commission 2018). In response, the oil palm industry has become more concerned about its reputation, engaging in initiatives to improve it. At the global level, the Malaysian Palm Oil Council, together with Unilever, and the

World Wide Fund for Nature, created the Roundtable for Sustainable Palm Oil (RSPO), a multi-stakeholder sustainability certification. In Colombia, the National Federation of Oil Palm Growers (Fedepalma) launched a campaign showcasing small-scale oil palm growers with messages such as "we are not workers, we are businesspeople now, because palm is the best thing we can have" (Fedepalma 2018:0:08). They add claims that "Colombian oil palm is life", countering the multiple accounts of death threats and massacres committed by paramilitaries to 'clear' the path for palm crops (CNMH 2018; Salinas Abdala 2008). The National Federation of Oil Palm Grower's campaign and lobbying efforts in the European Union, with support from the Colombian government, focus on communicating their claimed minimal effects on deforestation and improvement of the lives of small-scale farmers (Fedepalma 2019b). The aim of these campaigns is to position, on international markets and policy, the Colombian oil palm industry as more socially and environmentally sustainable than the Southeast Asian palm oil industry. Transnational oversight of the palm oil industry has made the Colombian industry concerned for its image and the conditions of small-scale oil palm growers. The national and international context in which small-scale farmers have encountered the oil palm industry shapes the structure of possibilities for these farmers, who, at the same time, actively navigate such structure and constantly reshape its contours.

Experiences of small-scale oil palm farmers

Participating in the palm oil industry has a wide variety of effects for different small-scale farmers. In the next sections I return to the stories of Gerardo and Cecilia, mentioned in the introduction, highlighting how their trajectories in terms of access to land, farming, forms of integration into de industry, and relations with organizations at

multiple scales have determined their possibilities to confront the economic and environmental risks produced by the palm oil industry. Gerardo is in his 60s, has two kids and lives in the township of Puerto Wilches, about 6 km away from his 10-ha farm. He worked for one of the largest palm oil companies in the region for 22 years before participating in a Productive Alliance Project. Cecilia is in her 70s, has three children and has been farming for 34 years in San Vicente, where she arrived after her now-late husband received 50 ha of land through agrarian reform policies. According to the testimonies of Gerardo, Cecilia, and their neighbors, these two farmers are the most affected currently operating farmers in each community by the bud rot disease, which is one of the most catastrophic risks the palm oil industry has produced for small-scale oil palm growers in the region.

My focus on the stories of Gerardo and Cecilia is guided by an extreme-case selection; their stories allow me to evaluate the tools that different small-scale farmers have for coping with risks, such as the bud-rot disease, and the factors that have shaped these tools. As the bud rot disease has extensively affected oil palm crops across Colombia, focusing on the cases of Gerardo and Cecilia allows me to specifically analyze how the trajectories of different small-scale farmers, beyond these two cases, can shape farmers' possibilities of coping with risks. It's important to acknowledge that the most affected farmers are no longer farming. Therefore, my case selection cannot capture their experiences. Yet, the trajectories, practices, and perspectives of two small-scale farmers who have been severely affected by the risks produced by the industry, but have maintained their farms, informs the mechanisms through which different farmers are affected and can confront harms. According to my interviews, all the farmers in Gerardo and Cecilia's communities have been affected by the bud rot disease, and all the farmers in each of their associations were incorporated into the palm

oil industry following a similar trajectory to theirs'. So, while the experiences of these two farmers are not typical in their communities, they are telling of the tools that different small-scale farmers possess for coping with risks in the palm oil industry.

Productive Alliance Projects

By 2000, Gerardo had been working for 22 years for one of the three largest palm oil companies in Puerto Wilches. He had a formal job, including paid vacations and contributions to his pension fund, and was part of a union. Seeing the success at the time of a group of 57 former coworkers who were part of a Productive Alliance project the company had developed in 1998, Gerardo asked the plantation manager if he could be included in the next stage of the program. In 2002, the United States Agency for International Development provided funds to partly subsidize another round of the program and the company selected a group of its highest paid plantation workers to be part of it. Gerardo had been one of them and was also selected. Today, he questions the company's motives in establishing the program: "what the company wanted was to get rid of piecework workers, lower the benefits payload. They put it in those words" (Interview, Puerto Wilches, June 2019, my translation). The company sold 270 ha of land to a newly created association of 27 workers. Each worker had to invest their severance pay to buy part of the land. The association used the subsidies obtained from the government and foreign aid and took a loan for 620 million pesos (USD $258,550 at the time) to pay for the remaining portion of the land, eradicate the old and unproductive oil palm crop that was planted there, and plant a new one. After about four years of work, Gerardo and his colleagues got the first harvest. For the first four years, before the first harvest, the income for all the members of the association came from minimal payments financed by the loan they had taken. In Gerardo's words, this was a

hard time: “making a living those four years…. Imagine! We learned to eat only stew” (Interview, Puerto Wilches, July 2018, my translation). During the first years of establishing palm oil, each hectare required an investment of about 20 million pesos (USD $8,343 at the time) to eradicate the old standing oil palm crop, prepare the soil, build new drainage, and buy inputs to change the chemical composition of soil, pesticides, and fertilizers. The deal involved a yield purchase commitment from the company for 25 years. According to the company's projections, after about 10 years, Gerardo's association would pay off the debt, and farmers would get the profits. The first four years as oil palm growers were tough, but the prospect of owning their own productive crop kept Gerardo and his partners going.

After the first harvest came through, Gerardo's income rose. But soon after, a bud rotting disease hit the crop with long term consequences for Gerardo's livelihood. “In 2008, some people got four million pesos (USD $2,080 at the time). When we started producing, paying the loan, when we started to breathe in 2008, was when the bud rotting disease came. And then came a harsh rainy season" (Interview, Puerto Wilches, July 2018). The crop flooded, and the disease expanded rapidly. This bud rotting disease starts in the spear and spreads toward the bud until the palm dies (Corley and Tinker 2016). About 50% of Gerardo's crop was affected, but his losses went beyond that. Gerardo's crop had a dramatic fall in productivity with negative feedback loops for the crop. Each harvest gave him barely enough to pay for his family's expenses, but not to pay for the crop's expenses. In Gerardo’s words,

> The palm barely gave us enough to subsist, pay for the kids' schooling, the food, house bills. And if you don't contribute to the palm, it punishes you. It punishes you by not producing the same amount of fruit. It doesn't have robust bushes anymore, but smaller ones. That's because it's undernourished. That's understandable (Interview, Puerto Wilches, June 2019, my translation).

As a monocrop genetically selected from a narrow genetic pool, palm is highly vulnerable to pests (Altieri and Rosset 2018; Nyouma et al. 2019). A momentary income drop that limits farmers' ability to buy the inputs that palm requires has long term consequences in terms of productivity. Caring for his family's expenses at a moment of income decline, meant a sharp permanent drop, a punishment, in Gerardo's crop production over the whole lifetime of the crop. At this point, Gerardo's palm was producing about one fourth of what he expected. He was also unable to continue contributing to his pension fund: "in 2013, I couldn't keep up with payments, I wasn't making enough for that. So, I got stuck back in time" (Interview, Puerto Wilches, June 2019, my translation). In order to claim a pension, among other requirements, the Colombian legislation requires workers to make payments for a minimum amount of weeks (at least 1,150) (Ministerio de Trabajo 2017). The income drop that Gerardo faced, and his consequent inability to make payments to his pension fund, meant that, in terms of pension savings, he couldn't make any progress after 2013. His crop partners were going through similar difficulties and paying association fees was the last priority. So, they decided to dissolve the association.

They faced numerous other difficulties. While the government offered a relief program that benefited these farmers, "they didn't tell us" said Gerardo (Interview, Puerto Wilches, June 2019, my translation). He only found out when calling the bank to notify them about the death of one his former partners. Lack of effective communication by the government meant that Gerardo and others had limited time to make the payments and paperwork needed to take advantage of the relief program. Gerardo had to hastily sell one hectare of land, that had barely any palms left, to a cattle farmer through an informal deal. Many of the former members of his association faced a similar situation. While many wanted to divide up the land to sell their portion, they haven't

been able to do so due to outstanding tax and mortgage debts. Gerardo is working to find a way to divide land and debts or to find a buyer for the whole plot.

Farmers in Gerardo's association, and other similar associations in the area, have contrasting experiences with their crop. Those who were able to diversify their investments have done slightly better. For example, one of Gerardo's partners in the association bought a billiard hall with the first earnings from palm and was able to keep investing in the crop as the production declined due to the pest. Others have taken additional jobs, working double shifts to care for the crop and at times investing part of their wages in it. In contrast, those who fully invested their time and initial earnings in palm have now lost all, or a portion, of their crop. Many have abandoned their land and migrated, or informally sold a portion to a family member who has the necessary cash flow to keep it running. The association of 57 of Gerardo's coworkers, which seemed successful when he decided to join the Productive Alliance project, later dissolved due to financial problems. According to my interviews, none of these 57 of Gerardo's former coworkers who formed the association that preceded Gerardo's have continued growing oil palm. Out of the 27 initial members of Gerardo's association, around six are recognized by their colleagues as having a successful running farm (Interviews, Puerto Wilches, June-August 2019). While Gerardo is the most affected *currently* operating farmer in his community, a significant portion of the farmers who participated in productive alliance projects are no longer there. Gerardo's experience reflects some of the challenges of participating in Productive Alliance projects. His experience is not the most extreme case, but it does highlight how, for many participants of Productive Alliances, integrating into the palm oil industry meant shifting from a unionized job to an economically risky enterprise that turned a few into businesspeople and most into struggling, or dispossessed, farmers.

Peasant Palm Projects

Cecilia has had a different experience. She planted palm in 2003 and now runs what she defines as a successful farm. Her family was able to secure land as part of a peasant movement that pressured the Colombian National Institute for Agrarian Reform, INCORA, to grant land to landless peasants. In the mid-1980s, Cecilia's now late husband, Emilio, worked at a large-scale palm oil company, just like Gerardo. After being fired for trying to form a labor union, Emilio and other farmworkers squatted one of the company's plots demanding land to work. Cecilia recalls how they were forcibly evacuated several times, "they were removed by the army, they were jailed like two different times" and during the occupation both she and Emilio fulfilled several tasks. "Emilio had to serve as guard. I had to go and help. People had different duties. Some were cooks, there were like six of us cooks every day" (Interview, San Vicente, October 2019, my translation). This was an organized movement with a structure that followed the intended union structure. The leadership was composed of men, as they were the ones employed in the palm oil fields. Cecilia and other women had kitchen and other care responsibilities in the occupations. Cecilia doesn't recall following a particular national peasant movement, but she does remember they received outside guidance. At the time, several national and regional movements led occupations around the country, including many that were successful in securing land for landless peasants (Martin Peré 2016; Zamosc 1990). Emilio and his co-workers were eventually advised to shift to occupying the regional INCORA offices, in the nearby city of Bucaramanga. After a day of occupation at INCORA and conversations with government officials that had already approached them to negotiate the end of previous occupations, Emilio came home with good news. INCORA officials were coming the next day to arrange the

details about the land allocation for Cecilia, Emilio, and their fellow occupiers (Interviews, San Vicente, June 20, October 30, 2019).

In 1986, the year following the occupations, Cecilia and her family were assigned 50 ha of land in San Vicente. This wasn't a gift. One of the most common deals arranged by INCORA was buying and partitioning a large plot of land to sell smaller portions to landless peasants at or near market prices, but with more flexible payment conditions than other farms sold on the market (Martin Peré 2016, Interviews, San Vicente and Sabana de Torres, June-October 2019). The main difference compared to buying land through the market was that INCORA provided credit and then made small-landholdings available by dividing larger ones. In their newly assigned farm, Cecilia's family initially built a small open floor home. They had cattle, chickens, cassava, corn, plantain, different citrus fruit, and guava. These were for both consumption and sale, "I made curds for our meals, and sometimes sold them. That's how we made money for other groceries. Because when you live in a farm you can have a good life, even if you don't make that much money" (Interview, San Vicente, October 2019, my translation). Her family's approach to farming followed the general precepts of agroecological farming, with diversified production mostly directed at subsistence and some complementary sales allowing them to buy other basic goods (like salt and sugar). This approach provided for a decent living according to Cecilia. But soon after she and her family established the farm, life became difficult due to the presence of illegal armed groups. "We were honestly frightened. When planting a cassava plant, we didn't know if we would be able to eat it" (Interview, San Vicente, October 2019, my translation). While Cecilia was eventually granted land, the fruits of farm work quickly became uncertain as she feared she would have to flee if the guerillas threatened to take her kids.

In 2003, Cecilia's son heard of a project, led by the PDP NGO, to support farmers to grow palm oil. But a guerrilla group with peasant origins that has fought for agrarian reform (Reyes Posada 1987), opposed it and threatened to displace or kill anyone who planted palm. At about the same time, paramilitary groups formed in alliance with landed elites to secure territorial control over guerillas (Romero 2003), arrived to the lower San Vicente, where Cecilia lives. Cecilia and many of her neighbors narrate stories of increased fear for their lives. Both guerilla and paramilitary groups accused farmers of being the enemy's ally and Cecilia was once threatened with a rifle for asking members of a paramilitary group camping on her farm about a turkey missing from the bunch. Cecilia recalls that after a few months, paramilitary group members had taken over, displacing guerilla members. Paramilitaries "did want us to grow palm" (Interview, San Vicente, October 2019, my translation). According to Cecilia and many of her neighbors, after paramilitary groups kicked out guerillas and made way for palm projects, the PDP people came back and established the first round of the peasant palm project in San Vicente.

With PDP support, Emilio and Cecilia planted 10 ha of palm. Their association now consists of 98 producers and also includes two of Cecilia's kids. Cecilia and her family have maintained an agroecological farming approach, apart from their palm (which is grown as a monocrop). They still have the cassava, guava, plantain, lime, and chickens they had before planting palm, and some cattle. The cattle and part of the lime harvest are for sale, while the other crops and animals are for household consumption. Sales from palm, cattle, and lime fund some of the inputs for these commercial crops and cattle, as well as some of Cecilia's family's expenses, such as house improvements. The production of cassava, guava, plantain, and chickens for subsistence continues the agroecological approach used before palm arrived. Cecilia considers palm "a blessing",

"it was a blessing, after a year and a half [after about another year in the nursery] the plants bore fruits" (Interview, San Vicente, October 2019, my translation). Income from palm allowed Cecilia to build a house with multiple rooms and provide an income for her and two of her kids, who are back living at the farm after years working outside.

Other members of her organization describe similar improvements to their quality of life, which the oil palm industry likes to showcase. Fidel, one of Cecilia's neighbors, says before planting palm "we were always penniless… with 15 cows you can't make a living, right? When that [palm] crop came it gave us enough to get by" (Interview, San Vicente, July 2018, my translation). Fidel now has one of the most productive palm oil crops in the region and has been showcased by the National Federation of Oil Palm Growers in national and international events as a success story. Farmers like Fidel and Cecilia have greater autonomy from the palm oil industry than Gerardo and his neighbors. However, they are not seen as a threat by the palm oil industry as they serve the industry's communication goals while being located in more marginal lands than those large-scale companies choose for their direct expansion.

Even though oil palms take about three years to bear the first fruit, Fidel, Cecilia, and many others in the area have had a stable income since their crops started. This is partially explained by the fact that PDP arranged for farmers to receive payments, funded by credits taken by their association, for all palm maintenance work before the first harvest. Additionally, the costs of Cecilia's and Fidel's crops have been lower than those of many other farmers, because members of their association have helped each other to plant oil palm crops through communal work sessions to establish the nursery and prepare land for planting. Members of this association had strong ties, as neighboring farmers, before planting palm. These ties have allowed them to help each other and build additional projects, including a community grocery store. The

association buys inputs in bulk and farmers pay by credit every two weeks. In hard times, when prices or production plunge, the association negotiates payment plans with suppliers. According to the PDP leadership, they have also renegotiated loans when certain farmers or associations face unusual hardship. Building on pre-existing ties and having support from organizations that can mediate between small-scale farmers and other institutions are key factors for strengthening farmers' livelihoods through palm.

Nevertheless, over the years, Cecilia's family has lost about 30% of their oil palm crop due to the same bud-rotting disease that affected Gerardo. But even in tough times Cecilia has managed to keep buying the pesticides and fertilizers palm crops need to be productive, thus avoiding the negative feedback cycle Gerardo described. She was able to do so for at least two reasons. First, her family has several crops and animals for household consumption, allowing them to use most of the income from palm to reinvest in the oil palm crop when necessary. Second, their association has helped them finance inputs when they can't pay for them. So, the remaining 70% of Cecilia's crop is productive and she wants to keep it.

When asked how she imagines her farm in the future, Cecilia explains she is preparing to plant lime in the three hectares of land where she had to eradicate palm. She decided to grow lime because, "what's the point of replanting palm there? So that it gets infected again?" (Interview, San Vicente, October 2019, my translation). Additionally, lime is both for consumption and sale. Cecilia has continued diversifying her income, keeping a partially-agroecological approach.

According to my interviews, the overwhelming majority of members of Cecilia's association live on their farm and express a high degree of satisfaction with their land and crops. Of all members of the community, Cecilia's palm has been the most affected by the pest. All the farmers I met in the area have a similar approach to

crop diversification. Similarly to Cecilia, the cash obtained through palm has allowed many of them to build robust houses and to pay for their children or grandchildren's higher education. This was still true during 2019, a year with a rough combination of low yields, low palm fruit prices, and high input costs. The association negotiated extended payment periods with suppliers to avoid negative cash flows for farmers, while most farmers relied on subsistence and other cash crops until the start of 2020, when palm oil yields and prices rose. In the case of the Productive Alliance projects set up by the company Gerardo used to work for, at least two thirds of the participants have sold or abandoned their farms. In contrast, according to participants' accounts, only about 3% of farmers in Cecilia's association have sold their farm (Interviews, San Vicente and Puerto Wilches, April-November 2019). While none of the farmers I met in this association own profitable businesses beyond their farm— but some do take up external employment at times — they have built stable livelihoods and solidarity networks they can rely on in hard times.

Building Autonomy in a Risky Business

In this chapter I've asked ask, how have some small-scale farmers confronted the risks posed by a capital-intensive global value chain, such as the palm oil industry? Exploring the different contexts that have shaped small-scale farmers' integration into the oil palm industry in Magdalena Medio, reveals how some small-scale farmers, like Cecilia, have been able to build resilient livelihoods while growing oil palm. The different mechanisms that small-scale oil palm growers have utilized to build economically viable livelihoods, in the context of agrarian capitalism, also provide important lessons to re-think their possibilities of persistence going forward. Rather than completely integrating into capitalist agriculture or being fully pushed to its

margins, Cecilia and her neighbors have integrated into global value chains to improve their income, while also growing subsistence crops that afford partial autonomy from markets and allow them to confront the risks posed by those markets. In this section I discuss how through agroecology, building on local solidarity ties, and with support from organizations at multiple scales, small-scale oil palm growers construct a pathway to adapt export crops for the benefit of peasant farming. Local knowledge about what to grow, how to grow it with low input use, and how to work together with neighbors have allowed Cecilia and others to build more economically viable and environmentally sustainable livelihoods, compared to many participants of Productive Alliances. The precepts of industrialized agriculture that the palm oil company imposed on Gerardo, created the conditions of vulnerability that resulted in his current precarious livelihood position.

The capitalist large-scale agriculture approach that has pushed small-scale farmers to the economic and environmental margins, then threw palm oil farming as a lifeboat that reproduces the vulnerability capitalist agriculture poses for small-scale farmers. Cecilia and many of her neighbors consider palm "a blessing" because it offers higher incomes and has allowed them to access market goods and services that improve their quality of life, like a better house or higher education for their kids. At the same time, the expansion of the palm oil industry to the point where large-scale producers are able to shape public policy on behalf on the industry, and incorporate small-scale farmers as suppliers in the most favorable terms to the industry, has built on peasant displacement and workers' rights violations. These were the very conditions of displacement and violations that erased the possibilities for Cecilia's husband and many others to access unionized jobs or engage in small-scale farming on more valuable lands. After creating the conditions for dispossession for smallholders and farmworkers,

large-scale palm oil growers, with the help of the Colombian government and other organizations, offered them the possibility to grow oil palm only to put them in new conditions of vulnerability.

In Colombia, palm oil mills have what the literature on Global Value Chains calls 'buyer driven power' (Gereffi 1994). Each small-scale farmer has access to, at most, a handful of mills located at a reasonable distance, while each mill has hundreds of farmers they can buy from. Each individual farmer can be discarded. The company that offered Gerardo the land deal can discard him as recipient of technical assistance (which could improve the productivity of his crop) because the crop has been affected by a disease. Additionally, large-scale industry actors dominate decision-making processes around research and technical assistance, which means that knowledge around palm oil crops is targeted towards their needs. As a result, technical assistance guidelines advise all farmers to grow palm as a monocrop, which can expose farmers to the risks of losing everything when affected by pests or sharp price drops. The palm oil industry condenses many of the adverse conditions that capitalist agriculture poses for small-scale farmers that agrarian and environmental sociology scholars have identified.

Even under these adverse conditions, some small-scale farmers have been able to build some autonomy from palm oil companies and their interests through agroecology, local solidarity ties, and State-sponsored access to land. Maintaining agroecological production alongside palm has allowed farmers like Cecilia to have complementary income sources to navigate periods of reduced palm income. Additionally, even though the bud-rotting disease affected her crop, it did not spread as expansively in her area, where intercropping is a common practice, as it did in Puerto Wilches, where palm oil crops expand uninterrupted for miles. Agroecology research suggests that natural barriers, such as the ones in Cecilia's area, play a crucial role

limiting the spread of pests (Nicholls and Altieri 2004). Other aspects of the organization of palm crops in this area also build on arrangements that precede palm. Cecilia's organization is formed by neighbors who had solidarity ties before planting palm. They knew each other and rapidly organized communal work sessions that reduced their crop set-up costs. Gerardo and his neighbors were colleagues but had never worked as neighbors. The company set the conditions for the new ties, responding to the company's needs, not Gerardo's and his colleagues'. Local farming practices and ties have allowed Cecilia to manage her farm in her own interest, rather following determinations set for the profit of a private company.

While local knowledge and practices are key aspects of what makes Cecilia's farm viable at the local level, these issues depend on a broader set of relations that includes regional companies and NGOs, the state, social movements, and transnational organizations. The mediation that the PDP NGO, and the associations they created, provide allow Cecilia and her neighbors to engage in collective negotiations with suppliers, banks, and buyers to represent the interests of small-scale farmers. In contrast, due to lack of collective representation, Gerardo and his colleagues have lost opportunities — like loan restructuring — with long term consequences for the productivity of their crops. Additionally, access to land through the State has allowed Cecilia to make autonomous decisions about her farm, while Gerardo had to agree to the company's conditions to get land. Mechanisms for access to land through the State and the existence of social movements to access those mechanisms are crucial for small-scale farmers' livelihoods. For over twenty years, paths to access land through the State (other than claiming land from which someone was violently displaced) have been shut in Colombia. So, Gerardo was only able to access land through a palm oil company

under the conditions set by the company, instead of making autonomous decisions about what to plant.

Another key role of the state is related to security. As the literature on Colombia's armed conflict and Cecilia's experience reveal, the State plays a key role shaping the types of violence to which small-scale farmers are exposed, as well as their possibilities to keep farming and even their lives (Ballvé 2013; Martin-ortega 2008). While literature on agroecology has recognized the role of the state in mediating farmers' relations with markets (Gonzalez de Molina 2013a), the Colombian case highlights the need to pay more attention to the State's role protecting the lives and livelihoods of farmers pushed to the margins by State-backed agrarian elites.

Finally, transnational NGOs overseeing the palm oil industry have made palm oil companies concerned about their image in international markets. Therefore, even with buyer driven power, they have reasons to provide some support to small-scale farmers like Cecilia's neighbor, Fidel, and they cannot blatantly dismiss these farmers in their own interest. The possibilities that small-scale farmers have for building economically viable and environmentally sustainable livelihoods go beyond the boundaries of their farms and also depend on protection from organizations at different scales to mediate their relations with global value chains.

However, many threats persist. The absence of peasant movements, perpetuation of gendered access to land, and persistence of monocropping practices threaten long-term possibilities of building sustainable and equitable livelihoods based on palm oil crops. A fundamental threat is the absence of a social movement that represents their interests as peasants. The local association that groups Cecilia and her neighbors is not intended to represent Cecilia's interests beyond palm, particularly if these interests contradict those of the palm oil industry. She has been affected by the palm oil industry

before (e.g., when her husband was fired for trying to form a palm workers labor union), and she can be affected again (e.g., by the environmental effects of large-scale palm crops). But today Cecilia does not have access to a broader peasant movement that can support her to protect her peasant livelihood. Violence targeted at peasant movements, among other factors, wiped out most of these movements, so there are no available channels for landless peasants, like Cecilia once was, to access land and become autonomous farmers. Furthermore, the gender relations, reinforced by the State and palm-oil companies, that limited land access to men meant that the paths that Cecilia and other women had for accessing land remain unchanged. Palm oil fields are hostile spaces for women and a sexist division of labor places women in the unrecognized and unpaid tasks of cooking and performing other forms of household reproduction work, while their husbands perform jobs for farms and companies that can, in some circumstances, create a path to land ownership. Finally, oil palm, even in the context of peasant farming, is grown as a monocrop. While there can be some mitigating factors (such as natural barriers between these crops) compared to large-scale monocrops, it is plausible that small-scale palm oil crops still degrade the soil in ways that agroecologists have shown monocrops do. Hence, the lime crop Cecilia is planting on former oil palm land may suffer from the effects of palm on the soil, as tens of thousands of hectares of palm monocrops in Magdalena Medio may affect overall production possibilities of such land in the long run. In order to support what Cecilia and others have achieved and foster more equitable benefits from palm oil crops for rural communities, it is necessary to protect peasant movements, subvert gendered access to land, and promote a deeper agroecological integration of oil palm for peasant farming.

Small-scale farmers are not passive actors in the expansion of capitalist agriculture. They hold crucial knowledge that points towards a possible future where widely consumed commodities, such as palm oil, can be produced through agroecological practices in ways that alter the common conditions of production that result in vulnerability to pests, deforestation, and labor rights violations. The ways some small-scale farmers in Magdalena Medio have articulated their farming practices with the efforts of the State, and regional and transnational NGOs, also sets an example of what is possible for other organizations: mediating the relations of small-scale farmers with local and global markets in the interest of peasant farming rather than agribusinesses.

Palm Oil Transitions: Beyond Traditional Dichotomies

The experiences of small-scale oil palm growers in Magdalena Medio illustrate that the possibilities of transition towards strengthening peasant economies that benefits rural communities relates to different scales of power and goes beyond the common dichotomy of subsistence peasant farming vs. large-scale capitalist agriculture. As Tania Murray Li discusses, "the transition narrative corresponds closely to a popular desire to leave behind the insecurities of subsistence production, and enjoy the fuller life that better food, housing, education and health care can offer" (Li 2009:87). The groups of farmers that Cecilia and Gerardo are part of have pursued, through oil palm, their goals of enjoying the better life that higher incomes can offer, but the promises of industrialized agriculture have failed Gerardo's aspirations. In contrast, the supposedly backward or precapitalistic practices of peasant farming have provided protection for Cecilia to navigate the risks posed by monocrops destined for global markets. A transition towards more sustainable agriculture requires recognizing the benefits that

different types of production and markets offer, as well as learning from the communities that have managed to confront adverse conditions, building strong livelihoods based on local knowledge and practices. The knowledge and practices of small-scale farmers can be more relevant to confront current challenges of impoverishment and environmental degradation than the projects proposed by global agribusinesses. Governments may support the projects of global agribusinesses based on their interest in receiving the backing of wealthy agricultural elites, but this will not bring solutions to rural poverty. Peasant farming practices complemented with higher income crops can provide a sustainable and better quality of life and work for rural communities than export monocrops, as long as farmers have the autonomy to make decisions about their own farms and the support from autonomous organizations to mobilize and protect those decisions.

This research also goes beyond common opposed narratives about the need to either wipe out palm or relentlessly expand its production. Eradicating palm would not necessarily solve the problems of impoverished rural communities or the environmental degradation this crop has created. Additionally, it would hurt the livelihoods of the farmers and farmworkers that depend on this crop and would probably shift oil supply to the more land-extensive soy or canola crops. The opposite option, expanding oil palm, would extend and intensify the adverse conditions for peasant farming created by this crop. Instead, learning from the agricultural practices of small-scale palm oil growers in Magdalena Medio and other regions draws a possible path forward for supplying current global oil markets in a way that benefits rural communities. This option is different from alternatives championed by the palm oil industry of making current palm crops sustainable, as it does not fall on marginal reforms led by palm oil companies but on transitioning towards a different form of palm oil production led by

small-scale farmers. Given the timespan of palm oil crops (around 25-35 years), such transition would take a long time and would require a significant enhancement of political support for agroecology. However, it is important to set a goal that can direct political attention towards more sustainable palm oil production. That is what this paper sets out to do.

Another dichotomy that this paper contributes to overcoming is the idea that agroecology is local, and industrialized agriculture global. While various scholars have highlighted the need for different organizations to support agroecology (Giraldo and Rosset 2018; Gonzalez de Molina 2013a), this work goes further to argue that agroecology is necessarily and simultaneously tied to the interconnections between transnational, national, and local political organizations. Even when Cecilia and other small-scale farmers focused on growing food crops for local and regional economies, before planting palm, their lives were shaped by the expansion of global oil palm markets and the Colombian government's efforts to support it. Growth of palm oil demand has fueled the displacement, labor precaritization, and armed conflict that Cecilia and many other farmers have experienced in Magdalena Medio. Their possibilities to engage in agroecological production depend on the actions and decisions of armed groups, large-scale palm oil companies, the Colombian government, and regional and transnational NGOs. Agroecological production is not only about farming practices and support from ministries of agriculture and the FAO. Its viability also depends on agricultural loan regulations, the paths for landless farmers to access land, and the goals of international aid. More critically, agroecology depends on the bodily integrity that so many national governments fail to provide farmers and farmworkers, especially women. While agroecology scholarship has recognized the importance of support from political organizations, a focus on marginalized farmers in the Global

South highlights the importance of protecting farmers' lives and autonomy. Agroecology, and its possibilities to improve the lives of different communities and the sustainability of agricultural ecosystems, depends on national and international policies that go well beyond agriculture and local contexts.

Finally, Cecilia and Gerardo's opportunities have been shaped by the agricultural patterns in each of their towns, but also by their gendered occupations. Cecilia, and all other women farmers I met during my fieldwork, were only able to access land through their husbands or other men in their family. This is true even when Cecilia and others were doing part of the work necessary to access land. During land occupations Cecilia was cooking and looking for family members jailed during occupations. But it was her husband who received the land. After the State ended land reform laws, Gerardo's path to access land is an example of "market-led", ways to secure land. In the palm oil industry, hundreds of farmworkers have participated in projects to buy land and supply oil palm fruit to their previous employer. Given that the overwhelming majority of workers in oil palm fields are men, this means that mostly, if not only, men can access land through currently available market channels. Historical and current paths to access land in Colombia, and many other places, reinforce gender inequalities in agriculture. This situation not only affects women farmers, but also the prospects of sustainable and small-scale agriculture. Multiple researchers have highlighted how the positions of care and oppression that many women hold in different communities can align in favor of subsistence communal projects and environmental exploitation, while men tend to favor cash crops and resist adopting sustainable practices, often associated with female values (Anderson 2020; León Araya 2017; Silva Santisteban 2017). In order to support a transition towards more environmentally

sustainable palm oil production led by small-scale farmers, it is crucial to support women and other gender-minority farmers to access land.

Palm oil is the most consumed oil in the world. Its path from production to consumption traverses the organization of agrarian communities and the many political organizations that shape them. Forging more sustainable and equitable food systems requires a wide array of transformations that can be informed by the organizing traditions, agroecological knowledge, and national and international ties that small-scale oil palm growers in Magdalena Medio have mobilized to build more environmentally sustainable and economically viable palm oil production for rural communities in the region.

Chapter Five — Conclusion: Tracing the Causes of Socioenvironmental Inequalities to Repair Harm

Dear reader, let me ask you a few questions: what was your day like yesterday? What did you eat? Did you have any packaged foods (like cookies, bread, or chocolate)? What about cleaning products? Did you use commercial brand soap, toothpaste, or maybe wore clothes recently washed with laundry detergent? Did you ride a diesel-powered bus? Please take a breath and a few seconds to answer these questions to yourself.

If you did consume any of the mentioned items, it is likely that there was a portion of palm oil in your life. It is likely that your life intersected with the lives of oil palm workers and small-scale farmers who, like Cecilia, Gerardo (mentioned in chapter four), and the members of Sintraproaceites union (mentioned in chapter two), produce oil palm fruit. As stated repeatedly throughout this dissertation, palm oil is the most consumed vegetable oil in the world. In many regions, including Colombia, production is expanding and will likely continue to do so in the coming years. In the words of geographer Case Watkins, "it is evident that oil palm cultivation will continue to expand throughout the tropical world. The question is not *if,* but *how*" (Watkins 2011:25). Today, this expansion is driven by large-scale plantations that destroy livelihoods and ecosystems. Identifying the mechanisms of this expansion and destruction is crucial to forge alternative food systems.

Palm oil production is expanding not only because of the unique material qualities of this oil. In Colombia, this expansion is enabled by palm oil corporations using violence against farmers and farmworkers and continuing colonial legacies of transforming palm crops and their surrounding ecologies. Yet these strategies have

limits. In Magdalena Medio, some small-scale farmers have been able to forge alternatives, building on agroecological knowledge, local solidarity ties, and support from organizations at regional, national, and transnational scales. These findings contribute to envision possible transitions toward greater social and environmental justice for agrarian communities, particularly in Colombia. They also offer tools for the sociological study of inequalities and the search for alternative futures in food systems.

The explanatory power of GVC and other economic sociology approaches can increase by addressing the historical trajectories of contemporary power relations between economic actors, the role of violence in shaping power, knowledge, inequality, and labor control. While the classical version of the GVC approach offers concrete tools to explore the distribution of labor and value in an industry, it also removes the social context in which economic activities are embedded. The development of the palm oil industry in Colombia reveals that instead of just isolating key variables, removing the social context from GVC analyses has the effect of overlooking key drivers of decisions about industrial organization and its effects on social inequality. The social, historical, and political contexts of these decisions are not accessory but structural to the workings of the world economy. Taking those contexts into account, this research suggests that violence is a key mechanism through which global economic relations produce local inequalities. Economic sociology needs better tools — focusing on power, violence, and labor control — to explore the production of such inequalities.

Addressing ecological relations as a subject of sociological inquiry is also crucial to identify the causes and mediating factors of social inequalities. Sociological analyses provide important tools to identify the social structures and decisions that produce and reproduce inequalities between people. Other fields — such as geography, anthropology, science and technology studies, and environmental studies — offer lenses

that reveal how social relations are shaped by human and other-than-human beings. The material transformations that palm oil industry actors have produced on oil palm trees over the last century, and the effects of this transformations for farmers in Colombia today, highlight how deeper dialogues between sociology and multispecies perspectives can lead to a better understanding of social inequalities in food systems and to identify ways to confront these inequalities. The field of sociology has a crucial role to play in this dialogue, analyzing the distributional effects of material transformations of palm oil trees (and other beings) on different social groups. Deeper and broader dialogues between sociological and multispecies perspectives can reveal unstudied aspects of social and environmental inequalities, as well as possible ways to confront these inequalities in various arenas of social inquiry.

Identifying these possibilities of confronting inequalities in agriculture requires simultaneously looking back — towards the past — and sideways – toward both environmental and social transformations. As agrarian scholars discuss systemic threats and opportunities for small-scale farmers in contemporary agriculture, the historical life trajectories of some of these farmers in Magdalena Medio reveal the potential of agroecological farming and social and political ties with multiple organizations as important tools to confront systemic threats. As food systems scholars discuss possibilities of forging more sustainable forms of food agriculture, the historical analysis of oil palm farming in Magdalena Medio reveals that sustainability is not only about the future but also about the past. Building alternative futures in agriculture requires analyzing both life trajectories and large-scale systems, going forward and historically. GVC approaches and multispecies scholarship can complement agrarian studies literature to investigate the roots of oppression for farmers, and how farmers can further confront those roots.

In more practical terms, my research identifies specific ways to forge more equitable and sustainable food systems, as alternatives to the common — and ineffective — approach of sustainability certifications. The experiences of various small-scale palm oil growers and farmworkers in Colombia highlight the need for land access for landless peasants and small-scale farmers, disseminating agroecological knowledge, and protecting social movements as key factors to support more environmentally sustainable and economically viable forms of agriculture. These experiences put into question the idea that sustainability can be achieved through labels and certifications, unveiling how sustainable palm oil certifications disguise exploitation and violence as corporate social responsibility. In Magdalena Medio, large-scale palm oil companies have established profitable, and allegedly sustainable, businesses through violent control of workers and continuing colonial legacies of environmental extraction. In contrast, and despite pressures of expanding plantation agriculture, some small-scale farmers have managed to maintain economically viable farms through diversified agriculture alongside palm. These farms allow them to support their families and care for the long-term production of their land. Partially regenerative agriculture has been possible through agroecological practices, State-sponsored access to land, and political support of social movements and NGOs — these factors need support from governments and other actors to enable truly sustainable and equitable agriculture by small-scale farmers.

Agroecology is particularly important for the agricultural diversification that has enabled some persistence possibilities for small-scale farmers in Magdalena Medio. The palm oil industry has promoted monocrops that can be more profitable but also riskier than diversified farming. In Magdalena Medio, palm oil corporations manage to address these risks through asset diversification outside of agriculture. Simultaneously, they

push small-scale oil palm growers to adopt monocrops, leaving no room for diversification within the assets these farmers possess. Rather than searching for a technical fix to risk hedging for small-scale farmers, policy makers can learn from and support the agroecological, risk management, strategies these farmers have implemented independent of the palm oil industry.

Furthermore, this work identifies common interests that can fuel coalitions between farmworkers at large-scale companies and small-scale farmers. In their public discourse, Colombian palm oil corporations underscore differences between these two groups. This discourse portrays small-scale farmers as forward-looking actors who are contributing to the growth of the industry by supplying oil palm fruit to profitable and socially responsible corporations (see image one on chapter two for a visual representation of this idea). In contrast, unionized farmworkers, like Sintraproaceites' members, are portrayed as greedy, limiting the industry's growth, and collaborating with illegal armed groups. But far from being distinct social groups with opposing interests, small-scale farmers and farmworkers in Magdalena Medio often transition between one position and the other. Their lives and work opportunities have been conjointly shaped by the determinations of large-scale corporations. Both Gerardo and Cecilia's husband were palm oil workers before becoming small-scale growers. In companies like Indupalma (discussed in chapter two), the shift from expanding crops through company-owned crops that offer formal employment to contract farming has been facilitated by these companies' efforts to weaken unions. Moreover, the quality of life and work for farmworkers at large-scale corporations and small-scale farmers is shaped by common processes. For instance, the material production of exploitable and controllable palm oil crops through colonial legacies has enabled the control that these corporations have exercised over both famers and farmworkers in Magdalena Medio.

The common distinction between the work and life perspectives of small-scale farmers and farmworkers that palm oil companies portray responds to the interests of these companies rather than those of farmers and workers.

Finally, this research offers clues about ways to provide reparations for victims of the Colombian armed conflict. It identifies connections between the historical trajectories of land displacement and accumulation, which are at the root of the conflict, and the contemporary business success of the palm oil industry. Palm oil corporations like Indupalma have profited from part of the violence exercised in the context of this conflict. At the same time, various State and civil society actors are searching for ways to fund the reparations that aim to acknowledge the harm suffered by victims of conflict. The connections identified in this research between past episodes of violence and contemporary business success of palm oil corporations point to the profits of this sector as a possible source of funding for those reparations. Exploring the causes and continuities of socioecological harms can illuminate ways to partially repair them.

As you and I intersect, through the palm oil in our lives, with palm oil farmers and farmworkers, dialogues between GVC, multispecies, and agrarian studies can help us identify ways to forge environmental and social justice at those intersections. Exploring the violent and ecological transformations of oil palm crops is crucial to envision alternatives to environmental and social exploitation. These analyses provide practical, and often unexplored, tools to build alternative food systems. Transforming oil palm crops based on the experiences of small-scale farmers and farmworkers in Magdalena Medio holds the potential to shape more sustainable and equitable relations along its far-reaching paths from field to fork (and shower, gas tank, and the many other spaces palm oil fills today).

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