

Assessing Forced Labor in the Abaca Supply Chain of Ecuador

Report

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ABBREVIATIONS

ALINDECO	Aljay Agro-Industrial Development Corporation
DYA	Centro de Desarrollo y Autogestión
FAO	Food and Agriculture Organization of the United Nations
HS	Harmonized System
ILO	International Labor Organization
KII	key informant interview
PPE	personal protective equipment
SPMI	Specialty Pulp Manufacturing Inc.

EXECUTIVE SUMMARY

INTRODUCTION AND METHODOLOGY



Abaca fibers hanging on drying racks outdoors. Source: ICF

Abaca, also known as Manila hemp, is a species of banana that is inedible but cultivated for the production of vegetable fiber. Abaca fibers are valued for their exceptional strength and long fiber lengths, and the fibers are used in the production of ropes, textiles, paper, and other products, including, but not limited to, specialty paper products such as meat casing, coffee and tea bags, and currency (see Table 3 for additional details). Abaca production in Ecuador accounts for approximately 15% of all global production, second only to the Philippines, which accounts for 84%. All of the abaca produced in Ecuador is exported. The cultivation of abaca is labor intensive, and in recent years,

journalistic and litigation efforts have exposed the poor working conditions of abaca laborers, most of whom are Afro-Ecuadorians (Plan V, 2019). In 2021, in response to a legal filing against Furukawa, a main producer of abaca in Ecuador, for forced labor violations, the Ecuadorian Provincial Court of Justice of Santo Domingo de los Tsáchilas ruled in favor of the workers, marking the country's first recognized case of modern-day slavery in agriculture and the first time that workers had won a lawsuit against a powerful agro-industrial company for discrimination and human rights violations (Benotman, 2021). In November 2024, the Constitutional Court of Ecuador ruled that the labor conditions in Furukawa plantations were analogous to slavery (*Caso 1072-21-jp y Acumulados*, 2024).

This study had two primary objectives: (1) to identify the current presence of forced labor in the abaca supply chain of Ecuador, as defined by the International Labor Organization and international standards; and (2) to trace the supply chain of abaca from plantations, through domestic processing facilities, and into export markets and further processing.

The methodology for this study included a combination of secondary data analysis, a quantitative survey of 156 abaca workers, qualitative interviews with 25 abaca workers, and key informant interviews with 22 experts from academia, business, and government. The worker respondents included abaca workers in Santo Domingo de los Tsáchilas and Los Ríos provinces who participated in abaca production within the last year and who were aged 18 or older. Most of the interviewers were current or former abaca workers. The recruitment of abaca workers to the research team facilitated access to workers. In addition, these workers helped refine the research tools. The survey employed convenience sampling and identified respondents with the support of local civil society actors and through snowball sampling. The findings are not statistically representative of Ecuador's abaca industry or its labor practices. However, the data help identify the existence of forced labor in the study area and, when combined with qualitative insights, offer a broader understanding of the issue.

This study used the definition of forced labor contained in International Labor Organization Convention 29 and operationalized this definition according to the guidelines provided in the 20th International Conference of Labor Statisticians *Guidelines Concerning the Measurement of Forced Labor* (2018) and the

International Labor Organization's *Hard to See, Harder to Count* (2024). According to the guidelines, a case of forced labor requires performing work that is both involuntary and under the threat or menace of a penalty (coercion). The study assessed forced labor among employed workers. Employed workers included respondents who reported working for a boss and those who reported that someone else made decisions about their work.

MAIN FINDINGS

Labor

Forced Labor

Thirty-five respondents, 34% of employed workers, experienced forced labor. Forced labor was relatively uncommon for the youngest age group (aged 18–24) and more common among those aged 25–39. This difference may relate to the difference in work activities by age. Processing abaca fibers (*maquileo*) tends to be a job for more experienced workers, and only one worker in the youngest age group reported this as their main activity. Since workers whose primary activity was processing abaca fibers (*maquileo*) experienced the highest rate of forced labor, this helps explain the lower rate of forced labor among younger workers.

Male workers had a higher rate of forced labor (40%), compared to female workers (18%); this may relate to the primary job activities performed by men versus women. As mentioned previously, workers whose primary activity was processing abaca fibers (*maquileo*) experienced the highest rate of forced labor, and this primary activity was exclusively reported by men. Only 1 of the 19 workers who reported that their primary activity was drying abaca fibers (*tendaleo*) experienced forced labor, and this activity was performed almost exclusively by women. Workers in Los Ríos and Santo Domingo experienced similar rates of forced labor. Having no contract or a verbal contract was associated with a higher rate of forced labor (36% and 35%, respectively) compared to having a written contract (25%).

Although the design of this study does not allow for an analysis of causal effects, consideration of the forced labor rate by level of education in those surveyed suggests that education may have a protective effect on forced labor. Those with less than a primary education had the highest rate of forced labor (48%), followed by those who completed primary (30%). Those with more than a primary education had the lowest rate of forced labor at 14%.

Involuntary Work

Nearly all (95%) employed workers (respondents working for or being directed by a boss) were found to have experienced at least one indicator of involuntary work.

- The most common indicator was hazardous or degrading working conditions, experienced by 87% of employed workers. The indicator was defined for this study as the failure of the employer to mitigate the risks involved in their work (respondent reported that the employer does not provide personal protective equipment needed to perform job safely, that the employer endangers respondent's life by failing to take proper safety precautions, or that the employer does not provide the training need to perform job safely) or being required to work while seriously ill or injured.

- More than one-third (38%) of employed workers experienced onerous working hours or work schedule, defined for this study as usually working beyond the legal overtime limit (12 hours per day or 52 hours per week) or being required to work non-stop work without breaks during the workday.
- One-fourth (24%) of employed workers experienced deceptive or fraudulent recruitment. Among survey respondents, deceptive recruitment most frequently occurred in relation to remuneration levels, hazards, housing, or the nature of the work.

Less frequent forms of involuntary work included abuse or manipulation of debt (7% of employed workers), inability to terminate employment (2%), and degrading work-related living conditions in housing imposed by the employer (1%).

Coercion

While nearly all employed respondents experienced involuntary work, a much lower percentage experienced coercion, which “refers to the means used to compel someone to work without their free and informed consent” (International Labor Organization, 2024, p. 3). Thirty-four percent of employed respondents experienced at least one indicator of coercion.

- The most common form of coercion was the threat of dismissal while living in employer-provided housing. This form of abuse of vulnerability was experienced by 22% of employed respondents.
- Nine percent of employed respondents experienced threat of loss of housing or land provided by the employer, another form of abuse of vulnerability.
- Six percent of employed workers experienced withholding of wages.
- Five percent of employed workers experienced threats of or actual physical or sexual violence to compel them to perform work activities they would otherwise have refused. One qualitative interviewee described a former boss who used to hit and even shoot at workers when they failed to comply with instructions.

Less common forms of coercion included restrictions on workers’ movement (2% of employed workers), abuse or manipulation of debt (1% experienced this as a form of coercion, as opposed to a form of involuntary work), retention of identity documents (1%), or threat of arrest (1%).

Child labor

Although the focus of the study was forced labor, the research tools included some questions on child labor to broadly frame the child labor risks. Fifteen percent of survey respondents reported that children work at their worksites. The actual percentage of worksites with working children may be higher due to underreporting. Qualitative interviews suggest that respondents may discount youth who work part time or alongside their parents. When asked which abaca activities are performed by children, respondents most frequently reported cutting abaca stalks to extract fibers (indicated by 96% of those

Injuries due to abaca farming

“It’s very dangerous. We say that working with abaca is the most dangerous thing. People have been killed, lost hands, heads, and legs while working with abaca.”

—Abaca worker

Most (79%) of the sampled workers have received injuries or developed illnesses because of their jobs.

Among these workers:

- 74% experienced body pain. Many qualitative interviewees described chronic, debilitating back pain.
- 67% had received cuts or wounds from sharp objects, including machetes and sharp abaca fibers.
- 29% reported injury to the limbs, which includes cuts and wounds as well as amputation.
- 21% reported damage to the lungs.
- 20% reported injuries to the eyes.

who said children work at their workplace), transporting abaca materials (54%), drying abaca fibers (33%), and maintaining plants (21%).

Supply Chain

Two large landowners dominate Ecuador's abaca production: FPC, the registered entity for Furukawa (FPC) and Marca Abaca (FPC), and el Chileno, which is the name used to identify Garman Manterola, the owner of Cafiv (el Chileno) and Manterola (el Chileno), which mainly export crops from their own land, as well as buy some crops from small producers and intermediaries.¹ The following table outlines the name conventions and corporate ownership for these companies (Appendix 4).

Exporter of record	Company abbreviation	Key informant interview respondents' vernacular company name	Known parent company, shareholders, ownership, subsidiaries, managers
Cooperativa de Exportacion de Firbras Vegetales (Cafiv)	Cafiv (el Chileno)	El Chileno	Owner: German Manterola
Manterola Miranda German Alfredo	Manterola (el Chileno)	El Chileno	Ownership: Manterola Miranda German Alfredo (100%) Managers: Seiji Nagao Nagao, Hugo Adolfo Chalen Bermeo, Angel Ivan Segarra Segovia, Jose Adrian Herrera Villena
Furukawa Plantaciones C.A. del Ecuador	Furukawa (FPC)		Registered under FPC Marketing in Ecuador Parent Company: Mavenz Registered under FPC Marketing in Ecuador
Marca Abaca SA	Marca Abaca (FPC)		Shareholders: Mavenz Inc. (33.3%); Mabalay Eric Umali (33.3%); Cabezas Espinosa Martin Solomon (33.3%) Beneficial owners: Mavenz Inc. Registered under FPC Marketing in Ecuador

Names and known ownership relations for major landowners. Source: Bank of Ecuador, Sayari 2024, key informant interviews, (Evidencity, 2024)

According to interviewees, these 2 owners collectively manage about 5,500 hectares, which represent about a third of domestic abaca cultivation land. Next in size, Agrícola is a unique corporate lead member-based initiative that represents 77 members who collectively cultivate 2,140 hectares; member plantations range from 5 to 90 hectares.² The remainder of abaca production is done by small and medium producers, with plantations ranging from 1 to 1,000 hectares, who sell directly to companies or intermediary traders.

¹ Marca Abaca was formed in 2019, one year after the legal case was filed against Furukawa. Available records indicate that Marca Abaca began exporting in 2023.

² For additional detail on Agrícola, see Section 4.1.2, Landowners.



*Artisanal abaca handicrafts in Monterrey, Ecuador.
Source: Centro de Desarrollo y Autogestión*

Abaca grown in Ecuador is almost exclusively exported as of 2024. Domestically, traces of abaca fiber are used to make artisanal handicrafts. Ecuador does not have a domestic abaca pulp processing industry, and all abaca fibers are processed into pulp abroad. Ecuador accounts for 15% of global abaca fiber exports. This first tier of the abaca supply chain, from Ecuador to importer, is relatively transparent through publicly available data. In 2023, 51.8% of Ecuadorian abaca was exported to the United Kingdom, 24.1% to the Philippines, 20.6% to Japan, and 3.3% to Spain.

At the second tier of the international supply chain, it becomes increasingly difficult to trace Ecuadorian abaca due to multiple points of co-mingling, a variety of intermediary traders, and a wide range of end uses. Major destination markets for Ecuadorian abaca—the United Kingdom, the Philippines, Japan, and Spain—have abaca pulp manufacturing facilities, and all except for the Philippines have specialty paper processing facilities. The Philippines primarily exports abaca pulp to Europe, Asia, and North America for further processing into downstream goods. At every downstream sale from the point of export in Ecuador, there is a possibility that Ecuadorian abaca fiber is co-mingled with abaca fibers or abaca pulp from the Philippines. As a result, abaca exported from Ecuador may be found in a majority of products that use abaca as an input.

Abaca is primarily processed into abaca pulp for use in specialized papers—popular end uses include tea bags, sausage casing, and banknotes. Valued for its wet strength, durability, and resistance to saltwater, abaca has a multitude of end-use applications beyond specialized paper. Traditionally, abaca has been used in textiles, marine ropes, and paper products, and industries continue to find new and innovative uses for it, including, but not limited to, the following: textiles, home décor, paper products, food and beverages, medical equipment, cosmetics, electronics, construction, and the automotive industry. All of these downstream products made from abaca are at risk of sourcing abaca linked with forced labor.

RECOMMENDATIONS

This study offers the following recommendations:

To Private Sector Actors:

- Manufacturers of abaca pulp should facilitate purchase of raw abaca fiber from Ecuador with plantations that eliminate forced labor practices. Unlike many other international agricultural sectors, abaca workers typically work exclusively in abaca and have a social-cultural tie to the land and product. Ecuador produces high-quality abaca, a product in growing demand in a global community looking for environmentally sustainable products. The abaca value chain findings suggest that profits allow for improved worker conditions and sufficient profit motivation to traders.
- There is an emerging practice of incorporating codes of conduct among companies, especially international buyers. Buyers and all end users of products containing abaca should ensure that these codes of conduct are enforced and monitored. It is crucial that these codes are informed by the Ecuadorian regulatory framework and adapted accordingly to effectively address irregular situations. It is important for national certifications to be aligned with international social certifications and made mandatory for export.

- Buyer companies should establish ongoing corporate social responsibility programs that enable small suppliers to progressively enhance their production methods to meet the standards set by corporate due diligence. In addition, due to the current conditions in abaca farming, buying companies should direct resources and oversight to improve working and living conditions for abaca workers in the short term, including investments in housing, healthcare, and education.
- Producer companies should develop business improvement plans with budgets allocated for upgrading infrastructure, machinery, and personal protective and other safety equipment. Producer and exporter chambers or associations could provide productive support to the sector by facilitating better connections between small producers and exporters. Programs should be created to raise awareness and provide training for workers on safety measures and labor rights.
- Ahlstrom, headquartered in the United Kingdom, is the corporate organizer and exclusive purchaser of abaca from Agrícola, a distinctive initiative aimed at coordinating small producers. Ahlstrom should invest in training its members to enhance working conditions, production processes, and opportunities in export markets.
- First tier importers in the United Kingdom, Japan, the Philippines, and Spain should require exports to provide a list of all small plantation owners from whom exporters of record have purchased abaca. These lists should be published to allow for third party tracing of abaca fibers from point of production to export.

To the Government of Ecuador:

- Develop specific programs to boost abaca production (particularly among small-scale producers), incorporating technological innovation, access to credit for purchasing tools and developing updated machinery, training, technical assistance, and research.
- Enhance the Ministry of Agriculture's system of mandatory permits for exported products (*Agrocalidad*) to require exporters to confirm that mechanisms for preventing and addressing forced labor and child labor have been implemented at the production source.
- Increase the number of labor, child labor, and occupational health inspections in abaca plantations, with a focus on addressing contractor-related issues.
- Launch safety and health campaigns among abaca workers and employers that include distribution of personal protective equipment.
- Implement social programs in education, healthcare, and income improvement to enhance the living conditions of abaca-producing families and prevent abuses by companies and contractors.
- Promote cooperative models and worker organizations that provide training and business development for workers and small producers.

To Other Governments:

- Support the Ecuadorian government's efforts to eliminate instances of forced labor in the abaca sector.
- Provide financial assistance and technical support to civil society actors working in the abaca sector and abaca-producing regions.
- Highlight quality investigative journalist coverage of labor abuse.
- Conduct studies on the role of child labor in abaca production in Ecuador.
- Advocate for Harmonized System code nomenclature that includes abaca-specific categories at the six-digit level, to facilitate tracing of abaca through international trade data.

To Civil Society:

- Develop projects focused on preventing child labor, preventing violence against women, facilitating access to legal aid, improving production, and promoting worker-organized cooperatives for abaca workers.
- Promote responsible consumption campaigns to raise awareness and highlight the conditions under which abaca is produced in Ecuador.
- Continue to bring national and international attention to the conditions of workers in abaca production.
- Conduct additional research on labor and living conditions for workers, especially women and children, to guide future government and private sector policies.

I INTRODUCTION

Abaca, also known as Manila hemp, is a species of banana that is inedible but cultivated for the production of vegetable fiber. Abaca fibers are valued for their exceptional strength and long fiber lengths, which can reach up to three meters (FAO, 2024a), and the fibers are used in the production of ropes, textiles, paper, and other products. Abaca production in Ecuador accounts for approximately 15% of all global production, second only to the Philippines. All of the abaca produced in Ecuador is exported. The cultivation of abaca is labor intensive due to the largely manual nature of the work, and in recent years, journalistic and litigation efforts have exposed the poor



Abaca fibers hanging on drying racks outdoors. Source: ICF

working conditions of abaca laborers. In 2019, the Ecuadorian Ombudsman's Office released a report documenting a widespread system of servitude and "modern slavery" at Furukawa's plantations (Llerena, 2019). Later that year, 123 abaca farmers, with the support of human rights organizations, took Furukawa (FPC)³ to court over allegations of forced labor (*Caso 1072-21-jp y Acumulados*, 2024). In 2021, the Ecuadorian Provincial Court of Justice of Santo Domingo de los Tsáchilas ruled in favor of the workers, marking the country's first recognized case of modern-day slavery in agriculture and the first time that workers had won a lawsuit against a powerful agro-industrial company for discrimination and human rights violations (Benotman, 2021).

This study, initiated in 2023, was intended to explore current working conditions more broadly in the abaca sector in Ecuador. The study had two primary objectives: (1) to identify the current presence of forced labor in the abaca supply chain of Ecuador, as defined by the International Labor Organization (ILO) and international standards; and (2) to trace the supply chain of abaca from plantations, through domestic processing facilities, and into export markets and further processing.

This report consists of five sections. Section 1 introduces the context and objectives of the study, followed by background information on abaca production, processing, and labor conditions in Section 2. Section 3 provides a detailed account of the study's methodology and its limitations. Section 4 provides findings on the supply chain and labor conditions. Section 5 provides a conclusion and policy recommendations.

2 BACKGROUND

2.1 ECONOMIC OVERVIEW

Ecuador is an upper-middle-income country with a gross domestic product in 2023 of \$118.8 billion and gross domestic product per capita of \$6,609 (World Bank, n.d.). Ecuador adopted the U.S. dollar as the country's official national currency in 2000, which succeeded in stabilizing the economy, reducing

³ See Appendix 4 for a summary of company abbreviations and corporate affiliations.

inflation, and restoring confidence in financial systems. However, the economy remains heavily dependent on oil, both as a source of domestic energy and export revenue. Exports are dominated by oil (40%), shrimp (22%), and bananas (10%) (UN Comtrade, 2024). In recent years, economic growth has slowed due to a hydroelectric energy crisis and rising crime rates, fueled by organized drug cartels (World Bank, 2023). In the Ecuadorian economy, abaca is not a major industry or agricultural crop. According to World Bank data, at their peak, abaca exports represented 0.03% of the country's gross domestic product. Although abaca is not of domestic economic importance, Ecuador is an important global supplier, meeting approximately 15% of the global demand for abaca.

2.2 DOMESTIC PRODUCTION OF ABACA

Abaca was introduced to Ecuador in the 1960s by a Japanese citizen named Furukawa, who recognized the favorable climatic conditions in northwestern Ecuador. Although much of the agricultural land in the northeast is dedicated to banana plantations, since the 1960s, some landowners began cultivating abaca for export. Figure 1 highlights the provinces in which abaca is grown in Ecuador.

Figure 1. Map of abaca production in Ecuador



Source: ICF

Abaca is a crop from the Musaceae family, similar to bananas and plantains (Plants For A Future, 2024). The productive lifespan of an abaca plant for harvesting typically ranges from 15 to 25 years. Once planted, abaca is ready to be harvested within 18 to 24 months. Subsequently, abaca can be harvested every 2 to 3 months for up to 25 years (Araya Gutierrez et al., 2023).

In Ecuador, two main varieties of abaca are cultivated: *Bungalanón* and *Tangongón*. *Bungalanón* is fast growing and produces a white and soft fiber, and *Tangongón* produces a stronger and more resilient fiber. Research findings did not indicate any commercial differences in the varieties. Production of different varieties were mixed regionally and seem to be co-mingled in the domestic supply chain before export. According to the Ecuador’s Annual Agricultural Surface and Production Survey for 2023, there are 15,562 hectares of planted abaca, of which 13,279 hectares are harvested. The productivity per hectare varies depending on the soil:

“We get a yield per hectare of a minimum of 3 tons of fiber per hectare per year, at the least. Of course, it depends on the land too. Abaca is not like palm, which can grow in almost any soil. Abaca is a bit more particular and doesn’t produce the same in all types of soil. So, the minimum is 1.5 to 1.3 tons per hectare per year in not-so-good soil. But the average is 3 tons.”

—Small producer, key informant interview

Ecuador’s production volumes fluctuate annually, based on productivity, market pricing, and global demand. Table 1 highlights Ecuador’s annual production volume over the last five years.

Table 1. Domestic production of abaca in Ecuador, 2019–2023

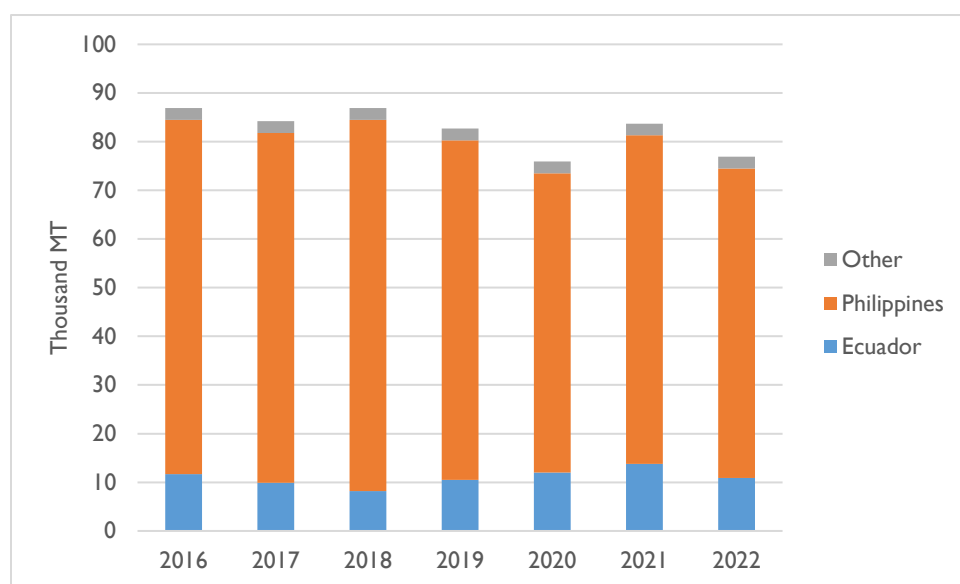
Product	Domestic production (thousand MT)				
	2019	2020	2021	2022	2023
Abaca	10.5	12.0	13.8	10.9	9.7

Source: (2018–2022) FAO, 2023 content (fao.org); 2023 UN Comtrade, 2024

2.3 GLOBAL ABACA PRODUCTION

Ecuador is the second largest producer of abaca (13%), behind the Philippines (84%). The Food and Agriculture Organization of the United Nations (FAO) does not publish country-specific abaca production levels for other small global producers, although Costa Rica is the only other producer of abaca fiber. As illustrated in Figure 2, despite minor fluctuations, the volume of global production and market share role of national producers of abaca has remained relatively constant in recent years.

Figure 2. Global production of abaca fibers, 2016–2022



Source: (FAO, 2024b); Appendix 3

2.4 ECUADOR'S ABACA WORKFORCE

Extant literature on the labor conditions in the abaca industry of Ecuador is limited. However, existing literature provides some information about the demographics of abaca workers. Most abaca laborers come from Esmeraldas, which is considered the most impoverished province in the country (Plan V, 2019). Esmeraldas also has the highest concentration of Afro-Ecuadorians in the country, a group that has historically experienced and still experiences racial discrimination and economic marginalization (Boudewijn et al., 2024).

When the Japanese citizen who introduced abaca to Ecuador founded Furukawa Plantaciones⁴ in Santo Domingo in the 1960s, employment opportunities in Esmeraldas were quite limited. News about the company's arrival and the potential for jobs circulated, and some people migrated from Esmeraldas to Santo Domingo in search of work. Older people recall how the information was passed through word of mouth. Currently, a significant portion of the abaca workforce consists of Afro-Ecuadorians (Plan V, 2019).

A master's thesis written by a member of the study's research team found that female abaca workers earn less than male abaca workers, and women have fewer job options within the sector. The author found that the primary jobs performed by women are hanging the fibers to dry and transporting the fibers from the field by donkey; women also perform unpaid domestic tasks within the camps (Torres Vinueza, 2022). In addition, children as young as age 10 have been found working in the harvesting and transportation of abaca and suffering from chronic diseases due to inhalation of abaca dust and from residue from the kerosene lamps used to work at night (Smink, 2023). A study on the living conditions of 400 abaca farmers conducted in 2019 by the Ministry of Economic and Social Inclusion showed that 83% lived in extreme poverty, with only 2% not being poor (Smink, 2023).

⁴ See Appendix 4 for a summary of Ecuadorian company acronyms. Note in the 1960s, Furukawa Plantaciones was not yet incorporated under FPC, and therefore in this paragraph, the term "Furukawa Plantaciones" is used; "Furukawa (FPC)" is used in the rest of the report.

A review of the literature also highlights the hazardous nature of the work. Medical examinations of abaca workers have found injuries and chronic illnesses to be widespread, including “(i) lower back pain; (ii) muscle pain in the legs and arms; (iii) joint pain in the knees, ankles, neck, hands and feet; (iv) breathing difficulties; (v) severe headaches; (vi) hearing loss; and (vii) decreased field of vision” (*Caso 1072-21-jp y Acumulados*, 2024). Workers also face dangerous conditions due to insufficient personal protective equipment (PPE), including a lack of protective gloves while handling abaca, which could cause serious injuries because of its sharp filaments (Benotman, 2021). Media reports also describe health and safety concerns surrounding the working conditions in the abaca industry. These include workers’ potential limb mutilations due to fiber extraction, continued use of machinery that has not been replaced in more than 50 years, overcrowded living conditions, with small rooms accommodating up to 8 people, the absence of bathrooms, and water sourced from wells and estuaries that may be contaminated by abaca residue (Baquero & Moran, 2019).

As mentioned previously, abaca farmers took Furukawa (FPC) to court in 2019, and a provincial court ruled in favor of the workers in 2021. In 2021, the Ombudsman’s Office filed a protection action against Furukawa and the Ministry of Labor. Both cases led to a series of appeals, and in 2023, the Constitutional Court of Ecuador initiated a review hearing regarding the alleged omission of the Ecuadorian State and the direct liability of Furukawa (FPC) and their duty to pay reparations. The court ruled that Furukawa maintained conditions analogous to slavery in the form of servitude (*servidumbre*) on its estates, and it ordered the company to pay financial compensation totaling \$41 million to the workers involved in the cases and to issue a public apology. The court also found that the Ministry of Labor and Ministry of Health failed to adopt measures to prevent the situation (*Caso 1072-21-jp y Acumulados*, 2024).

The case report describes the exploitation and detrimental living conditions experienced by the workers and their families during the time period reviewed by the court (1963 to 2019), including the following:

- Workers experienced dangerous working conditions, with no efforts on the part of Furukawa to mitigate the inherent risks in abaca production, including failure to provide or facilitate access to health facilities.
- There was a lack of access to schooling for children living on the remote plantations, resulting in generations of people who see abaca farming “their vocation and only possibility of subsistence” (para. 119).
- Instances of child labor were found.
- There were “restrictions on entry and exit from the farms (gates locked with padlocks and restricted vehicle access)” (para. 64.3).
- Workers had extremely low earnings, partially due to deductions for the use of tools necessary for the work, often resulting in a cycle of debt to Furukawa. Workers or tenants were sometimes given an advanced payment, which “functioned as a production quota.”
- Workers experienced racist insults; for example, “blacks have no rights to anything” (para. 104).
- Workers lived in degrading housing conditions.
- Women and girls were exposed to sexual violence and harassment (*Caso 1072-21-jp y Acumulados*, 2024).

The case report also describes various forms of intermediaries through which Furukawa has sourced labor during its years in Ecuador. Before 2011, the company “operated through intermediaries known as field bosses or group bosses and through outsourcing companies” (para. 74). From 2011 to 2019, the company “operated through intermediaries who were tenants of the company’s properties” (para. 74). The cost to rent the land was calculated based on the abaca production expected for that piece of land, and after this deduction, little remained to pay the workers. Under all of these models, the abaca had to be sold exclusively to Furukawa. The report concludes that, although Furukawa used different

contracting models over the years, the abaca production system remained controlled by Furukawa while the people who harvested it received minimal income. Furukawa began directly hiring workers in 2019 (*Caso 1072-21-jp y Acumulados*, 2024).

3 METHODOLOGY AND STUDY IMPLEMENTATION

3.1 RESEARCH QUESTIONS

This study was guided by the following research questions:

1. Are there indicators of forced labor present in the abaca industry of Ecuador, and how and where do these occur within the supply chain?
 - a. At what stages of the supply chain is there forced labor?
2. Who are the main stakeholders in Ecuador involved in the sale and processing of abaca obtained through forced labor?
 - a. Is abaca processed into downstream goods in Ecuador? How is exported abaca harvested in Ecuador and consolidated before export?
3. What role do abaca exports from Ecuador play in international markets?
 - a. What downstream products are produced with abaca?
 - i. Which of those abaca downstream products are at high risk of being produced with abaca from Ecuador?

3.2 METHODOLOGY

The methodology for this study included a combination of secondary data analysis, a quantitative workers' survey, qualitative worker interviews, and key informant interviews (KIs). The process began with a review and analysis of available reports and trade data, guided by thematic areas of focus such as forced labor and the abaca supply chain. This review contributed both to the study design and the final report.

Quantitative workers' survey: The survey of 156 workers sought to identify the presence and characteristics of forced labor in abaca production. The design of the survey and the operational definition of forced labor were guided by the 20th International Conference of Labor Statisticians *Guidelines Concerning the Measurement of Forced Labor* (2018) and the ILO's recently released *Hard to See, Harder to Count* (2024) (for more details, see Section 3.3, *Measuring Forced Labor*). The survey captured respondents' socio-demographic information and their work activities and indicators of forced labor in their most recent job in abaca.

The survey targeted abaca workers in Santo Domingo de los Tsachilas and Los Ríos provinces who participated in abaca production within the last year and who were aged 18 or older at the time of survey administration. The survey employed convenience sampling and identified respondents with the support of local civil society actors and through snowball sampling. Researchers intentionally included workers at both small-scale and large-scale operations and prioritized workers who worked for employers. The survey was administered by hand-held tablets on the SurveyCTO platform.

Qualitative worker interviews: Qualitative worker interviews were intended to gather additional insights on the topics covered in the survey. These interviews were administered to a subset of 25 survey participants.

Key informant interviews: The 22 KIs gathered information on how the abaca supply chain in Ecuador is structured, what actors are involved and how they interact, and how abaca produced with

forced labor could find its way into downstream goods. Respondents were selected based on their expertise in these areas, with participants drawn from academia, business, and government.

The research instruments were adapted from ICF's global research instruments to fit the context of the abaca supply chain in Ecuador. This adaptation was informed by a scoping study conducted in December 2023, as well as by inputs from ICF's regionally based research partner, Centro de Desarrollo y Autogestión (DYA). The research instruments were reviewed by members of the survey team who were current or former abaca workers. Their insights proved invaluable, ensuring that questions were contextually relevant and appropriately framed to maximize respondent comprehension and promote accurate responses.

All instruments were translated into Spanish. Quantitative data analysis was performed using Stata 15, and interview notes and transcripts were thematically coded manually by two coders and organized in Excel. All interview notes and transcripts were translated into English. The research team triangulated the results of the qualitative and quantitative analyses to identify key findings and conclusions. This process ensured that all findings were supported by multiple evidence sources and analyses.

3.3 MEASURING FORCED LABOR

This study uses the definition of forced labor contained in ILO Convention 29: “The term forced or compulsory labor shall mean all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.”⁵ The study operationalizes this definition of forced labor according to the guidelines provided in the 20th International Conference of Labor Statisticians *Guidelines Concerning the Measurement of Forced Labor* (2018) and the ILO's *Hard to See, Harder to Count* (2024). *Hard to See, Harder to Count* (2024) was released during the planning stage of this study, and it offers much more detailed guidance on conducting research on forced labor compared to previously available resources. The ICF research team consulted with the authors of the guidelines and with the U.S. Department of Labor during the adaptation of these guidelines to the context of abaca production in Ecuador.

According to the guidelines, a case of forced labor requires performing work that is both involuntary and under the threat or menace of a penalty. *Hard to See, Harder to Count* (2024) describes three employment stages: recruitment stage, employment stage, employment separation stage. For this study, a worker must have experienced both involuntary and coercion during the same employment stage to be classified as a case of forced labor.

This study uses the following indicators of involuntary work, drawn from ILO materials:

- Forced recruitment
- Deceptive or fraudulent recruitment

⁵ This definition differs from the one used by the Ecuadorian Constitutional Court in determining that Furukawa workers experienced servitude (*servidumbre*), a practice analogous to slavery. The judgement defines servitude (*servidumbre*) as “the condition of a person who is obliged by law, custom or agreement to live and work on land belonging to another person and to provide that person with certain services for pay or free of charge, without the freedom to change his condition” (para. 52). The court uses criteria developed by the Inter-American Commission on Human Rights to verify the existence of slavery or similar practices, noting that “although not all criteria are required in all cases, such criteria must demonstrate sufficient control to significantly limit freedom and affirm that the victim cannot reasonably change his or her condition” (para. 53). The following are the criteria: “restriction or control of individual autonomy, loss or restriction of a person’s freedom of movement, obtaining a benefit by the perpetrator, vulnerable position of the victim, absence of free will or consent or its irrelevance due to the subjection of the victim to forms of coercion, use of physical or psychological violence, economic exploitation and detention or captivity” (para. 51) (*Caso 1072-21-jp y Acumulados*, 2024).

- Hazardous or degrading working conditions
- Onerous working hours or work schedule
- Degrading work-related living conditions
- Abuse or manipulation of debt
- Inability to terminate employment

The study uses the following indicators of coercion, drawn from ILO materials:

- Physical or sexual violence
- Restrictions on workers' movement
- Abuse or manipulation of debt⁶
- Withholding of wages
- Retention of identity documents
- Threat of loss of housing or land provided by employer

See Appendix 5 for the survey questionnaire, and see Appendix 6 for a table showing how the indicators of forced labor, involuntary work, and coercion are operationalized.

3.4 TRAINING AND PREPARATION

Training took place in Quito, Ecuador, on June 26–29, 2024. The training was facilitated by DYA with support from ICF. The training comprehensively covered the study objectives, the definition of forced labor and forced labor indicators, research design, fieldwork procedures, research ethics, informed consent protocols, data quality assurance, and a detailed review of the research tools. It also included mock surveys and interviews and feedback sessions aimed at refining interview techniques. Most of the interviewers were current or former abaca workers. During the training, these workers shared insights into the abaca supply chain, terminology used by workers, details of tasks completed by different types of workers, risks experienced by workers, access strategies, and safety considerations. This feedback was used to refine the fieldwork plan and research tools.



Interviewer administers a survey to an abaca worker.
Source: DYA

Pilot data collection took place in Santo Domingo de los Tsáchilas. Following the pilot, the research team conducted a debriefing session to discuss challenges encountered and lessons learned.

⁶ According to *Hard to See, Harder to Count* (2024), abuse or manipulation of debt can be both a form of involuntary work and a form of coercion. In this study, respondents who indicated that they owed a debt to their employer that had been manipulated were considered to have experienced an indicator of involuntary work (see Table 10. *Debt to employers among employed workers*). Those who reported debt bondage as a reason they were forced to perform a work activity they would otherwise have refused were considered to have experienced an indicator of coercion.

In response to these lessons learned, the research team made several minor revisions to the questionnaire to improve respondent comprehension.

Prior to data collection, the research design and instruments were approved by ICF’s independent Institutional Review Board. Researchers were trained to adhere to strict ethical guidelines, including informed consent, confidentiality, and data security. The research was performed in compliance with 45 Code of U.S. Federal Regulations Part 46 on the Protection of Human Subjects. Verbal informed consent was obtained from all respondents before proceeding with the interview by reading a consent form aloud to them. Interviewed workers were also provided with a resource sheet detailing local support services, including government and community organizations. All personal identifying information was redacted before data analysis.

3.5 DATA COLLECTION

Data collection with abaca workers took place in July 2024, with 156 surveys and 25 qualitative interviews completed. Data quality was closely monitored in real time by the survey supervisors present in the field to address any issues and review submissions. KIs were conducted between July and October 2024, using semi-structured interview guides tailored to each respondent’s expertise and role. A total of 22 KIs were completed. Table 2 summarizes the study sample by type of participant and type of data collection.

Table 2. Sample summary

Type of data collection	Workers	Key informants	Total
Surveys	Santo Domingo region: 95 workers Los Ríos region: 61 workers		156 participants
Qualitative interviews	Santo Domingo region: 17 workers Los Ríos region: 8 workers	Ecuadorian government agencies: 6 Academics/think tanks: 4 Industry: 9 Independent professionals: 3	47 participants

3.6 CHALLENGES, LIMITATIONS, AND LESSONS LEARNED

Access to workers: Accessing abaca workers for interviews initially posed a challenge. Abaca workers not involved in the legal issues discussed in Section 2.4 feared being blacklisted or losing their jobs and were reluctant to speak with outsiders.⁷ It was necessary to recruit former abaca workers to the research team to gain access to the target population. However, this posed a significant challenge because although they were well-connected in the community and knowledgeable about the supply chain, they lacked research experience and training. To address this, the former abaca workers hired for the project underwent thorough training and were supported by a strong supervision team that was very involved in data collection.

⁷ Qualitative interviewees recounted experiences of blacklisting; for example: “Yes. For instance, not long ago, I tried to submit an application at Rey Leche. The only thing they asked for was my ID number. I handed over my ID, my voting paper, my COVID papers, everything, and they looked me up in the system. They said, ‘No, you can’t work here because you’re involved with Furukawa.’”

Sampling method: The quantitative workers' survey used purposive and convenience sampling rather than probability sampling, allowing for a diverse pool of respondents but also introducing limitations. Findings are not statistically representative of Ecuador's abaca industry or its labor practices. However, the data help identify the existence of forced labor in the study area and, when combined with qualitative insights, offer a broader understanding of the issue.

Supply chain tracing: Supply chain research for this report triangulated data from multiple national government publications, international organizations, data subscription services, open-source research, and KIs. Due to limitations in Harmonized System (HS) nomenclature that categorizes abaca fibers and pulp under the same six-digit code as other plant fibers, whenever possible more narrowly defined abaca statistics from the Bank of Ecuador, FAO, and Philippine government publications were used in place of UN Comtrade statistics.

In addition, shipping records from Panjiva and Sayari were reviewed to identify specific companies trading in abaca fibers and downstream goods, such as abaca pulp. There is an inherent limitation to this methodology, as shipping data are not exhaustive—even among reporting countries—and records are subject to errors and omissions. In addition, the over-inclusive HS classification of abaca fiber and abaca pulp with other plant fibers increased the risk of including the trade of non-abaca downstream goods. Therefore, whenever available, shipping records' "product descriptions" were reviewed to ensure greater specificity and accuracy when identifying downstream goods produced with abaca.

Shipping data facilitated the identification of abaca importers or record. All registered importers in the United Kingdom, Japan, and Spain were approached, along with certain importers in the Philippines and downstream importers in the United States. The majority of importers did not reply; among those who did, several opted out of interviews after discussing the nature of the research with the interviewer. Although select interviews with importers proved useful, they generally provided a limited perspective on their operations and did not offer a comprehensive overview of the national or international abaca industry.

4 FINDINGS

The following sub-sections present the study's findings. Section 4.1 provides the abaca supply chain findings, tracing the domestic processing and consumption of abaca in Ecuador as well as the international export and downstream uses of abaca products from Ecuador. Section 4.2 outlines findings related to labor conditions.

4.1 SUPPLY CHAIN FINDINGS

4.1.1 Overview

Efforts to trace and document the supply chain of Ecuadorian abaca are complicated by the manner in which the Ecuadorian legal system handles the formation and documentation of in-country subsidiary and affiliate companies.

Throughout the following sections, significant effort has been made to accurately specify companies involved in the export and production of abaca in Ecuador. At the same time, researchers have also endeavored to include, where applicable, the names by which workers refer to individual purchasers and export companies.⁸

⁸ See Appendix 4 for a summary of company abbreviations and corporate connections.

4.1.2 Landowners

According to key informants, abaca production in Ecuador is dominated by two large landowners—FPC, the registered entity in Ecuador for Furukawa (FPC) and Marca Abaca (FPC), and el Chileno, the term used to identify Garman Manterola, the owner of Cafiv (el Chileno) and Manterola (el Chileno), which primarily export crops from land they own, while also purchasing some crops from small producers and intermediaries.⁹ Interviewees estimate that these two owners collectively manage around 5,500 hectares, which represents about one-third of domestic land dedicated to abaca cultivation.¹⁰ Agricola,¹¹ a unique initiative for organizing small producers, represents 77 members who collectively cultivate 2,140 hectares; member plantations range in size from 5 to 90 hectares. The remainder of abaca production is done by small and medium producers, with plantations ranging from 1 to 1,000 hectares, who sell directly to companies or intermediary traders (qualitative interview with industry representative).

4.1.3 Production

4.1.3.1 Labor

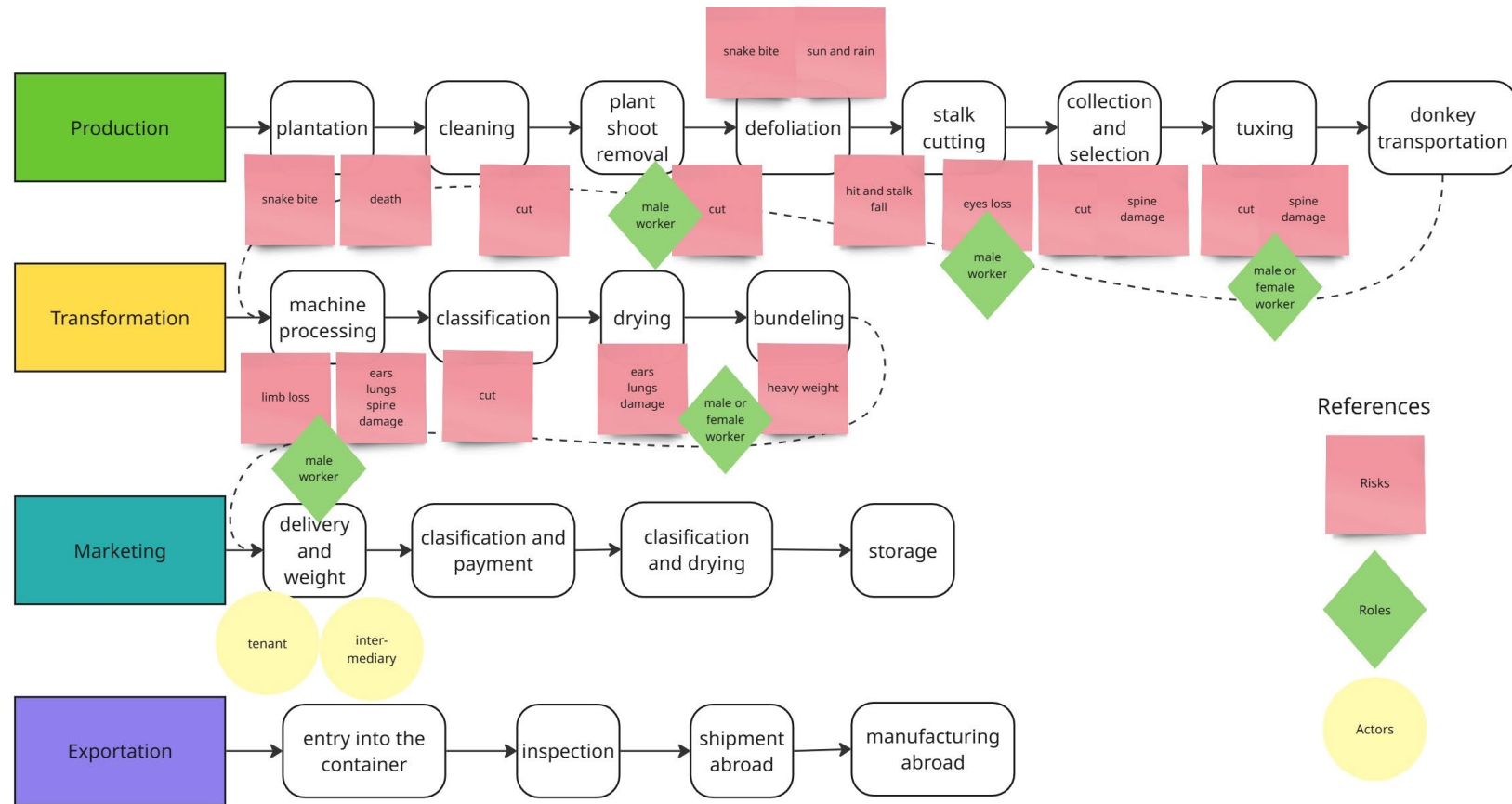
The abaca supply chain starts with production, followed by transformation, marketing, and export. As part of a qualitative group research activity with abaca workers who worked in the production or processing of abaca fiber, the supply chain of abaca was reconstructed, identifying risks, roles, and actors involved in each phase. It is important to highlight that this conceptualization was carried out from the worker's perspective. Figure 3, the product of this exercise, describes the activities of the production stage. The other links in the chain related to commercialization and export will be discussed later.

⁹ See Appendix 4 for a summary of company abbreviations and corporate connections.

¹⁰ Following the legal case against Furukawa, approximately 400–500 hectares of Furukawa land is managed by former Furukawa employees who are involved in the case.

¹¹ According to its corporate website, Ahlstrom helped establish the farmers' association in 1967 and is the sole customer of the cooperative (Ahlstrom, 2024a). KII respondents indicated that Ahlstrom establishes an annual quota of 1.5 tons per hectare and sets a per ton price that is slightly above the market rate paid by other buyers. The producers typically produce more than 1.5 tons, but Ahlstrom will not purchase any fibers above the predetermined annual quota. Rather, Ahlstrom sources from other abaca fiber producers in Ecuador, including Cafiv (el Chileno) (KII with industry representative).

Figure 3. Stages of abaca production in Ecuador from a worker's perspective: Risks, roles, and actors



Source: DYA

The workers' description of the domestic production of abaca before being sold for export is consistent with descriptions found in secondary literature and KIs. The production of abaca is labor intensive and involves multiple steps:

- **Planting:** Abaca is cultivated by planting rhizomes or suckers. It takes about 18–24 months for the plants to mature.
- **Maintaining the plants (*chapeo*) and pulling up shoots (*dehije*):** The abaca plants require regular care, including weeding, fertilizing, and pest control, until they reach maturity.
- **Harvesting abaca leaves (*tumbado*):** Once the plant matures, the stalks are harvested manually and collected into a pile.
- **Cutting abaca stalks to extract fibers (*tuzeo*):** Only the outer layers of the stalk are used for fiber extraction, as the inner layers are too weak.
- **Transporting abaca materials (*burreo*):** After cutting, bundles of stalks (*tonguillos*) are transported by donkey to the machine for further processing. Donkeys are primarily herded by women and children.
- **Processing abaca fibers (*maquineo*):** The harvested stalks are stripped to remove the fibers, typically with a mechanical stripping machine with a diesel engine driving a roller, equipped with blades and a system for opening them. The process involves scraping off the pulp to separate the fiber from the plant. It must occur within 8 to 12 hours of stem cutting to avoid discoloration and maintain optimal fiber quality.
- **Drying abaca fibers (*tendaleo*):** The abaca fibers are then dried, usually hanging on racks constructed of small palm trees under the sun, to remove moisture. Proper drying is essential to preserve the quality of the fiber. In post-drying, fiber is stacked in dry, covered, and well-ventilated locations to preserve quality.
- **Classification:** After drying, the fibers are sorted and graded based on quality, length, and strength. High-quality fibers are more durable and fetch higher prices.
- **Baling:** The dried and graded fibers are compressed into bales for easier transport and storage.
- **Distribution:** The bales of abaca fiber are transported to manufacturers or exporters for processing into various downstream products such as ropes, textiles, and paper.

Workers have different roles during the stages of transformation and production of abaca fiber. Many workers engage in multiple activities, reflecting the sector's dynamic nature, which combines seasonal and daily tasks. Workers may participate in various industry activities concurrently or in different capacities, depending on the season. Some tasks, such as transportation and drying, tend to be performed by women. Operating the stripping machine (*maquineo*) is typically the best-paid task, as it requires (informally transferred) training and is considered the most dangerous task in the production process.

Harvested abaca in Ecuador is sold either to the landowner or independent small traders. Small landowners who are members of Agrícola sell their abaca quota to Alhstrom. Worker interviews and KIs indicated that abaca is often stored at warehouses in La Concordia or Santo Domingo, and from there it is exported through ports on Ecuador's Pacific coast. Exporters and destination markets are further detailed Section 4.3, *Exports*.

4.2 DOMESTIC CONSUMPTION

As of 2024, abaca grown in Ecuador is almost exclusively exported. Trace amounts of abaca fiber are consumed domestically to create artisanal handicrafts; examples of handicrafts are depicted in the image to the right.

Interviews with industry stakeholders in Ecuador also revealed nascent domestic private sector efforts to develop uses for abaca fiber in higher-value downstream goods—such as boxes or bags for bananas destined for export. To date, these efforts have yet to lead to a substantial increase in domestic use of abaca grown in Ecuador.



*Artisanal abaca handicrafts in Monterrey, Ecuador.
Source: DYA*

4.3 EXPORTS

There are no domestic abaca pulp processing facilities in Ecuador. Thus, all Ecuadorian exports of abaca are in the form of raw abaca fiber.

“Ecuador doesn’t export pulp, just fiber. And it’s something we want to do and plan to do, but, as the saying goes, ‘If you try to do too much, you accomplish little...’ That’s not just a machine; that’s an entire pulp plant, right? And pulp is very well received.”

—Industry representative, KII

In 2022, half of all abaca produced in Ecuador was exported to the United Kingdom, a quarter to the Philippines, approximately 20% to Japan, and less than 4% to Spain. Export patterns remained consistent in 2023, in which 51.8% of Ecuadorian abaca was exported to the United Kingdom, 24.1% to the Philippines, 20.6% to Japan, and 3.3% to Spain¹² (Appendix 3). Although there have been annual fluctuations in abaca production and export volumes over the last decade (see Section 2.3, *Global Abaca Production*), 2022 was the first year the United Kingdom replaced the Philippines as the largest destination market for abaca from Ecuador. Between 2022 and mid-2024, new export traders entered the market in Ecuador, and more than a dozen new destination markets imported small amounts of abaca; however, these new destination markets represent less than 1% of total abaca exports from Ecuador (Appendix 3).

Abaca fibers are exported by large companies or export traders and imported by affiliated companies or intermediary traders. Abaca fibers are most commonly sold for transformation into abaca pulp, but they are also sold for the production of rope, twine, yarn, fabric, and artisanal crafts. KII respondents indicated that commercial abaca trade contracts are typically customized to the client, and all abaca

¹² As noted in the limitations section (Section 3.6), export data in this report used data published by FAO and the Governments of Ecuador and the Philippines. HS nomenclature is overly broad; abaca fiber is classified under HS 5305.00, which includes other fibers, specifically: “Coconut, abaca (Manila hemp or Musa Textilis Nee), ramie and other vegetable textile fibers, not elsewhere specified or included, raw or processed but not spun; tow, noils and waste of these fibers (including yarn waste and garnetted stock).” In the case of Ecuador, in recent years, exports under HS 5305.00 are nearly identical to reports on abaca fiber exports, suggesting that Ecuador does not export other vegetable fibers included in the six-digit HS description. However, this is not true for other exporting and importing countries. Therefore, data from FAO and national governments are used to ensure accuracy. The issue of overly broad HS nomenclatures becomes more pronounced with each intermediate and downstream product, such as abaca pulp, cordage, and paper. See Appendix 3 for further detailed information on HS codes.

fibers are exported abroad for further processing and contain purchasing quotas and unique pricing arrangements based on buyer-specified quantity and quality criteria.

Key informants revealed that Ecuadorian exporters generally perceive that international buyers are not concerned with labor conditions in abaca production, but rather focus exclusively on the quality and price of abaca fibers. However, some respondents noted there is growing awareness of labor abuses following the legal case against Furukawa (FPC). Although the case against Furukawa (FPC) did raise awareness in the industry, and some buyers and sellers of abaca have public company statements on sustainability and labor rights, research findings show that labor exploitation remains widespread in the industry.

Domestically, the normalization of poor labor and living conditions in agricultural production in the region, especially within the abaca industry, seemed to decrease some industry stakeholders' interest in labor issues. Most producers and traders interviewed mentioned that working in abaca production is tough, low-status work and that formal contracts are not common, but some industry representatives claimed that workers are well-acquainted with the business and have the ability to negotiate.

“Auditors and outsiders think, believe, estimate—because I argue they don’t know—that the people working in the fields live in ignorance. And that’s not true. The workers know perfectly well how much things cost, what the benefits are, etc., etc., etc. They’re well aware of the economy. You can’t go there and say, ‘Hey, come here, I’ll pay you three dollars a day.’ No, ma’am. No one will work for that. They’d rather sit around a fire. So, people here work for more than the minimum wage, okay? So, all this work, all these services are processed, invoiced, and everything, because the tax authority (SRI) is on top of everyone, right? All those service charges are based on a worker’s equivalent salary of around \$800 per month. So, it’s not like they’re being exploited and forced to give their labor away for five dollars, no. No one, no one works for less than what I’m telling you. They charge by the day, but people know, and they’re aware that this is the going rate everywhere. And that’s the baseline salary.”

—Industry representative, KII

This industry assessment of labor conditions contradicts the labor research findings presented in this study. Many workers indicated that they felt obliged to accept the terms offered by employers because of a lack of alternative employment opportunities. In addition, as discussed in Section 4.4.2.5, most abaca workers who participated in the survey earn less than minimum wage.

Most industry stakeholders seem to accept the status quo of labor conditions for abaca workers, but one exporter indicated that their company makes efforts to differentiate itself by ensuring “fair” payment to the workers who supply them abaca and by formalizing contracts with their permanent workers. This stakeholder expressed expectations that international businesses will increasingly intensify their demands for decent working conditions, and they hope their social marketing will be a business advantage over other sellers who engage in worse labor practices. However, another industry representative assessed the business community’s interest in social and environmental certification systems differently, stating:

“They ask for [environmental certification], because foreign legislation also asks for it, but it is not that... It is not that this gives it competitive competence [advantage].”

—Industry representative, KII

Thus, it remains uncertain what, if any, impact nascent industry efforts to improve labor conditions will have on abaca workers.

4.3.1 Trade Overview

Major destination markets for Ecuadorian abaca—the United Kingdom, the Philippines, Japan, and Spain—have abaca pulp manufacturing facilities, and all except the Philippines have specialty paper processing facilities. Therefore, the Philippines primarily exports abaca pulp to Europe, Asia, and North America for further processing into downstream goods. Abaca fiber from Ecuador can be co-mingled with abaca from the Philippines at pulp processing facilities. When asked if the Ecuador abaca exports to the Philippines are mixed with Philippine fibers with varying levels of quality, an industry representative responded:

“They mix it, yes, they mix it. [It doesn’t deteriorate the overall quality because] the cellulose becomes more rigid next to each other. In other words, the mixture is more or less 70% Philippine fiber and 30% Ecuadorian fiber.”

—Industry representative, KII

In addition to co-mingling at pulp processing facilities, a second point of co-mingling can occur when abaca pulp is purchased by downstream users and potentially combined with pulp from other sources. For example, Ahlstrom¹³ in the United Kingdom primarily sources abaca fiber from Agricola and Cafiv for pulp manufacturing, but Ahlstrom also purchases abaca fiber and pulp from the Philippines, which in turn are likely partially sourced from other Ecuadorian fiber exporters, like Furukawa (FPC), Cafiv (el Chileno), or Manterola (el Chileno). Co-mingled pulp is used in the production of a vast array of downstream goods. It becomes increasingly difficult to trace abaca as it moves through a complex international supply chain through multiple industries, but there is a clear risk of co-mingling of abaca fibers and pulp produced with forced labor.

Despite the opacity of parts of the supply chain, the downstream uses of abaca are well-known. Valued for its wet strength, durability, and resistance to saltwater, abaca has various end-use applications. Traditionally, abaca has been used in textiles, marine ropes, and paper products, but industries continue to find new and innovative uses for abaca. Abaca can be found in specialized paper applications—in everything from cigarette filters for Winston and Marlboro cigarettes to the Japanese yen banknote (Guillen, 2021; Ilette & Armando, 2022; Philippine Fiber Industry Development Authority, 2021). In recent decades, growing demand for sustainable green materials has resulted in commercial interest in abaca as a biodegradable alternative to plastic fibers and a more environmentally sustainable alternative to wood fibers. Tea and coffee filters made with abaca are frequently marketed as healthier and more sustainable alternative to filters made with plastic or wood-based fibers (Cafec, 2024; I’m Plastic Free, 2024). The automotive, construction, and medical industries have found a multitude of downstream uses for abaca, most notably in the manufacture of reinforced polymer composites—construction materials that are made by combining polymer resin and a reinforcement material (such as carbon fiber, glass fibers, or organic fibers) (Gapusan et al., 2021). Mercedes Benz, for example, has employed abaca as a substitute for glass fibers in automobile body parts to reduce both weight and cost (FAO, 2024a). Table 3 summarizes the downstream uses of abaca fiber and abaca pulp.

¹³ Ahlstrom is a European-based corporation that specializes in producing a wide range of specialty fiber-based products (<http://www.Ahlstrom.com>). Note also Ahlstrom’s relationship with the member-based growers association, Agricola, as outlined in Section 4.1.2 and footnote 10.

Table 3. Downstream uses of abaca

Industry	Downstream uses
Textiles	Rope, twine, yard, fabric, ship lines, fishing nets, fishing lines, sacks
Home décor and crafts	Handicrafts, rugs, carpets, hats, furniture, dartboard pads
Paper products	Manila envelopes, vacuum bags, stencil paper, pattern paper, filters, cigarette plug wrap paper, art papers, adhesive papers
Food and beverages	Teabags, coffee filters or pods, meat/sausage casings
Medical	Surgical masks, medical filter papers, pharmaceutical pill coating, orthopedic materials
Cosmetics	Soaps and lotions (enzymes from abaca extract), nonwoven fabrics, make-up pads
Electronic industries	Electrolytic capacitor paper, speaker cones, condenser paper
Construction	Insulation and composite in building materials
Automotive	Various automotive components

Source: ICF

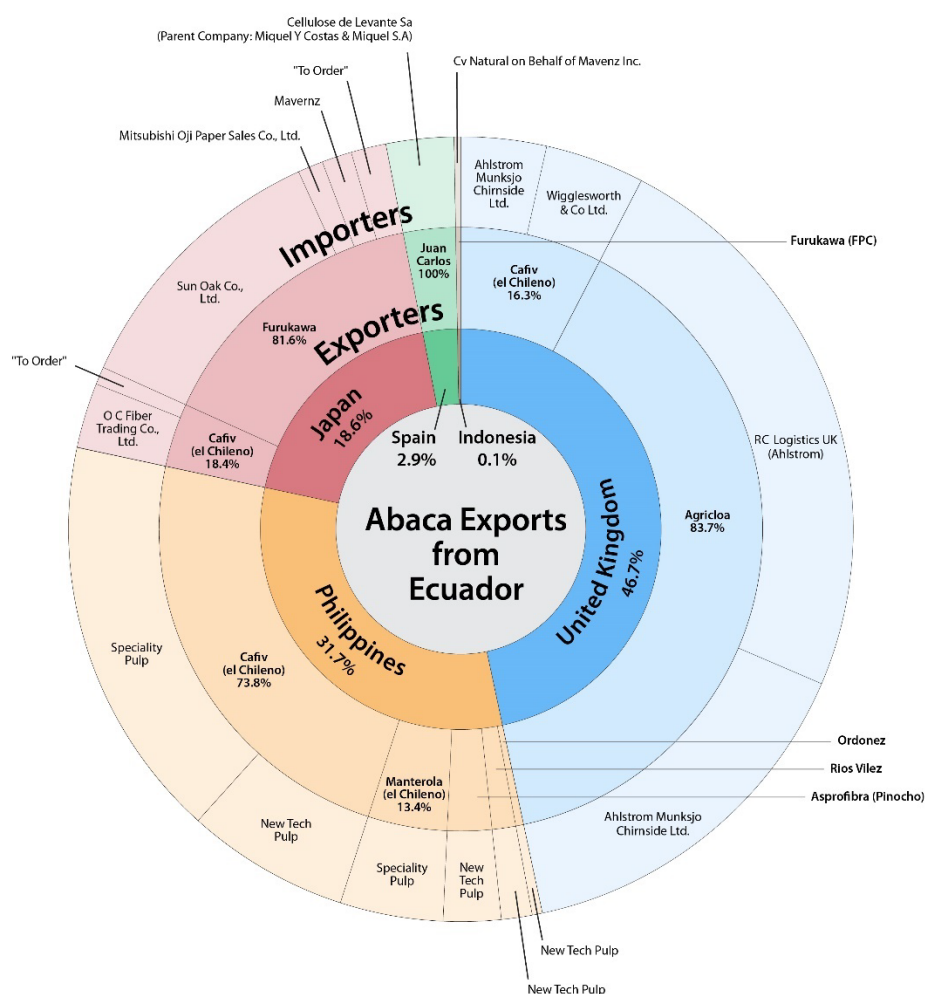
4.3.2 Supply Chain Tracing: First Tier, Abaca Exports from Ecuador

Although there are myriad downstream and end-use applications for abaca, this section details the first tier in the international supply chain, when abaca fibers from Ecuador are exported abroad. By combining data from multiple sources, it is possible to clearly identify the Ecuadorian exporter and the importing country and company. After establishing the initial destination markets—the United Kingdom, the Philippines, and Japan—the analysis explores the second tier of the international supply chain, in which abaca from Ecuador is processed into pulp and traded internationally to meet a wide range of industrial and manufacturing demands.

As shown in Figure 4, in 2022, the three primary exporters are el Chileno (Cafiv and Manterola), Agricola, and Furukawa (FPC). Of these three, Cafiv (el Chileno) and Manterola (FPC) have the broadest network of international buyers, exporting to Japan, the Philippines, and the United Kingdom. Furukawa (FPC) exported to Japan and to Indonesia, and Agricola, a member-based organization, sold exclusively to Ahlstrom in the UK market based on annual quotas established by Ahlstrom.¹⁴ Among smaller traders, Ordonez exported to the Philippines and Spain, and Rios Vilez and Asprofibra (Pinocho) exported exclusively to the Philippines.

¹⁴ Ahlstrom founded Agricola, a member-based abaca producer organization, which sets an annual quota and sale price for abaca fiber.

Figure 4. Abaca exports: Destination country, exporter, and importer, 2022



Note: Exporters and quantities were sourced from the Bank of Ecuador and triangulated with production data from FAO and shipping data from Panjiva. The list of Ecuadorian exporters is complete and exhaustive. In some cases, such as the Philippines, exports of abaca were exported from Ecuador in 2022, but not received in the Philippines until January 2023. Exhaustive shipping data from Panjiva were not available for Japan (81% of importer shipments by quantity) and the United Kingdom (91% of importer shipments by quantity).

Source: Bank of Ecuador, Panjiva, FAO, KILs

Figure 4 depicts trading relationships in 2022. Shipping data from January 2023 to mid-2024 show the emergence of new exporters of Ecuadorian abaca, including Bee Corp Trading, Candelario Salazar Diana Patricia, Endless Spring Farms, Horcaf CIA Ltd., and Marca Abaca (FPC) (Sayari, 2024).¹⁵ As of the time of writing, however, these new entrants have not had any substantial impact on existing trade relationships, and their percentage of overall trade was relatively small.¹⁶ As of mid-2024, FPC

¹⁵ These new entrants are traded as follows: Bee Corp Trading to Philippines (SPMI), Candelario Salazar Diana Patricia to Philippines (New Tech Pulp), Endless Spring Farms to over a dozen countries (multiple buyers), Horcaf CIA Ltd single shipment to a coffee maker in France.

¹⁶ There seem to have been some changes to the pattern of commercial trading relationships, but these likely occurred for business reasons other than the entrance of new exporters. In 2023, for example, Spanish importer

(Furukawa and Marca Abaca), el Chileno (Cafiv and Manterola), and Agricloa remain the dominant exporters. Of note, shipping data from 2023 and 2024 did contradict claims made by multiple industry representatives in interviews conducted for this study that importers were avoiding importing abaca from Furukawa (FPC) due to the labor abuse cases filed in Ecuadorian courts. The flexibility of these annual trade relationships highlights the multiple opportunities that abaca fiber at risk of being procured with forced labor in Ecuador has to enter the international supply chain, regardless of a company’s recent trade partners.

4.3.3 Supply Chain: Second Tier, Imported Ecuador Abaca Processing and Trade

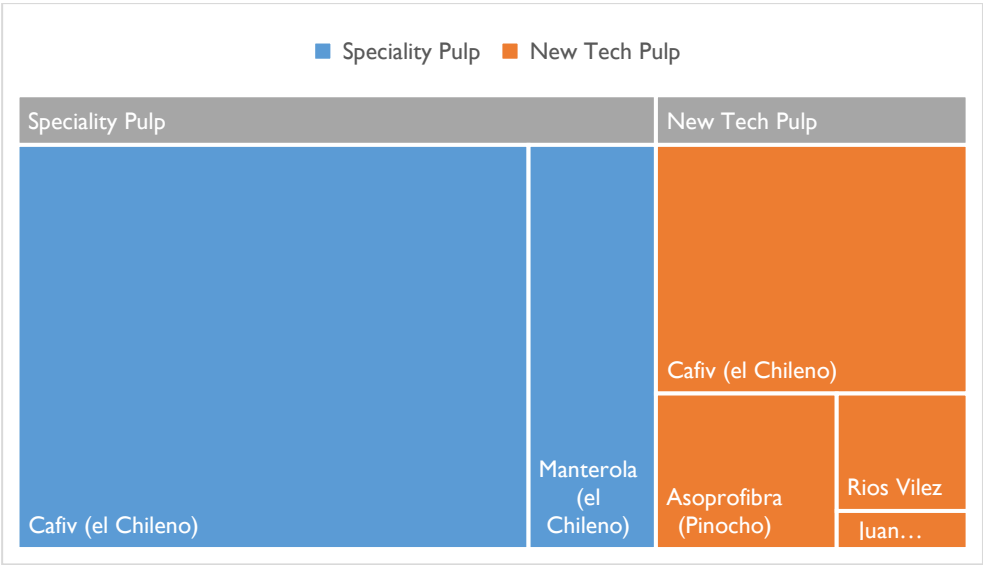
This section provides a supply chain overview for the second tier of the international supply chain. Each destination country summary describes importing companies (from 2022 to mid-2024) and available shipping records of products containing abaca to third countries. The second tier of the international supply chain is more opaque than the first tier, due to co-mingling and a lack of public disclosure of proprietary business practices and shipping data. Therefore, the overview of second tier downstream tracing is not exhaustive but rather serves to provide examples of how abaca produced with indicators of forced labor in Ecuador could find its way into a vast array of goods all over the world.

4.3.3.1 Philippines

Importers of Ecuadorian Abaca Fiber: Specialty Pulp Manufacturing Inc. (SPMI), New Tech Pulp, Inc., Aljay¹⁷ Agro-Industrial Development Corporation (ALINDECO)

Ecuadorian Exporters: Cafiv (el Chileno), Manterola (el Chileno), Ornadez, Rios Vilez, Asprofibra (el Pinocho), Bee Corp Trading

Figure 5. Philippine importers of abaca from Ecuador, with associated Ecuadorian exporter, 2022



Source: Bank of Ecuador, Panjiva 2023

Celesa switched from exclusively importing from Ordonez to Marca Abaca (FPC). Manterola (el Chileno) began exporting to an additional importer in the Philippines, ALINDECO, and replaced Cafiv (el Chileno) as a source for Ecuadorian abaca for Wigglesworth in the United Kingdom. Ahlstrom ceased importing from Cafiv and instead imported from Ordonez and Marca Abaca (FPC). Rios Veliz sent a few shipments to Japan and China (Taicang Hanspaper Industry Co., Ltd.), rather than exporting to the Philippines.

¹⁷“Aljay” is also on occasion spelled “Albay” in various publications.

As of 2022, the Philippines is the second largest importer of Ecuadorian abaca, but a leading global exporter of abaca pulp. There is little available literature on labor conditions in abaca farming in the Philippines. A review of the literature found no descriptions of forced labor in the sector. Limited sources mentioned child labor in the sector (*Indigenous Abaca Farmers Harvest New Prosperity* | *International Labor Organization*, 2023; Perez, 2024; Orense, 1992 as cited in Torres, 1998).

The Philippines imports raw abaca fiber from Ecuador, which tends to be of higher quality than the average abaca fiber produced in the Philippines.¹⁸ According to the Philippine government, from 2010 to 2019, primary export markets for abaca pulp were the United Kingdom (31%), Germany (31%), Japan (14.0%), the United States (8.5%), France (6%), and China (5.2%). The majority of these exports were in the form of abaca pulp (79%), followed by abaca fibers (15%), cordage (5%), and fabric and yarns (0.7%) (Philippine Fiber Industry Development Authority, 2021). This historical trend is consistent with FAO reports of export quantities in 2022. In 2022, the Philippines exported 11.2 thousand MT of abaca fiber and 31.8 thousand MT of abaca pulp, 2.8 thousand MT of cordage, and 0.2 thousand MT of other abaca products (FAO, 2024b). The co-mingled Philippine and Ecuadorian abaca pulp is exported to the United States, Europe, and Asia for further processing into downstream goods.

The Philippines is the global leader in abaca production, and downstream domestic processing is dominated by abaca pulp manufacturers but also includes handicrafts, fabrics, cordage, and raw fibers.¹⁹ There are four abaca pulp mills in the Philippines: SPMI,²⁰ ALINDECO, Pulp Specialties Philippines Inc., and New Tech Pulp, Inc. (Philippine Fiber Industry Development Authority, 2021).²¹ As in Ecuador, the fibre-craft sector is relatively small and dominated by small artisanal enterprises. The Philippines also has 7 cordage manufacturing firms and 10 grading and baling establishments that trade abaca fiber domestically and for export.

Shipping records document that three abaca pulp processing plants (ALINDECO, SPMI, and New Tech Pulp) import abaca fiber from Ecuador. Once the abaca is processed into abaca pulp, Philippine abaca pulp manufacturing facilities export approximately 80% of the pulp they produce, over half of which is sent to the United Kingdom and Germany. New Tech Pulp, the largest importer of Ecuadorian abaca fiber in the Philippines, is part of Glatfelter Corporation, a U.S.-based company that is one of the largest abaca pulp manufacturers in the world.²² Glatfelter's Philippine pulp processing entity, New Tech Pulp, is the largest importer of Ecuadorian abaca in the Philippines, and Glatfelter is a major UK importer of abaca pulp from the Philippines.

Glatfelter's corporate website markets quality assurance by referring to New Tech Pulp as "Glatfelter's own dedicated pulp production site in the Philippines."²³ Glatfelter primarily uses abaca pulp in the production of tea bags, coffee filters, and meat casings. The Philippine 2021–2025 Roadmap highlights

¹⁸ Interviews with key informants. According to the Abaca Industry Roadmap report, "The pulp processors resorted to importation [of fibers from Ecuador] to address the deficiency in local supply of specific grades and meet buyers' specifications." (Philippine Fiber Industry Development Authority, 2021)

¹⁹ Abaca is produced in many regions of the Philippines. Abaca farming is concentrated in the Bicol Region, Visayas and Mindanao areas; the largest producing province is Catanduanes (43% from 2010 to 2019) (Philippine Fiber Industry Development Authority, 2021).

²⁰ Ching Bee Trading Corporation holds a majority ownership of its affiliate company, SPMI (Ching Bee, 2024).

²¹ SPMI is located in BayBay, Leyte; ALINDECO is located in Balading, Malinao Alby; Pulp Specialties Philippines Inc. is located in Albura, Leyte; and New Tech Pulp, Inc. is located in Lanao Del Norte.

²² According to a September 2023 press release, Glatfelter entered into an exclusive agreement with Ekman & Co., a global sales and marketing organization, to market Glatfelter's abaca pulp exclusively through Ekman's sales agency platform (Ahlstrom, 2020). On November 5, 2024, Glatfelter merged with Berry Global's Health Hygiene and Specialties Global Nonwovens and Films to form Magnera (Nasdaq, 2024).

²³ <http://glatfelter.com/solutions/segments/electrical/capacitor/>

the importance of abaca in the production of tea and coffee bags and meat casings, noting that they are the “two major markets for abaca pulp.” Glatfelter also employs abaca in the production of various other downstream goods, including capacitor materials.²⁴ Its corporate website indicates that “many of [their] capacitor materials contain sustainable abaca fibers, which are delivered from [New Tech Pulp in the Philippines].”

Shipping records document the export of coffee filters²⁵ from Glatfelter Lydney Paper Mill Ltd. (UK) to Glatfelter Composite Fibers NA Inc. in the United States (Panjiva, 2024) and to Harney and Sons Teas in the United States (Sayari, 2024). One shipment record from New Tech Pulp in the Philippines included exports of abaca pulp²⁶ to Ekman & Co. Inc. in the United States (Sayari, 2024).

Shipping records also documented the shipment of abaca pulp from SPMI exports to the United States, China, the United Kingdom, the Netherlands, Belgium, and Türkiye.²⁷

Export records for ALINDECO were not publicly available. However, its corporate website mentions the production of abaca pulp, which can be used for food-grade specialty paper that is halal-certified.²⁸ This suggests, perhaps, that ALINDECO markets to Islamic customers in Indonesia or the Middle East, as these areas may have a greater demand for halal-certified products. The President and CEO of ALINDECO, Orpha Noveno Mabalay, is also a minority shareholder of Furukawa (FPC), although shipping records do not reveal exports from Furukawa (FPC) or Maraca Abaca (FPC) to ALINDECO. In 2023 and 2024, shipping records indicate that ALINDECO imported abaca from Manterola (el Chileno) (Sayari, 2024).

4.3.3.2 United Kingdom

Importers of Ecuadorian Abaca Fibers: Ahlstrom-Munksjo Chirnside Ltd., Wigglesworth & Co. Ltd., RC Logistics²⁹

Ecuadorian Exporters: Cafiv (el Chileno), Agricola, Manterola (el Chileno)

²⁴ A capacitor, originally known as a condenser, is widely used in electric circuits. It is a device that stores electric energy between two closely spaced insulated materials. Abaca pulp processed into a porous ultra-thin paper is used in some capacitors (Stockinger et al., 2023).

²⁵ HS 4823.20 “other paper, paperboard, cellulose wadding and webs of cellulose fibers, cut to size or shape; other articles of aper pulp, paper, paperboard, cellulose wadding or webs of cellulose fibers. Filter paper and paperboard.”

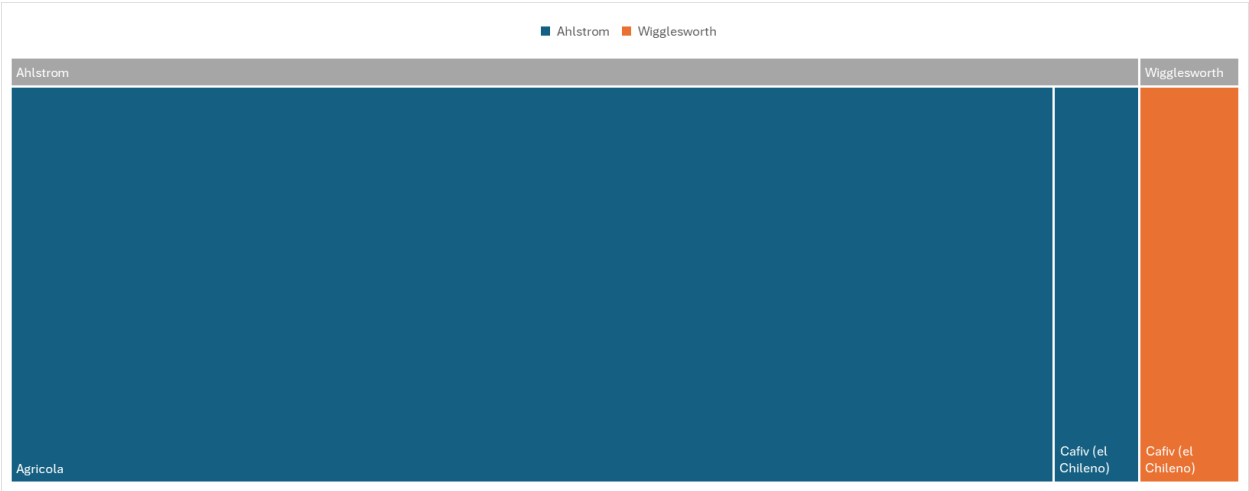
²⁶ No HS code was included in the shipment record, but the product description stated, “abaca pulp.”

²⁷ Available shipping records in Sayari classified these shipments under HS 5305 but included “abaca pulp” in the description. Buyer names were redacted from the record.

²⁸ <https://www.alindeco.com/>

²⁹ In 2022, a large percentage of exports sold by Agricola were only identified by the shipping company, RC Logistics. Although the shipping data do not identify the buyer, according to qualitative research findings and Ahlstrom’s corporate website, Agricola exclusively sells abaca to Ahlstrom in the United Kingdom. Therefore, all shipping records of abaca from Agricola to RC Logistics are assumed to be sent to Ahlstrom.

Figure 6. English importers of abaca from Ecuador, with associated Ecuadorian exporter, 2022



Source: Bank of Ecuador, Panjiva 2023

In the United Kingdom, there are two importers of abaca fiber from Ecuador—Wigglesworth and Ahlstrom.

In 2022, Wigglesworth sourced its abaca from Cafiv (el Chileno). Wigglesworth is a global leader in the natural fiber trade and a manufacturer of abaca pulp, yarn twine, and ropes. According to its website, “Wigglesworth have a prominent role in the merchenting and distribution of abaca fiber (also known as Manila Hemp) and manufactured abaca products including yarns, twines, and ropes, as well as pulp.”³⁰ Shipping records did not document exports of abaca or abaca pulp from Wigglesworth. As shipping data are not exhaustive, it is unclear if the abaca is exported and shipping records are not available, or if all the abaca is consumed by domestic industries in the United Kingdom.

Ahlstrom is a global corporation that specializes in producing a wide range of specialty fiber-based products, most notably in the United Kingdom. Ahlstrom manufactures coffee and tea filters and meat casing products for the domestic market in the United Kingdom and global importers. In 2022, Ahlstrom exclusively sourced Ecuadorian abaca from Agricola and Cafiv (el Chileno); in 2023, Ahlstrom continued to import from Agricola, but replaced imports from Cafiv (el Chileno) with imports from Manterola (el Chileno) (Panjiva, 2023; Sayari 2024). As noted in Section 4.1.2 of this report, Ahlstrom has a unique relationship with Agricola; in the 1960s, Ahlstrom established a membership-based association of small abaca growers. According to KILs, for these smallholders, Ahlstrom establishes an annual quota of 1.5 tons per hectare and sets a per ton price that is slightly above the market rate paid by other abaca buyers. The producers typically produce more than 1.5 tons, but Ahlstrom will not purchase any fibers above the predetermined annual quota. Rather, Ahlstrom sources its remaining demand for raw abaca fibers from other abaca fiber producers in Ecuador, including Cafiv (el Chileno) and Manterola (el Chileno) in 2023. Agricola members are permitted to sell any production over the established quota with Ahlstrom to other buyers.

Although Ahlstrom processes most of its abaca pulp at its facility in Radcliffe, United Kingdom, it also imports “significant amounts” of abaca pulp from the Philippines (Ahlstrom, 2024a). Ahlstrom uses abaca pulp to produce plastic-free food casing, including coffee and tea filter paper and meat casings, at its facility in Chirnside, Scotland. According to company disclosures, abaca is the primary material used in

³⁰ <https://www.wigglesworthfibers.com/about-us>

the production of the fibrous casing paper for meat packaging (chorizo, coppa, salami, pepperoni, mortadella) and for a majority of the tea and coffee filters (Ahlstrom, 2020, 2024b).

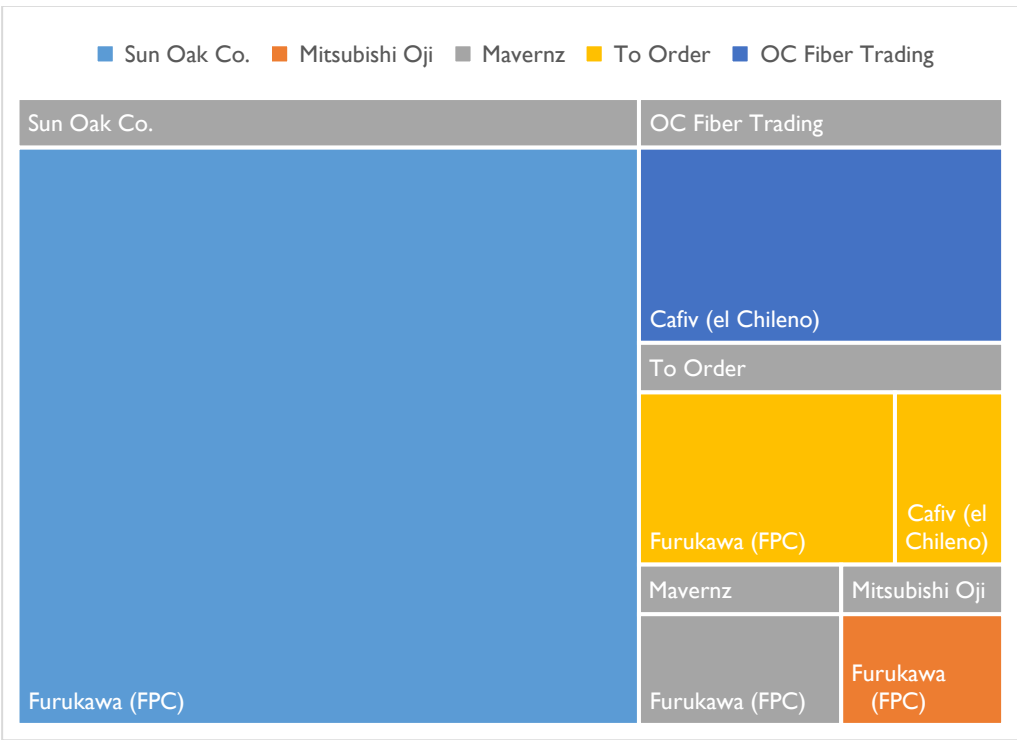
It is also possible that UK companies, Wigglesworth and Ahlstrom, trade the abaca pulp they produce domestically or internationally. However, there was insufficient publicly available data to trace these possible trade routes. Shipping data documented several shipments from Ahlstrom to the United States, including tea and coffee filter bags to Ahlstrom US (in Connecticut), Toddy Inc. (in Colorado), and BH Coffee Company LLC (in New Jersey), and casings for sausages to Pall Corporation (USA) (Sayari 2024). While not exhaustive, this list of buyers illustrates how abaca harvested with forced labor in Ecuador can enter foreign markets, including the United States, in the form of coffee and tea filters and meat casings (Ahlstrom, 2024a). The global reach of these downstream goods is highlighted by a 2018 quote from CEO Hans Sohlstrom: “One in 10 tea bags in the world is produced out of material manufactured at Chirnside, and one in every five tea bags is produced by Ahlstrom-Munksjö” (Newsroom, 2018).

4.3.3.3 Japan

Importers of Ecuadorian Abaca Fibers: Mavenz Inc., Mitsubishi Oji Paper Sales Co. Ltd., Sun Oak Co. Ltd., OC Fiber Trading Co. Ltd.

Ecuadorian Exporters: Cafiv (el Chileno), Furukawa (FPC), Marca Abaca (FPC)

Figure 7. Japanese importers of abaca from Ecuador, with associated Ecuadorian exporter, 2022



Source: Bank of Ecuador, Panjiva 2023

Japan has longstanding ties to Ecuador’s abaca industry, as the founder of Furukawa, who introduced abaca cultivation to Ecuador, emigrated from Japan following WWII. In 2022, Japan was the third largest destination market for Ecuadorian abaca, after the United Kingdom and the Philippines. From 2022 to mid-2024, all Ecuadorian abaca fiber exports to Japan were sourced from Furukawa (FPC), Maraca

Abaca (FPC), or Cafiv (el Chileno).³¹ Imported abaca fiber from Ecuador is processed into pulp or downstream goods in Japan for domestic consumption or export. Japan supports a robust industrial pulp processing industry, evidenced by its role as the third largest producer of paper and cardboard, behind only China and the United States (Klein, 2024).³² However, in addition to abaca, pulp processing uses a variety of other vegetable fibers and wood inputs. In addition, Japan imports and exports abaca pulp from other countries, including the Philippines and Spain.³³ Therefore, direct traceability of Ecuadorian abaca through pulp mills in Japan is complicated by co-mingling of inputs from various sources.

However, given the well-documented end uses of abaca, in combination with limited publicly available data, it is evident that abaca in Japan is used in yarn for fabric, banknotes, tea bags, coffee filters, and specialty papers (Cafec - SANYO SANGYO, n.d.; Oji Fiber Co., Ltd., 2025). One industry key informant indicated that Japan exports abaca yarn to Europe, where plant-based fibers are valued in textiles and clothing for their environmental friendliness.

Mavenz, Mitsubishi Oji, Sun Oak, and OC Fiber have imported abaca fiber from Ecuador (Panjiva 2023; Sayari 2024). Mavenz is a Japanese parent company with subsidiaries in Ecuador and the Philippines, and parent company to FPC Marketing Co. in Ecuador, under which Furukawa (FPC) and Marca Abaca (FPC) are registered (Sayari, 2024; Evidencity, 2024; Appendix 4). In the Philippines, Mavenz owns Tag Fibers Inc. and Fibers Trading Inc., traders in abaca and paper pulps. In addition to importing from Furukawa (FPC), shipping records indicate that Mavenz has imported abaca pulp from Pulp Specialties Philippines Inc. in the Philippines and recycled fiber pulp from Celesa in Spain. Shipping records from Mavenz are incomplete due to data limitations but include export shipments to Carriage House Papers LLC (USA) (Carriage House Paper, 2024).

Mitsubishi Oji Paper purchases abaca fibers from Furukawa (FPC), and shipping records indicate that the company exports pulp to India, Indonesia, Taiwan, Vietnam, and China. However, due to overly broad HS nomenclature and insufficient shipping description details, it is uncertain which exports contained abaca.

Sun Oak, a specialized trading company in the pulp and paper business, is a consolidated subsidiary of Nippon Paper Group.³⁴ Sun Oak's corporate website indicates that the company, "handle[s] a variety of products such as thin paper, fine paper, functional paper, converted paper, papermaking raw materials, and chemicals." Sun Oak sources abaca fiber from the Philippines and Ecuador. Export shipping records were unavailable, either due to data limitations on shipping records from Japan or domestic consumption of abaca and abaca pulp by domestic industries.

According to shipping records, OC Fiber sources abaca from Cafiv (el Chileno) in Ecuador, but research was unable to determine the final destination or end uses of these shipments. OC Fiber was formed in 2019, following a joint venture between O&C Fiber Trading Co., Ltd., and Chuetsu Pulp & Paper Co., Ltd., and is an equity-method holding of Oji Holdings Corporation (*Notice of Launching Joint Procurement of Imported Woodchip by Three Companies*, 2019).

³¹ Furukawa (FPC) exported all of its abaca fibers to Japan, except for a small shipment to its parent company, Mavenz, in Indonesia.

³² Top pulp and paper companies in Japan by total assets in rank order include Oji, Japan Pulp&Paper, Rengo, Daio Paper, Hokeutsu Paper Corporation, Mitsubishi Paper Mills, Tomoku, and Chuetsu Pulp & Paper (Klein, 2024).

³³ Following legal action in 2018 against forced labor practices at Furukawa, Alhstrom and other European buyers seemed to refrain from purchasing abaca procured by Furukawa (Evidencity, 2024). However, in 2023, Spain imported abaca fibers from Furukawa's sister company, Marca Abaca (FPC) (Panjiva, 2023).

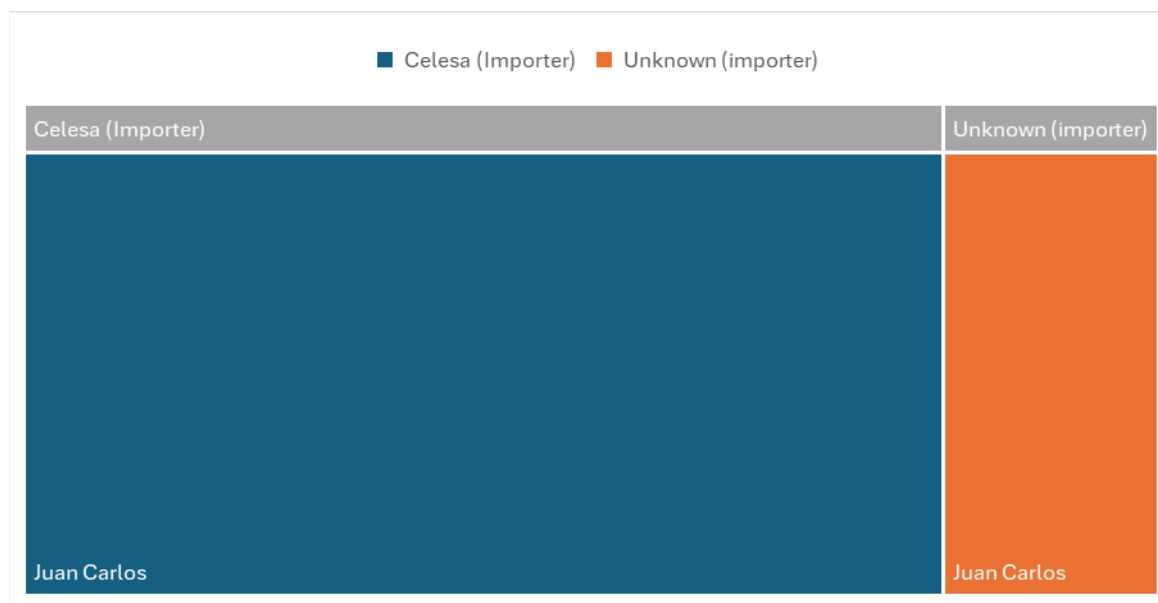
³⁴ <https://www.nipponpapergroup.com/contents/20024380.pdf>, https://sun-oak.jp/company_en

4.3.3.4 Spain

Importer of Ecuadorian Abaca Fibers: Celesa Cellulose de Levante, s.a. (Celesa)

Ecuadorian Exporters: Ordonez, Marca Abaca (FPC)

Figure 8. Spanish importers of abaca from Ecuador, with associated Ecuadorian exporter, 2022



Source: Bank of Ecuador, Panjiva 2023

Celesa, the only Spanish importer of abaca from Ecuador, is headquartered in Barcelona, Spain, and operates a pulp mill in Tortosa, Tarragona, Spain.³⁵ Celesa is part of the Miquel y Costas Group, which includes 15 companies dedicated to the production of cellulose pulps and papers, including Terranova Papers.³⁶ According to its corporate website, the Miquel y Costas Group has 6 manufacturing facilities in Spain and 1 in Argentina and exports 80% of its products to 130 countries.^{37,38}

Shipping records indicate that Celesa imported abaca from Ordonez and Marca Abaca (FPC) in Ecuador and shipped recycled fiber pulp (HS 4706.92) to Carriage House Papers LLC (USA), Cranes (USA), Cong Ty TNHH Procter (Vietnam), and Monson Paper, LLC (USA) (Panjiva 2023, Sayari 2024).

Terranova Papers, part of the Miquel y Costas Group (Spain), indicate that they source abaca from Ecuador and the Philippines. As Terranova Papers is not listed as an importer of record in public shipping records, it is assumed that they source their Ecuadorian abaca from their affiliate company,

³⁵ <http://www.celesa-pulp.com>

³⁶ <https://terranovalpapers.com>

³⁷ <https://terranovalpapers.com/en/miquel-y-costas-group>

³⁸ Consistent with researched downstream uses of abaca, Miquel y Costas Group lists its (or its customers') downstream abaca production to include the tobacco industry (ultra-high porous plug, paper wraps); electronic industries (capacitor papers); cosmetics and medical industries (nonwoven fabrics, make-up oil absorbers); bank notes and security papers; food industry (tea bag papers, meat casing papers, coffee pods); specialty papers (art and decorative papers, adhesive base papers, vacuum bag papers); and automotive industry (filter papers).

Celesa, due to intracompany incentives to trade with an affiliate company.³⁹ It is also possible Terranova Papers sources some or all their abaca pulp from the Philippines.

4.3.3.5 Indonesia

Importer of Ecuadorian Abaca Fibers: CV Natural on behalf of Mavenz Inc.

Ecuadorian Exporter: Furukawa (FPC)

In 2022, Furukawa (FPC) exported small shipments of abaca to its parent company Mavenz through CV Natural. Research was unable to determine the final destinations or end uses of these shipments.

4.4 LABOR FINDINGS

This section first presents the characteristics of respondents and the nature of their work. Next, details are provided on the nature of working conditions, including recruitment and contracts, exposure to hazards, work schedules, earnings and debt, and living conditions. Finally, the section describes the presence of forced labor in the sector.

Missing responses (“don’t know” and “refused”) are excluded from the denominator for all estimates. Some estimates are presented for all respondents and some by subgroup. Tables presenting estimates by region use column percentages, meaning that they show the percentage of workers in each row among those in the subgroup indicated in that column. Each row presents both an estimate and the numerator, denoted by “n,” associated with the estimate. The denominator, denoted by “N,” is included at the bottom of tables in which all rows have the same denominator, and it is presented in the final column of the row in tables in which rows have varying denominators (due to survey question filters).

4.4.1 Characteristics of Survey Respondents

Respondent demographic characteristics are provided in Table 4. Respondents ranged in age, from 18 to 75 years old, with an average age of 40 years old. Two-thirds (67%) of the respondents were male and one-third (33%) were female. Most respondents were born in abaca-producing areas or neighboring provinces, including Esmeraldas (41%), Santo Domingo (31%), Los Ríos (10%), and Manabí (9%). However, qualitative respondents described significant levels of migration within the region in search of work, and three-fourths (74%) of respondents were not born in the province in which they worked at the time of the survey. Nearly half (44%) of respondents completed less than primary school, 36% completed primary school, and 21% completed some schooling beyond primary school. Key informants indicated that many current abaca workers lived on abaca plantations as children, and many of these sites were very far from schools.

Table 4. Respondent background characteristics

	%	n
Age (years)		
18–24	21%	32
25–39	37%	57
40–54	24%	38
55+	19%	29
Sex		
Male	67%	104
Female	33%	52
Born in current province of work¹		

³⁹ <https://terravapapers.com>

	%	n
Yes	26%	41
No	74%	114
Education		
No formal schooling	14%	22
Preschool	4%	6
Some primary	26%	40
Completed primary	36%	56
Some secondary	10%	15
Completed secondary or higher	11%	17
Number of respondents (N)		156

¹One respondent did not know their province of birth.

The primary abaca activities of respondents are aligned to the stages of abaca production described previously in *Section 4.1.3.1, Labor*. As shown in Table 5, the most common primary activity among respondents was cutting abaca stalks to extract the fibers (39%), followed by drying the abaca fibers (22%) and machine processing the abaca fibers (19%).

Two-thirds (66%) of respondents were employed by an employer, referred to as “employed” in this report, and one-third (34%) were self-employed. To determine whether a respondent was employed or self-employed, the interviewer first asked the respondent whether they have a boss. Those who responded in the affirmative were considered employed. Because preliminary research found that some workers who consider themselves self-employed actually work under the direction of another person or entity, respondents who indicated that they do not have a boss were asked a series of questions⁴⁰ to determine whether another person has decision-making power over the respondent’s work. If so, that respondent was considered employed. Those who said they did not have a boss and reported that no one else made decisions about their work were considered self-employed.

Those who were employed worked for a variety of abaca actors, including contractors (51%), land owners (21%), field bosses (16%), who are generally affiliated with large companies, tenants (8%), and company representatives other than field bosses (4%).

Table 5. Job characteristics

	%	n	N
Primary abaca activity			
Maintaining plants (<i>chapeo</i>)	3%	5	156
Pulling up the shoots (<i>deshije</i>)	2%	3	156
Harvesting abaca leaves (<i>tumbado</i>)	8%	12	156
Cutting abaca stalks to extract fibers (<i>tuzeo</i>)	39%	61	156
Transporting abaca materials (<i>burreo</i>)	4%	7	156
Processing abaca fibers (<i>maquileo</i>)	19%	29	156
Drying abaca fibers (<i>tendaleo</i>)	22%	35	156
Cooking for the workers	1%	1	156
Other work related to abaca	2%	3	156
Works for employer or self			
Employer	66%	103	156

⁴⁰ “Does anyone tell you how much to produce?”

“Does anyone tell you how to produce (so that the fiber doesn’t lose quality)?”

“Does anyone tell you where to work?”

“Does anyone tell you which tasks to do (for example, when to harvest)?”

	%	n	N
Self	34%	53	156
Boss is...			
Contractor	51%	53	103
Land owner	21%	22	103
Field boss	16%	16	103
Tenant	8%	8	103
Company representative	4%	4	103

4.4.2 Nature of Working and Living Conditions

4.4.2.1 Recruitment

The survey explored pathways to respondents' jobs to understand whether deceptive recruitment took place. Two-thirds (65%) of respondents were helped to get their job in abaca, primarily by family members (65% of those helped to get a job) or friends (19% of those helped to get a job). Qualitative interviewees also indicated that most recruitment occurs through existing social networks. Many employers (those identified as contractors, field bosses, and tenants) are current or former abaca field workers themselves. These employers know potential employees through their previous abaca work experience. Some interviewees also described working for family members who are contractors or tenants.

One-third (35%) of employed workers felt obliged to take the job. For most respondents, their sense of obligation was rooted in poverty or lack of alternative jobs. Four respondents indicated that they felt obliged to take the job because they were born on abaca plantations. Key informants suggested that those born on abaca plantations often begin working in abaca due to a lack of resources, lack of education, and lack of familiarity with or connections to alternative work. One respondent felt obliged to take the job because a family member required that he do so.

Very few workers overall had written contracts (12% of employed workers) (Table 6), and a greater proportion of men (15% of employed men) than women (4% of employed women) had written contracts. A greater proportion of women (54% of employed women) than men (45% of employed men) had verbal agreements. Overall, 41% (Table 6) of employed workers lacked an agreement of any kind, with similar proportions for men and women.

As shown in Table 6, one-fourth (25%) of employed respondents indicated that the conditions of their job did not match what they were promised before taking the job. When asked whether she would have taken the job had she known the real conditions, a qualitative interviewee replied, "I wouldn't have come. I thought it would be easier." She went on:

"They told me it was easy, soft work, so I said yes. Let me tell you, for those who take up the knife, their hands end up sore. When you're learning to tusear [cut the abaca stalks to extract the fibers], your whole body aches. The next day, you can't even get up; it feels like you've been beaten. Your wrists hurt; you can't even hold a glass of water. Some people can't recover, and their hands just stop working. The work of tusear is really tough; you suffer a lot."

—Abaca worker

The interviewee quoted here describes unmet promises regarding the nature of the job, and these concerns were shared by 12% of respondents who reported that their working conditions did not match the promises they had been made. The other primary areas of disconnect reported by survey respondents experiencing unmet promises were earnings (65%), hazards (19%), and living conditions (15%).

Table 6. Recruitment among employed workers

	Total %	Total n	Total N
Contract/agreement			
Written contract	12%	12	103
Verbal agreement	48%	49	103
None	41%	42	103
Conditions of job do not match promises	25%	26	103
Conditions not matching promises¹			
Earnings	65%	17	26
Hazards	19%	5	26
Living conditions	15%	4	26
Nature of the job	12%	3	26
Hours	8%	3	26
Work tasks	8%	2	26
Formality of work	8%	2	26
Job location	4%	1	26
Other	31%	8	26

¹ Multiple responses possible

Rosa

Rosa, now in her 20s, has been working in abaca since age 14. Her job is to cut the stalks to extract fibers. She feels misled about the work, explaining,

“They told me it was easy, soft work, so I said yes. Let me tell you, for those who take up the knife, their hands end up sore. When you’re learning to tusear [cut the abaca stalks to extract the fibers], your whole body aches. The next day, you can’t even get up; it feels like you’ve been beaten. Your wrists hurt; you can’t even hold a glass of water. Some people can’t recover, and their hands just stop working. The work of tusear is really tough; you suffer a lot.”

Rosa must meet a daily quota of abaca bundles, and if she doesn’t achieve the quota her boss, a contractor, will get angry and may fire her. Her 12-year-old child, one of Rosa’s six children, works alongside her to help meet the quota.

Rosa had a former boss who used to hit and even shoot at his workers when they didn’t comply with directions. He also attempted sexual assault:

“One time, he asked me to go to the field, and he tried to take advantage of me. He didn’t take me the usual way; he took another route. When I realized, I started shouting, telling him: if you try anything, I’ll tell my husband. He said, ‘No, no, it’s just a joke.’ And I said, ‘That’s not funny.’”

When asked if she feels the pay she receives is fair, Rosa replied:

“No. They exploit the people who work with abaca. They want to kill us. They work us to death in the fields, and they pay us miserably.”

She dreams of leaving the abaca industry one day.

“I keep saying I’m going to leave abaca, and now my son is 12 years old, and I’m still here, and I haven’t been able to leave.”

4.4.2.2 Hazardous Work

As described in Section 2.4, *Ecuador's Abaca Workforce*, there is widespread agreement that working in abaca is highly dangerous. A qualitative interviewee commented:

"It's very dangerous. We say that working with abaca is the most dangerous thing. People have been killed, lost hands, heads, and legs while working with abaca."

—Abaca worker

As shown in Table 7, most (89%) survey respondents indicated that their work involves risks to their health or safety. The most common risk was working with dangerous tools or fibers (81%). More than half (58%) of respondents described the risk of bites by snakes or other species, such as spiders. Almost half (47%) reported carrying unreasonably heavy loads. One-third (34%) of respondents risked accidents from using decorticating machinery, described in depth by a machine operator:

"[The machine has] a spinning top that turns around. Next to it, there's a flying wheel that powers the top, so you can wrap things, and on top of that, there's a blade. Sometimes, when you're wrapping, a string might get stuck, and your hand can get caught. If it pulls your hand, it's all over. If the spinning top 'bites' the flying wheel, there's nothing left."

[Interviewer: So, you could die?]

"There have been deaths. In fact, one of the guys around here has a leg... his leg was crushed by it. That's why his leg is twisted outwards. And it's not just where I work; there's another guy who got caught too. Honestly, I don't even know how, because when that machine grabs you, if it doesn't stop, it does all sorts of damage. If it does stop, it's less, meaning the fractures are smaller. That's horrible! Yeah. There are people with missing hands, missing fingers, missing feet."

—Abaca worker



Abaca worker operating a decorticating machine. Source: ICF

Twenty-nine percent of respondents indicated the risk of respiratory problems due to abaca dust, 27% reported the risk of accidents caused by falling abaca stalks, and 23% reported the risk of extreme heat. A smaller number of respondents reported risking eye damage, allergic reactions, or gastrointestinal problems due to abaca liquid or dust.

Most (79%) respondents have received injuries or developed illnesses because of their jobs.⁴¹ Like the qualitative respondent quoted in the previous section who experienced unmet promises regarding hazards, three-fourths (74%) of those who reported injuries or illnesses experienced body pain. Many qualitative interviewees described chronic, debilitating back pain. Cuts or wounds from sharp objects were also very common (67% of those who reported injuries or illnesses). Machetes are used in both the preparation of the fields and in extracting the fibers, and machete wounds are common among abaca workers. Qualitative interviewees also reported cuts by sharp fibers and other sharp objects encountered in the fields. Twenty-nine percent of those who reported injuries or illnesses reported

⁴¹ The presence or absence of injuries or illnesses was not used to determine whether the respondent experienced the hazardous work forced labor indicator. As discussed in *Section 4.4.3, Indicators of Forced Labor*, this study defines having experienced the hazardous work forced labor indicator as the failure of the employer to mitigate the risks involved in the work (respondent reports that the employer does not provide PPE needed to perform job safely, that the employer endangers respondent's life by failing to take proper safety precautions, or that the employer does not provide the training need to perform job safely). The other circumstance giving rise to this form of involuntary work is having to work while seriously sick or injured.

injury to the limbs, which includes cuts and wounds as well as amputation. Damage to the lungs (21% of those who reported injuries or illnesses) and injuries to the eyes (20% of those who reported injuries or illnesses) were also common.

Fifteen percent of employed workers reported that their employers require them to work when seriously sick or injured. At the time of the interview, one respondent was visibly severely injured. He was still working and told the interviewer that he was not given any leave to heal. He said that if he complains, “they tell you to submit your resignation.” Another worker complained that when his boss is unwell, his pay is late. He said:

“They demand that we work, sometimes even when we’re sick, saying, ‘You don’t want to work.’ So, in the same way, they shouldn’t make excuses and should pay us.”

—Abaca worker

Table 7. Exposure to hazards

	Total %	Total n	Total N
Work involves risks to health or safety	89%	139	156
Type of risk to health or safety¹			
Dangerous or sharp tools or fibers	81%	113	139
Bites by snakes or other species present in the work area	58%	81	139
Carrying unreasonably heavy loads	47%	66	139
Accidents from using decorticating machinery	34%	47	139
Respiratory problems	30%	41	139
Accidents caused by a falling stalk during the “tumbado” process	27%	37	139
Extreme heat	23%	32	139
Skin reactions or rashes	3%	5	139
Risk of fall or breaking leg	3%	5	139
Vision problems	3%	4	139
Hearing damage	3%	4	139
Other	6%	10	139
Ever hurt or sick because of job	79%	123	156
Type of injury or illness¹			
Body pain	74%	92	123
Cuts or wounds from sharp objects (knives, machetes)	67%	83	123
Injury to the limbs (arms/legs)	29%	36	123
Damage to the lungs	21%	26	123
Eye injury	20%	24	123
Snake bite	8%	10	123
Injury to or deafness in ears	0.8%	1	123
Severing of limb	0.8%	1	123
Other	28%	34	123

¹ Multiple responses possible

Work in abaca production is inherently hazardous, but employers have an obligation to mitigate the risk wherever possible. The failure to mitigate risk is an indicator of involuntary work with regard to hazardous or degrading working conditions (see *Section 4.4.3, Indicators of Forced Labor*). Survey respondents were asked about employer efforts to mitigate risks.

As shown in Table 8, 88% of respondents who faced risks reported that their employers did not provide the PPE needed to perform the job safely. Among the few respondents who were provided with PPE by their employers, 4 of 11 said that it was not regularly updated to ensure its proper condition. All

respondents were asked what types of protective gear they generally wear while working, whether provided by the employer or procured themselves. Most (81%) reported wearing work boots, and 68% reported wearing gloves. Fewer than 5% of workers reported wearing goggles, earplugs, respirators or dust masks, or coveralls. Other types of gear mentioned by workers (but not asked about systematically in the survey) included hats, long sleeves, sneakers, and knives or machetes.

Many employed workers described buying their own protective gear. A worker explained that he has to replace his gloves weekly, paying \$2.50 per pair. He noted that boots also need to be replaced regularly, but this is not always possible. He said:

“If you don’t want to buy them often, you have to patch them up. I’m currently wearing patched-up boots. [...] Yes, I repaired them—I patched them with a hot knife and put another piece of rubber on them.”

—Abaca worker

Another respondent reported that she is not provided with any protective gear, and she does not buy any herself. She stated:

“The drying area is another thing; it would be nice if they provided us with masks so the dust doesn’t get into our lungs, which is harmful. But I work without any protection, just leaving it up to God.”

—Abaca worker

Eighty-four percent of respondents who faced risks indicated that their employer endangered their life by failing to take proper safety precautions. Asked whether he believes his employer is endangering his life by not taking proper safety precautions, one qualitative interviewee responded:

“Of course, yes, many times, but there’s no way to complain because he doesn’t have the means to help me.”

[Interviewer: Do you think he is actually helping you?]

“No, he doesn’t help me because he doesn’t even have enough for himself.”

[Interviewer: He doesn’t have the means.]

“Exactly.”

—Abaca worker

This extract echoes others in the qualitative narratives, which indicated that contractors and land tenants are significantly constrained by the low earnings from abaca sales.

Respondents were also asked about training provided by their employers, and three-fourths (76% of those reporting risks) reported that their employers did not provide the training needed to perform their jobs safely. Although qualitative interviewees did not explicitly describe what training they felt was needed, one provided an example of knowledge that helps prevent injury. He said:

“And the other thing is that you have to know how to throw a stem over your shoulder and walk properly. Walk properly [because] if you slip, you might injure your shoulder, injure your leg, or even cut yourself, or get bitten by a snake—who knows. It’s dangerous.”

—Abaca worker

Table 8. Mitigation of risk among employed workers who face risk

	Total %	Total n
Employer does not provide PPE needed to perform job safely	88%	79
Employer endangers respondent's life by failing to take proper safety precautions	84%	76
Employer does not provide the training need to perform job safely	76%	68
Number of respondents (N)		90

Juan

Juan, now in his 40s, began working in abaca at age 10. His mother worked in abaca and taught him and his siblings to do the work. He explains that “there came a time when we didn’t have enough money to eat, so we had to help our mom.” Juan left school because the family needed his earnings to survive. Currently, he works for a large company running the abaca stripping machine.

He says his employers deduct money from his paycheck each month for insurance, but the bosses never deposit it, so he does not actually have insurance. His boss requires him to work onerous hours processing the fiber so it doesn’t get ruined:

“I start at seven in the morning, work until midnight, then sleep for an hour and go back to work.”

Juan says that his bosses threaten him that if they don’t get the production out, then there’s no money. He says he feels “like a slave.”

Juan recently suffered a severe injury at work and has been told he is going to lose his sight, but his employers have not given him any leave to heal. He said that if he complains, “they tell you to submit your resignation.”

4.4.2.3 Work Schedules

Long hours are common among abaca workers. Even though the legal workday in Ecuador is 8 hours (Article 47, Código Del Trabajo), 44% of respondents work more than 8 hours per day (Table 9). The legal work week is 40 hours, and 53% of respondents work more than 40 hours per week. Total hours per day, including overtime, are limited to 12 hours (Article 55, Código de Trabajo), and this number is exceeded by 4% of respondents. Total hours per week, including overtime, are limited to 52 hours, and this number is exceeded by 29% of respondents. On average, employed workers work longer hours than self-employed workers, and 38% of employed workers work over 8 hours per day, or 52 hours per week, compared to 23% of self-employed workers. A machine operator who works very long hours, when asked why he has to work so much, explained:

“It’s mandatory. And he calls me. On the phone.”

[Interviewer: Who calls you?]

“The boss, because I have to finish the work so it doesn’t get ruined.”

[Interviewer: Really? And how are you managing to live like this?]

“It’s not my fault, because if I don’t work, they fine me.”

[Interviewer: And how much is the fine?]

“Let’s see, if I earn thirty, they charge me forty.”

—Abaca worker

Thirteen percent of employed workers reported having to work non-stop without breaks during the workday. Describing the pace of work, a qualitative interviewee said:

“[My coworker]’s working at night, so I keep an eye on him, give him a cup of coffee because working on the machine makes you really hungry. Sometimes you go at it day and night, and your stomach burns from hunger.”

—Abaca worker

Table 9. Average hours per day and per week

	Total %	Total n
Daily hours		
Fewer than 8	25%	39
8	31%	48
9–12	40%	63
More than 12	4%	6
Weekly hours		
Fewer than 40	26%	41
40	20%	31
41–52	24%	38
More than 52	29%	46
Number of respondents (N)		156

4.4.2.4 Threats of Dismissal

After respondents were asked about workplace practices, they were asked follow-up questions about the consequences for failing to meet employer demands. For example, interviewers asked respondents whether they worked overtime, and if so, they asked what would happen if the respondent refused to work overtime.

By far the most common consequence was threats of dismissal. More than half (52%) of employed respondents faced threats of dismissal. Workers were influenced to accept negative working conditions for fear of dismissal. Qualitative interviewees described living in states of economic precarity that made the prospect of losing their jobs highly motivating.

4.4.2.5 Earnings and Debt

Nearly 4 in 5 workers (79%) reported that their earnings were not enough to meet their basic needs, with similar rates for men and women. The rate is higher for self-employed workers (92%, n=49) than for employed workers (73%, n=75).

An interviewer asked a qualitative interviewee who has worked in abaca for 20 years whether he has ever felt that his needs were being met. He replied:

“No, it’s always been like this. Instead of moving forward, I’m falling behind. Sometimes I feel disappointed and out of control, thinking about leaving, but then I don’t because I don’t see a way out.”

—Abaca worker

On average, the respondents earned \$1.70 per hour, with similar rates for employed (\$1.67 per hour) and self-employed (\$1.76 per hour) workers.⁴² Men earned significantly more than women. On average, men earned \$1.95 per hour, compared to \$1.19 per hour for women. Workers whose primary activities were harvesting abaca leaves (*tumbado*) and processing abaca fibers (*maquineo*) reported higher hourly rates than the other primary activities asked about in the survey. Both of these tasks were performed

⁴² Estimated hourly pay is after deductions and was calculated using the respondent’s typical pay amount, pay frequency, working hours per day, and working days per week.

exclusively by men in the sample. The primary activity associated with the lowest pay was drying abaca fibers (*tendaleo*), which was performed almost exclusively by women (97% of those who primarily do this task were women).

The legal minimum wage in Ecuador is \$460 per month (Article 3, Código de Trabajo). For the purposes of this analysis, the hourly minimum wage is estimated to be \$2.65.⁴³ Among employed workers, an estimated 88% earn below the legal minimum wage. All employed women earned below minimum wage, and 84% of employed men earned below minimum wage.

Almost one-third (30%) of employed workers had a target or quota imposed by their employer. Among those with a target or quota, about half (52%) considered the target or quota to be reasonable for an individual working alone to achieve. The consequences of failing to meet the target or quota included dismissal (39% of those with a quota), fine or salary deduction (10%), and loss of housing or land (3%).

One respondent explained that she cannot leave until she has met her quota. She said:

“Let’s say I work from seven to two-thirty. At two-thirty, I have to meet a quota. He’ll say, today you have to do thirty-five tonguillos [bundles of stalks], and I have to get those done. Whatever he assigns, I have to do.”

—Abaca worker

Several qualitative interviewees mentioned frequently receiving their payments late. Late payments may require taking out loans from informal lenders at high interest rates, resulting in a cycle of debt.

Forty-three percent of employed workers reported deductions from their earnings. Among these respondents, 59% reported deductions for food, 34% reported deductions to repay a salary advance, 5% reported deductions for lodging, and 32% reported deductions for other reasons, including payment of fines, for the cost of soap and toilet paper, and for insurance. One respondent working for a large company stated that \$35 per month is deducted from his wages to pay for insurance, but when he attempted to use it, he learned that “the bosses never deposited it.” The implication was that the bosses keep the deducted funds.

Eight percent of employed workers reported being charged excessive or unagreed to amounts for food, lodgings, or supplies. One interviewee explained that the amount she owes the local store is deducted from her wages, and her contractor pays the owner of the store directly, as “they have known each other for a while.” It is unclear whether or how much the contractor benefits from the arrangement. The interviewee acknowledges that the prices at the local store are much higher than those in the nearest city, but she cannot afford the cost of travel to the city. Another interviewee described paying above market prices for food at the local store, and in that case the store is owned by the contractor who employs him.

For a small proportion (5%, Table 10) of employed workers, deductions related to food purchases lead to a cycle of debt, as shown by this interview excerpt:

“Sometimes I make a bit more, but after deductions, I usually end up with about two hundred [biweekly]. Then they deduct the food I get from the store, so sometimes I’m left with... My coworker mentioned a hundred, right? But in reality, after everything, I sometimes have twenty, forty, or fifty left.”

[Interviewer: Why is it so expensive?]

“That lady exaggerates the prices.”

⁴³ Calculated as \$460 divided by 173.33 working hours per month (40 hours per week times 52 weeks per year divided by 12 months).

[Interviewer: And have you taken out loans there for food?]

“Yes, for food. We buy on credit for the fortnight. So we end up owing a hundred, a hundred fifty, sometimes two hundred.”

[Interviewer: Does she charge interest?]

“Practically, yes, because she raises the price a bit for everything you buy on credit.”

—Abaca worker

Overall, 7% of employed workers reported abuse or manipulation of debt. In some cases, workers were unable to leave their jobs due to debt. One such worker described her debt to her employer:

“I did have to pay him back so I could leave.”

[Interviewer: So you had to pay in order to leave. What would have happened if you hadn't paid?]

“I wouldn't have been able to leave.”

[Interviewer: Do you think they would have physically prevented you from leaving?]

“Like hitting me or treating me badly?”

[Interviewer: Yes, or even just locking a door so you couldn't leave.]

“Oh, for sure. I mean, I wouldn't have stayed willingly. If I left, I would've had to leave everything behind. I had to make the money to pay off my debt before I could take my things and leave.”

—Abaca worker

Table 10. Debt to employers among employed workers

	%	n
Experienced abuse or manipulation of debt	7%	7
In debt to employer due to excessive or unagreed amounts for food, lodging, or supplies	5%	5
In debt to employer due to workplace fines	2%	2
Employer unfairly increased amount of debt over time	3%	3
Number of respondents (N)		103

Carlos

Carlos, now in his 40s, began working at age 12 after the death of his mother. He supported himself for a few years by working in a shop, but after finishing primary school, Carlos dropped out:

“I wanted to keep studying, but I didn’t have the time. I had to work to eat, to dress, and I just didn’t have the time.”

At 15, Carlos began working in abaca as a helper, cutting abaca stalks to extract fibers. Carlos was often threatened by the contractor, who sometimes even pointed a shotgun at him. He describes that time in his life as “hard” and did not want to recall the details. At 20, Carlos began working with another contractor. He unfortunately sustained an injury on the job, which still causes him pain and limits his productivity:

“There was a stem that was twisted. I put a knife in to lift it, and it twisted back on me, and instead of letting go, I held on tighter because I was strong, and it snapped something in me.”

Carlos’s employer provided no help after his injury. Carlos describes being so weak during that time that he could not even start his motorcycle. While he eventually recovered mobility after paying for his own medical treatment, he can no longer work at the same level as before the injury. He explained:

“No, it’s not the same. I can work hard for three, four days, really push myself, but then the next week, I can’t.”

Now Carlos works for a contractor who is a relative. The contractor, in turn, works for a tenant, who works for the landowner. The tenant pays the landowner a fee per ton of abaca produced in lieu of a fixed land rental rate. The work is temporary because the tenant owns only a small piece of land. After the work here ends, the contractor Carlos works for will move the team to a new area. His earnings from this job are so low that he remains trapped in a cycle of debt. He buys food on credit at inflated prices, and his pay is deducted to cover the debt. His remaining earnings are insufficient to cover his needs until his next pay day, and thus the cycle perpetuates.

Recently, Carlos experienced a back injury while operating the abaca stripping machine. He sought treatment, but the doctors told him “that this pain is something I’ll live with for the rest of my life.” He also experiences chronic pain in his feet and hips and an ongoing cough.

4.4.2.6 Living Conditions

Table 11 presents the living conditions of workers living in employer-provided housing. Almost half (43%) of employed workers living in housing provided by their employers. Those living in employer-provided housing are vulnerable to exploitation because they may lose their housing if they lose their jobs. One qualitative interviewee explained:

“I’d have to move out immediately.”

—Abaca worker

The cost of housing is deducted from the earnings of one-fifth (20%) of those living in employer-provided housing. Thirty-nine percent of those living in employer-provided housing reported being unable to live elsewhere due to the distance to or cost of alternative housing. Deductions for the cost of housing and the inability to live elsewhere were both reported more frequently for respondents working in Los Ríos than for those working in Santo Domingo. Thirty-nine percent of respondents living in employer-provided housing reported that the quality of their housing is “bad,” with a higher rate in Los Ríos than in Santo Domingo.

Access to basic services is very limited. Most respondents living in employer-provided housing lacked access to clean water (84%), sanitation or sewer services (84%), and garbage collection services (84%), with similar proportions lacking these services in Los Ríos and Santo Domingo. Half (50%) of

respondents living in employer-provided housing lacked electricity—79% of those in Los Ríos and 37% of those in Santo Domingo. Sixty-one percent of respondents living in employer-provided housing feel their housing was harmful to their health, with a much higher percentage of Los Ríos workers reporting this concern than Santo Domingo workers. Almost half (45%) of workers living in employer-provided housing did not feel safe in their housing (57% in Los Ríos and 40% in Santo Domingo). One-fourth (27%) of respondents living in employer provided housing reported sharing a sleeping space with more than 4 people.

Table 11. Living conditions among workers living in employer-provided housing

	Los Ríos		Santo Domingo		Total	Total	Total
	%	n	%	n	%	n	N
Lives in employer-provided housing	45%	14	42%	30	43%	44	103
Cost of housing deducted from earnings	29%	4	17%	5	20%	9	44
Can't live elsewhere due to distance or cost of alternative	50%	7	33%	10	39%	17	44
Quality of accommodations							
Good	7%	1	23%	7	18%	8	44
Ok/Fine	36%	5	47%	14	43%	19	44
Bad	57%	8	30%	9	39%	17	44
Basic services							
Lacks access to clean water	79%	11	87%	26	84%	37	44
Lacks electricity	79%	11	37%	11	50%	22	44
Lacks sanitation/sewer services	79%	11	87%	26	84%	37	44
Lacks garbage collection services	79%	11	87%	26	84%	37	44
Conditions are harmful to health	86%	12	50%	15	61%	27	44
Does not feel safe in housing	57%	8	40%	12	45%	20	44
Number of people sharing sleeping space							
1–4 people	71%	10	73%	22	73%	32	44
5–8 people	29%	4	23%	7	25%	11	44
9 or more people	0%	0	3%	1	2%	1	44

4.4.3 Indicators of Forced Labor

The study explored the two components of forced labor described in *Section 3.3, Measuring Forced Labor*—involuntary work and coercion.

Nearly all (95%) employed workers were found to have experienced at least one indicator of involuntary work (Table 12),⁴⁴ which “refers to any work undertaken without the free and informed consent of the worker” (International Labor Organization, 2024, p. 5).

⁴⁴ Although “low or no wages” is included as an indicator of involuntary work in the 2018 International Conference of Labor Statisticians guidelines, the more recent *Hard to See, Harder to Count* (International Labor

- The most common indicator was hazardous or degrading working conditions, experienced by 87% of employed workers. A circumstance giving rise to this form of involuntary work is “hazardous work conditions posing serious risks to health and safety” (International Labor Organization, 2024, p. 11), defined for this study as the failure of the employer to mitigate the risks involved in their work (respondent reports that the employer does not provide PPE needed to perform job safely, that the employer endangers respondent’s life by failing to take proper safety precautions, or that the employer does not provide the training need to perform job safely). The other circumstance giving rise to this form of involuntary work is “work while seriously debilitated by sickness or injury” (International Labor Organization, 2024, p. 11).⁴⁵
- More than one-third (38%) of employed workers experienced onerous working hours or work schedule. Circumstances giving rise to this form of involuntary work include “onerous working hours leaving little or no rest or recovery time” (International Labor Organization, 2024, p. 11), defined for this study as usually working beyond the legal overtime limit (12 hours per day or 52 hours per week), and “non-stop work without breaks during the workday” (International Labor Organization, 2024, p. 11).
- One-fourth (24%) of employed workers experienced deceptive or fraudulent recruitment, which “relates to the failure to deliver what has been promised to the worker, either verbally or in writing, at the time of recruitment” (International Labor Organization, 2024, p. 10). Among survey respondents, deceptive recruitment most frequently occurred in relation to remuneration levels, hazards, housing, or the nature of the work.

Less frequent forms of involuntary work included abuse or manipulation of debt (7% of employed workers), inability to terminate employment (2%), and degrading work-related living conditions in housing imposed by the employer (1%).

Table 12. Respondents experiencing indicators of involuntary work among employed workers

	%	n
Experienced at least one indicator of involuntary work	95%	98
Hazardous or degrading working conditions	87%	90
Onerous working hours or work schedule	38%	39
Deceptive or fraudulent recruitment	24%	25
Abuse or manipulation of debt	7%	7
Inability to terminate employment	2%	2
Degrading work-related living conditions	1%	1
Forced recruitment	0%	0
Number of respondents (N)		103

As mentioned previously, “involuntary work, in and of itself, is a necessary but insufficient condition for forced labor” (International Labor Organization, 2024, p. 9). Most survey questions investigating involuntary work were followed by a question to determine the presence of coercion. For example, interviewers asked, “Does your employer require you to work when you are seriously sick or injured?” and if the respondent responded in the affirmative, the interviewer then asked, “What would happen if you refused to work while sick or injured?” For this study, a worker must have experienced both

Organization, 2024) does not include this indicator. No measure of low wages has been incorporated into the forced labor analysis for this study.

⁴⁵ Respondents were asked, “Does your employer require you to work when you are seriously sick or injured?” and a “yes” response indicates that this indicator is present.

involuntary and coercion during the same employment stage (recruitment, employment, or separation) to be classified as a case of forced labor.

Nearly all employed respondents experienced involuntary work, but a much lower percentage experienced coercion, which “refers to the means used to compel someone to work without their free and informed consent” (International Labor Organization, 2024, p. 3). Thirty-four percent of employed respondents experienced at least one indicator of coercion (Table 13).

- The most common form of coercion, experienced by 22% of employed workers, was the threat of dismissal while living in employer-provided housing, which is an abuse of vulnerability, referring to “situations in which employers take advantage of workers’ vulnerable position [...] to coerce them under threat of dismissal, deportation or denial of rights or privileges to perform work or accept work conditions they would otherwise refuse” (International Labor Organization, 2023, p. 10). The ILO notes that “forced labor is also more likely in cases of multiple dependency on the employer” (International Labor Organization, 2023, p. 10)—a condition that applies to abaca workers living in employer provided housing.
- Nine percent of employed respondents experienced the threat of loss of housing or land provided by the employer. This is a form of abuse of vulnerability because when a worker is “dependent on the employer for housing or land, [...] the ability of a worker to leave a job can be severely constrained” (International Labor Organization, 2024, p. 18).
- Six percent of employed workers experienced withholding of wages, defined as “the deliberate and systematic withholding of wages” (International Labor Organization, 2024, p. 17). For example, one qualitative interviewee working for a large company whose primary job was loading abaca into transport containers described having to fill a prescribed number of containers before the load would be moved. The employer then increased the number of containers by 33% but did not increase the number of days of work or the number of team members. The interviewee and his team risked not being paid if they were unable to harvest and process enough fiber to fill the containers by the scheduled pick-up date. His employer said, “If the containers don’t go, there’s no money to pay.” In this case, the employer threatened to withhold the workers’ wages to pressure them to produce more.
- Five percent of employed workers experienced threats of or actual physical or sexual violence to compel them to perform work activities they would otherwise have refused. One qualitative interviewee described a former boss who used to hit and even shoot at workers when they failed to comply with instructions.

Less common forms of coercion included restrictions on workers’ movement (2% of employed workers), abuse or manipulation of debt (1% experienced this as a form of coercion, as opposed to a form of involuntary work), retention of identity documents (1%), or threat of arrest (1%).

Table 13. Respondents experiencing indicators of coercion among employed workers

	%	n
Experienced at least one indicator of coercion	34%	35
Abuse of vulnerability: Threat of dismissal	22%	23
Abuse of vulnerability: Threat of loss of housing or land provided by employer	9%	9
Withholding of wages	6%	6
Physical or sexual violence	5%	5
Restrictions on workers’ movement	2%	2
Abuse or manipulation of debt	1%	1
Retention of identity documents	1%	1

	%	n
Abuse of vulnerability: Threat of arrest	1%	1
Number of respondents (N)		103

As mentioned previously, a worker is considered to have experienced forced labor if they reported at least one indicator of menace of penalty and one indicator of involuntary work during a stage of employment (recruitment, employment, or separation). All 35 respondents who experienced coercion also experienced involuntary work during the same employment stage: therefore, 35 respondents (34% of employed workers) experienced forced labor. Indicators of both coercion and involuntary work were often present across multiple stages. Specifically, 9 experienced forced labor during the recruitment stage, 29 experienced forced labor during the employment stage, and 2 experienced forced labor during the employment separation stage.

Table 14 presents the rate of forced labor by various characteristics. Forced labor was relatively uncommon for the youngest age group (aged 18–24) and more common among those aged 25–39. This difference may relate to the difference in work activities by age. Processing abaca fibers (*maquineo*) tends to be a job for more experienced workers, and only one worker in the youngest age group reported this as their main activity. Since workers whose primary activity was processing abaca fibers (*maquineo*) experienced the highest rate of forced labor, this helps explain the lower rate of forced labor among younger workers.

Male workers had a higher rate of forced labor (40%), compared to female workers (18%); this may relate to the primary job activities performed by men versus women. As mentioned, workers whose primary activity was processing abaca fibers (*maquineo*) experienced the highest rate of forced labor, and this primary activity was exclusively reported by men. Only 1 of the 19 workers who reported that their primary activity was drying abaca fibers (*tendaleo*) experienced forced labor, and this activity was performed almost exclusively by women. Workers in Los Ríos and Santo Domingo experienced similar rates of forced labor. Having no contract or a verbal contract was associated with a higher rate of forced labor (36% and 35%, respectively) compared to having a written contract (25%).

Although the design of this study does not allow for an analysis of causal effects, consideration of the forced labor rate by level of education suggests that education may have a protective effect on forced labor. Those with less than a primary education had the highest rate of forced labor (48%), followed by those who completed primary (30%). Those with more than a primary education had the lowest rate of forced labor at 14%.

Table 14. Percentage experiencing forced labor among employed workers by worker characteristics

	%	n	N
Experienced forced labor	34%	35	103
Age (years)			
18–24	14%	3	21
25–39	47%	18	38
40–54	20%	5	25
55+	47%	9	19
Sex			
Male	40%	30	75
Female	18%	5	28
Education			
Less than primary	48%	21	44

	%	n	N
Completed primary	30%	11	37
Beyond primary	14%	3	22
Province of work			
Los Ríos	39%	12	31
Santo Domingo	32%	23	72
Type of contract			
Written	25%	3	12
Verbal	35%	17	49
None	36%	15	42
Primary job activity			
Cutting abaca stalks to extract fibers (<i>tuzeo</i>)	30%	11	37
Processing abaca fibers (<i>maquineo</i>)	64%	14	22
Drying abaca fibers (<i>tendaleo</i>)	5%	1	19
Other	36%	9	25

4.4.4 Child Labor

Qualitative interviews revealed that most workers began their labor in the abaca industry as children, and field visits confirmed the current presence of children working. Fifteen percent of respondents reported that children work at their worksites. The actual percentage of worksites with working children may be higher due to underreporting. Qualitative interviews suggest that respondents may discount youth who work part time or alongside their parents. An interviewer observed children working in abaca, but when she asked the respondent about children's work in the sector, he said it was very rare. She mentioned the children she observed, and he replied:

“Oh, those girls. But that’s just helping with the donkeys. They just go to the field, load up the tonguillos [bundles], and herd the donkeys. [...] I don’t think they make them carry the tonguillos. They just load them up and bring the donkeys back so the tonguillos don’t get left behind.”

—Abaca worker

The respondent did not consider the children's involvement to be work, but informal discussions with these youth indicated that the hours spent on these activities can be substantial, and participation in these activities can expose youth to significant risks, including sexual assault in isolated fields.

Respondents who reported children working at their worksite were asked at what age children start working in abaca. As shown in Table 15, 29% indicated ages between 5 and 8 years, 42% indicated ages between 9 and 11 years, and 29% indicated ages between 12 and 16 years. Asked which abaca activities are performed by children, respondents most frequently reported cutting abaca stalks to extract fibers (indicated by 96% of those who said children work at their workplace), transporting abaca materials (54%), drying abaca fibers (33%), and maintaining plants (21%).



Child taking a donkey loaded with abaca to the processing area. Source: ICF

Table 15. Children working at respondent's workplace according to respondent

	Total %	Total n	Total N
Children work at workplace	15%	24	156
Average age children start working in abaca			
5 to 8	29%	7	24
9 to 11	42%	10	24
12 to 16	29%	7	24
Abaca activities performed by children¹			
Maintaining plants (<i>chapeo</i>)	21%	5	24
Harvesting abaca leaves (<i>tumbado</i>)	13%	3	24
Cutting abaca stalks to extract fibers (<i>tuzeo</i>)	96%	23	24
Transporting abaca materials (<i>burreo</i>)	54%	13	24
Processing abaca fibers (<i>maquineo</i>)	4%	1	24
Drying abaca fibers (<i>tendaleo</i>)	33%	8	24
Twisting/spinning abaca fibers into specific forms	8%	2	24

¹ Multiple responses possible

5 CONCLUSION AND RECOMMENDATIONS

Qualitative data suggest that overall, conditions in the abaca sector have improved in recent years. When asked her opinion on the conditions over time, a worker responded, “It has improved. It’s better. These days, I would say yes, it’s better. I see that contractors used to abuse people more.” When asked why, she explained, “Because of the laws. People are more aware now.”

However, despite improvements, forced labor continues to occur in the abaca sector, with one in three employed abaca workers in the sample experiencing forced labor and nearly all experiencing involuntary work. In addition, there is evidence of child labor in the sector.

Abaca exported from Ecuador can be found in a majority of products that use abaca as an input—from teabags to cigarettes to automobiles. All abaca exports from Ecuador are in the form of raw fibers; as of 2024, there are no domestic abaca processing facilities or pulp manufacturers. In 2022, half of all abaca produced in Ecuador was exported to the United Kingdom, a quarter to the Philippines, approximately 20% to Japan, and less than 4% to Spain (Appendix 3). Abaca fibers are primarily sold for transformation into abaca pulp, although they are also used in the production of rope, twine, yarn, fabric, and artisanal crafts.

The first tier of the abaca supply chain, from Ecuador to importer, is relatively transparent through publicly available data. At the second tier of the international supply chain, however, it becomes increasingly difficult to trace Ecuadorian abaca due to multiple points of co-mingling, a variety of intermediary traders, and a wide range of end uses. As a result, all downstream users of abaca are at risk of sourcing abaca produced with indicators of forced labor.

This study offers the following recommendations:

To Private Sector Actors:

- Manufacturers of abaca pulp should facilitate purchase of raw abaca fiber from Ecuador with plantations that eliminate forced labor practices. Unlike many other international agricultural sectors, abaca workers typically work exclusively in abaca and have a social-cultural tie to the land and product. Ecuador produces high-quality abaca, a product in growing demand in a global community looking for environmentally sustainable products. The abaca value chain findings suggest that profits allow for improved worker conditions and sufficient profit motivation to traders.
- There is an emerging practice of incorporating codes of conduct among companies, especially international buyers. Buyers and all end users of products containing abaca should ensure that these codes of conduct are enforced and monitored. It is crucial that these codes are informed by the Ecuadorian regulatory framework and adapted accordingly to effectively address irregular situations. It is important for national certifications to be aligned with international social certifications and made mandatory for export.
- Buyer companies should establish ongoing corporate social responsibility programs that enable small suppliers to progressively enhance their production methods to meet the standards set by corporate due diligence. In addition, due to the current conditions in abaca farming, buying companies should direct resources and oversight to improve working and living conditions for abaca workers in the short term, including investments in housing, healthcare, and education.
- Producer companies should develop business improvement plans with budgets allocated for upgrading infrastructure, machinery, and personal protective and other safety equipment. Producer and exporter chambers or associations could provide productive support to the sector by facilitating better connections between small producers and exporters. Programs

should be created to raise awareness and provide training for workers on safety measures and labor rights.

- Ahlstrom, headquartered in the United Kingdom, the corporate organizer and exclusive purchaser of abaca from Agrícola, is a distinctive initiative aimed at coordinating small producers. Ahlstrom should invest in training its members to enhance working conditions, production processes, and opportunities in export markets. Furthermore, the abaca-producing members of Agrícola should consider forming a cooperative to seek additional buyers beyond Ahlstrom for the surplus abaca produced over Ahlstrom's annual purchasing quota.
- First tier importers in the United Kingdom, Japan, the Philippines, and Spain should require exports to provide a list of all small plantation owners from whom exporters of record have purchased abaca. These lists should be published to allow for third party tracing of abaca fibers from point of production to export.

To the Government of Ecuador:

- Develop specific programs to boost abaca production (particularly among small-scale producers), incorporating technological innovation, access to credit for purchasing tools and developing updated machinery, training, technical assistance, and research.
- Enhance the Ministry of Agriculture's system of mandatory permits for exported products (*Agrocalidad*) to require exporters to confirm that mechanisms for preventing and addressing forced labor and child labor have been implemented at the production source.
- Increase the number of labor, child labor, and occupational health inspections in abaca plantations, with a focus on addressing contractor-related issues.
- Launch safety and health campaigns among abaca workers and employers that include distribution of PPE.
- Implement social programs in education, healthcare, and income improvement to enhance the living conditions of abaca-producing families and prevent abuses by companies and contractors.
- Promote cooperative models and worker organizations that provide training and business development for workers and small producers.

To Other Governments:

- Support the Ecuadorian government's efforts to eliminate instances of forced labor in the abaca sector.
- Provide financial assistance and technical support to civil society actors working in the abaca sector and abaca-producing regions.
- Highlight quality investigative journalist coverage of labor abuse.
- Conduct studies on the role of child labor in abaca production in Ecuador.
- Advocate for HS code nomenclature that includes abaca-specific categories at the six-digit level, to facilitate tracing of abaca through international trade data.

To Civil Society:

- Develop projects focused on preventing child labor, preventing violence against women, facilitating access to legal aid, improving production, and promoting worker-organized cooperatives for abaca workers.
- Continue to bring national and international attention to the conditions of workers in abaca production.
- Conduct additional research on labor and living conditions for workers, especially women and children, to guide future government and private sector policies.

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APPENDIX 2: HS CODES

HS Code Glossary

Product	HS code	HS definition
Abaca	5305.00	Coconut, abaca (Manila hemp or <i>Musa Textilis Nee</i>), ramie and other vegetable textile fibers, not elsewhere specified or included, raw or processed but not spun; tow, noils and waste of these fibers (including yarn waste and garnetted stock)
Abaca pulp	4706.92	Pulps of fibers derived from recovered (waste and scrap) paper or paperboard or other fibrous cellulosic material. Other: Chemical
	4706.93	Pulps of fibers derived from recovered (waste and scrap) paper or paperboard or other fibrous cellulosic material. Other: semi-chemical
Cordage	5607.90	Twine, cordate, ropes and cables, whether or not plaited or braided and whether or not impregnated, coated or sheathed with rubber or plastics. Other [than of sisal or other textile fibers of the genus <i>Agave</i> ; of polyethylene or polypropylene; or of synthetic fibers]

Note on HS mapping: Abaca (HS 5305.00) does not uniquely define abaca, as it includes non-abaca fibers. Abaca pulp (HS 4706.92 and 4706.93) does not uniquely define abaca pulp, as it includes other chemical and semi-chemical pulps derived from other cellulosic materials. Cordage (HS 5607.90) does not uniquely define cordage produced with abaca, as it includes cordage produced with other textiles and synthetic fibers.

Downstream products that may include abaca as an input and frequently appeared in shipping records include but are not limited to: Coffee/tea filters (HS 1404.90) “Vegetable products not elsewhere specified or included. Other [than cotton linters].” Coffee/tea pods (HS 4805.40) “Other uncoated paper and paperboard, in rolls or sheets, not further worked or processed than as specified in Note 3 of this Chapter. Filter paper and paperboard.” Dress patterns or Swedish tracing paper (HS 6307) “Other made up articles, including dress patterns.” Filter paper (HS 4823.20) “Other paper, paperboard, cellulose wadding and webs of cellulose fibers, cut to size or shape; other articles of paper pulp, paper, paperboard, cellulose wadding or webs of cellulose fibers: Filter paper and paperboard.” Tea bags (HS 5603.12) “Nonwovens, whether or not impregnated, coated, covered or laminated of man-made filaments weighing more than 25 g/m² but not more than 70 g/m².” Cellulose sausage casings (HS 3917.10) “Tubes, pipes and hoses, and fittings thereof (for example, joints, elbows, flanges) or plastics. Artificial cuts (sausage casings) of hardened protein or in cellulosic material.”

All potential downstream goods HS codes (HS 1404.90, 4805.40, 6307.00, 4823.20, 5603.12, 3917.10) do not uniquely define goods produced with abaca and include products that do not contain abaca.

APPENDIX 3: EXPORT AND PRODUCTION VALUES

Export Markets for Abaca from Ecuador, 2022 and 2023 (MT)

Importer	Primary quantity (MT)		Destination market share (percentage)	
	2022	2023	2022	2023
World	10,852	10,191	100.0%	100.0%
Canada	0.002	0.01	0.0%	0.0001%
China		11		0.1%
El Salvador		0.01		0.0001%
French Guiana		0.01		0.0001%
Guadeloupe		0.01		0.0001%
Indonesia	18	4	0.2%	0.04%
Jamaica		0.01		0.0001%
Japan	1,900	2,099	17.5%	20.6%
Kazakhstan		0.01		0.0001%
Kuwait		0.01		0.0001%
Netherlands		0.01		0.0001%
Nicaragua		0.01		0.0001%
Paraguay		0.01		0.0001%
Philippines	2,675	2,458	24.6%	24.1%
Puerto Rico (U.S.)		0.01		0.0001%
Qatar		0.01		0.0001%
Romania		0.01		0.0001%
Spain	400	340	3.7%	3.3%
Trinidad & Tobago		0.01		0.0001%
United Kingdom	5,859	5,279	54.0%	51.8%
United States		0.01		0.0001%
Uruguay		0.01		0.0001%

Source: Ecuador Central Bank, 2024

Top Global Producers of Abaca, 2022

Producing Country	Quantity (thousand tons)	Percent of total global production
Philippines	63.6	82.7%
Ecuador	13.8	14.2%
Other (Costa Rica)	2.4	3.1%

Source: FAO, 2023

Note: Global production statistics for 2023 were not available at the time of report writing.

APPENDIX 4: COMPANY NAMES OF EXPORTERS OF ABACA FROM ECUADOR

Exporter of record (2022 and 2023)	Company abbreviation	KII respondents' vernacular company name	Known parent company, shareholders, ownership, subsidiaries, managers
Asociacion de Produccion Agricola de Abaca Gacifibra Asoprofibra	Asoprofibra (Pinocho)	Pinocho	
Garcia Reyes Erasmito Aristides	Garcia Aristides (Pinocho)	Pinocho	
Bee Corp Trading S.A.S	Bee Corp Trading (Lopez)	Lopez	Shareholder 50-50%: Lizano Vera Gerado Humberto and Lopez Mendoza Byron Fernando. Manager: Lopez Mendoza; Legal representative: Bravo Cheve Jennifer Mariela
Cooperativa de Exportacion de Firbras Vegetales (CAFIV)	Cafiv (el Chileno)	El Chileno	Owner: German Manterola
Manterola Miranda German Alfredo	Manterola (el Chileno)	El Chileno	Ownership: Manterola Miranda German Alfredo (100%)
Cooperativa Produccion Agricola Abaca Ecuador	Agricola		
Endless Spring Farms	Endless Spring Farms		Ownership: Serrano Diaz Luis Oswaldo (100%). Manager: Serrano Diaz Luis Oswaldo
Furukawa Plantaciones C.A. del Ecuador	Furukawa (FPC)		Managers: Seiji Nagao Nagao, Hugo Adolfo Chalen Bermeo, Angel Ivan Segarra Segovia, Jose Adrian Herrera Villena. Registered under FPC Marketing in Ecuador. Parent Company: Mavenz Registered under FPC Marketing in Ecuador
Marca Abaca SA	Marca Abaca (FPC)		Shareholders: Mavenz Inc (33.3%); Mabalay Eric Umali (33.3%); Cabezas Espinosa Martin Solomon (33.3%). Beneficial Owners: Mavenz Inc. Registered under FPC Marketing in Ecuador
Global Trade International CLOTIC-Trade S.A.S.	CLOTIC Trade		
Ordoñez Espinosa Juan Carlos	Ordonez		
Processador Mejia S.A.	Mejia		
Rios Veliz Jorge Luis	Rios Veliz		Shareholder: Rios Veliz Jorge Luis (100%)

Exporter of record (2022 and 2023)	Company abbreviation	KII respondents' vernacular company name	Known parent company, shareholders, ownership, subsidiaries, managers
Rojas Meloi Luis Fernando	Meloni		100% ownership Rojas Meloni Luis Fernanco. Rojas Meloni Luis Fernando is 0.2% shareholder in Epotadora de Frutas Queved; .03% shareholder in Inmobilirai Nikithom SA; .01% shareholder of Centroprak SA; 5% shareholder of Shiara SA; 20% shareholder of Inmobiliaria Azul CIA Ltd

Source: Bank of Ecuador; Sayari; KIIs

APPENDIX 5: FINAL RESEARCH INSTRUMENTS

ABACA WORKER QUESTIONNAIRE

Field	Question	Answer
CONSENT		
CONSENT	Before starting the survey, I would like to read you some information so that you understand what the study involves. • This study is carried out by DYA Desarrollo y Autogestion. • This survey is part of a study that seeks to better understand the work experiences among abaca workers in Ecuador. • Everything you say is confidential. • None of your co-workers or employers will know what you say. • Your name will not be used in any report. • Data from this study may be shared with other researchers or made available in public databases in order to advance research on these topics. Before doing so, all personally identifiable information will be removed. • Participation in this study is voluntary, and if you do not participate there will be no consequences. • The risk of doing this survey is that some of our questions are personal and may bring up painful memories that make you feel uncomfortable. • If you find the survey too tiring or upsetting, we can pause, reschedule, or end the interview. • There are no direct benefits for participating in this study, but if you decide to participate in this study, your contribution will help shed light on the situation of working conditions in the	1 YES 2 NO

Field	Question	Answer
	abaca industry. • Your answers may help develop future programs to help other workers. • Do you have any questions? • If you have any questions in the future, you can contact DYA, info@dya.org.ar Do you agree to participate in this survey?	
STARTING_NOTE	INTERVIEWER: DO NOT READ RESPONSE OPTIONS ALOUD UNLESS INDICATED. LISTEN TO THE RESPONSE AND SELECT THE MOST APPROPRIATE RESPONSE OPTION(S). DO NOT READ UPPERCASE TEXT ALOUD. <i>Question relevant when: CONSENT = 1</i>	
SECTION 1: GENERAL INFORMATION		
<i>Group relevant when: CONSENT = 1</i>		
S1Q01	S1Q01. Have you worked in the abaca industry in Ecuador in the past year?	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S1Q02	S1Q02. How old are you? [IF NEEDED, SAY: Your best guess is fine] <i>Question relevant when: S1Q01 = 1</i>	
SECTION 1: GENERAL INFORMATION > SECTION 1A: GENERAL INFORMATION		
<i>Group relevant when: CONSENT = 1 and (S1Q02 > 17 or S1Q02 = -76) and (S1Q01 = 1)</i>		
S1Q03	S1Q03. INTERVIEWER: MARK RESPONDENT'S GENDER. ASK IF UNSURE.	11. MALE 22. FEMALE 33. PREFER NOT TO SAY

Field	Question	Answer
S1Q04	S1Q04. Where were you born?	11. ECUADOR 55. OTHER COUNTRY 77. DON'T KNOW 99. REFUSED
S1Q04_OTHER	S1Q04_OTHER. RECORD OTHER COUNTRY OF BIRTH <i>Question relevant when: S1Q04 = 55</i>	
S1Q04A	S1Q04A. In which province of Ecuador were you born? <i>Question relevant when: S1Q04 = 1</i>	11. AZUAY 22. BOLIVAR 33. CAÑAR 44. CARCHI 55. CHIMBORAZO 66. COTOPAXI 77. EL ORO 88. ESMERALDAS 99. GALÁPAGOS 10. GUAYAS 11. IMBABURA 12. LOJA 13. LOS RÍOS 14. MANABÍ 15. MORONA SANTIAGO 16. NAPO 17. ORELLANA

Field	Question	Answer
		1 18. PASTAZA 8 1 19. PICHINCHA 9 2 20. SANTA ELENA 0 221. SANTO DOMINGO DE LOS 1 TSÁCHILAS 2 22. SUCUMBÍOS 2 2 23. TUNGURAHUA 3 2 24. ZAMORA-CHINCHIPE 4 7 77. DON'T KNOW 7 9 99. REFUSED 9
 S1Q05	S1Q05. Have you ever attended school?	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
 S1Q05A	S1Q05A. What is the highest class you have completed? <i>Question relevant when: S1Q05 = 1</i>	1. PRESCHOOL/NURSERY 1 SCHOOL 22. SOME PRIMARY 33. COMPLETED PRIMARY 44. SOME SECONDARY 5. COMPLETED SECONDARY OR 5 HIGHER 7 77. DON'T KNOW 7 9 99. REFUSED 9
 GI_READ	READ: For the following questions, please think about your most recent job working in the abaca industry. If you	

Field	Question	Answer
	had more than one job, think about your main job.	
 S1Q06	S1Q06. Approximately when did you start this work? [INTERVIEWER: SELECT MONTH (IF KNOWN)]	11. JANUARY 22. FEBRUARY 33. MARCH 44. APRIL 55. MAY 66. JUNE 77. JULY 88. AUGUST 99. SEPTEMBER 10. OCTOBER 11. NOVEMBER 12. DECEMBER 77. DON'T KNOW
 S1Q06_YEAR	S1Q06_YEAR. YEAR [INTERVIEWER: RECORD YEAR.]	
 S1Q07	S1Q07. Do you still have this job?	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
SECTION 1: GENERAL INFORMATION > SECTION 1A: GENERAL INFORMATION > S1C Group relevant when: not(S1Q07 , '77')) and not(S1Q07 , '99'))		
 S1Q07A	S1Q07A. Approximately when did you stop working this job? [INTERVIEWER: SELECT MONTH (IF KNOWN)] Question relevant when: S1Q07 does not equal 1	11. JANUARY 22. FEBRUARY 33. MARCH 44. APRIL 55. MAY 66. JUNE 77. JULY

Field	Question	Answer
		88. AUGUST 99. SEPTEMBER 1 0 10. OCTOBER 1 1 11. NOVEMBER 1 2 12. DECEMBER 7 7 77. DON'T KNOW 7
 S1Q07A_YEAR	S1Q07A_YEAR. YEAR [INTERVIEWER: RECORD YEAR.] Question relevant when: S1Q07 does not equal 1	
 SECTION 1: GENERAL INFORMATION > SECTION 1A: GENERAL INFORMATION > S1C > S1D Group relevant when: (JOB_END_FLAG does not equal 1) and (DOES_NOT_KNOW_FLAG does not equal 1)		
 S1Q08	S1Q08. Do you have a boss?	11. YES 22. NO 7 7 77. DON'T KNOW 7 9 9 99. REFUSED 9
 S1Q08A1	S1Q08A1. Does anyone tell you how much to produce? READ ALOUD RESPONSE OPTIONS AND SELECT ALL THAT APPLY Question relevant when: S1Q08 > 1	11. YES 22. NO 7 7 77. DON'T KNOW 7 9 9 99. REFUSED 9
 S1Q08A2	S1Q08A2. Does anyone tell you how to produce (so that the fiber doesn't lose quality)? Question relevant when: S1Q08 > 1	11. YES 22. NO 7 7 77. DON'T KNOW 7 9 9 99. REFUSED 9

Field	Question	Answer
 S1Q08A3	S1Q08A3. Does anyone tell you where to work? <i>Question relevant when: S1Q08 > 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q08A4	S1Q08A4. Does anyone tell you which tasks to do (for example, when to harvest)? <i>Question relevant when: S1Q08 > 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q08B	S1Q08B. Who tells you to do this? <i>Question relevant when: S1Q08A1 = 1 or S1Q08A2 = 1 or S1Q08A3 = 1 or S1Q08A4 = 1</i>	1 CONTRACTOR OR TENANT? 2 FIELD BOSS? 3 LAND OWNER? 4 MEMBER OF YOUR FAMILY? 5 COMPANY 5 OTHER 77. DON'T KNOW 99. REFUSED
 S1Q08B_OTHER	RECORD OTHER <i>Question relevant when: S1Q08B = 55</i>	
 S1Q08C	S1Q08C. Is your boss... READ ALOUD RESPONSE OPTIONS AND SELECT ALL THAT APPLY <i>Question relevant when: S1Q08 = 1</i>	1 A contractor or tenant? 2 A field boss? 3 A land owner? 4 A member of your family ? 55. OTHER 77. DON'T KNOW 99. REFUSED

Field	Question	Answer
 S1Q08C_OTHER	S1Q08C_OTHER. RECORD OTHER <i>Question relevant when: S1Q08C = 55</i>	
 S1Q08D	S1Q08D. INTERVIEWER: WHAT DOES THE RESPONDENT CALL THIER BOSS OR THE PERSON WHO TELLS THEM WHAT TO DO <i>Question relevant when: S1Q09 = 1</i>	1 CONTRACTOR 2 TENANT 3 FIELD BOSS 4 LAND OWNER 5 COMPANY
 S1Q08E1	S1Q08E1. Does anyone tell your [boss] what to produce? <i>Question relevant when: S1Q08 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q08E2	S1Q08E2. Does anyone tell your [boss] how to produce (so that the fiber doesn't lose quality)? <i>Question relevant when: S1Q08 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q08E3	S1Q08E3. Does anyone tell your [boss] where to work? <i>Question relevant when: S1Q08 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q08E4	S1Q08E4. Does anyone tell your [boss] which tasks to do (for example when to harvest)? <i>Question relevant when: S1Q08 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED

Field	Question	Answer
 S1Q08F	S1Q08F. Who tells your [boss] to do this? <i>Question relevant when: S1Q08E1 = 1 or S1Q08E2 = 1 or S1Q08E3 = 1 or S1Q08E4 = 1</i>	1 CONTRACTOR OR TENANT? 2 FIELD BOSS? 3 LAND OWNER? 5 COMPANY 5 55. OTHER 7 77. DON'T KNOW 9 99. REFUSED
 S1Q08F_OTHER	RECORD OTHER <i>Question relevant when: S1Q08F = 55</i>	
 S1Q08H	S1Q08H. What is the name of the company? <i>Question relevant when: S1Q08B , '5') or S1Q08F , '5')</i>	2 FURUKAWA 3 EL CHILENO/PINOCHO 4 ABACA ECUADOR 5 OTHER COMPANY 7 77. DON'T KNOW 9 99. REFUSED
 S1Q08H_OTHER	RECORD OTHER <i>Question relevant when: S1Q08H = 55</i>	
 S1Q08J	S1Q08J. What company does the field boss work for? <i>Question relevant when: (S1Q08B , '2') or S1Q08C , '2') or S1Q08F , '2')) and S1Q08H = null</i>	2 FURUKAWA 3 EL CHILENO/PINOCHO 4 ABACA ECUADOR 5 OTHER COMPANY 7 77. DON'T KNOW 9 99. REFUSED
 S1Q08J_OTHER	RECORD OTHER <i>Question relevant when: S1Q08J = 55</i>	

Field	Question	Answer
 S1Q08G	S1Q08G. To whom is the abaca delivered? <i>Question relevant when: (S1Q08B , '1') or S1Q08B , '3') or S1Q08B , '4') or S1Q08C , '1') or S1Q08C , '3') or S1Q08C , '4') or S1Q08F , '1') or S1Q08F , '3') or S1Q08F , '4')) and S1Q08H = null and S1Q08J = null</i>	1 INTERMEDIARY 2 FURUKAWA 3 EL CHILENO/PINOCHO 4 ABACA ECUADOR 5 OTHER COMPANY 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
 S1Q08G_OTHER	RECORD OTHER <i>Question relevant when: S1Q08G =55</i>	
 S1Q08K	S1Q08K. To whom do you sell the fiber? <i>Question relevant when: S1Q09 = 2</i>	1 INTERMEDIARY 2 FURUKAWA 3 EL CHILENO/PINOCHO 4 ABACA ECUADOR 5 OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
 S1Q08K_OTHER	RECORD OTHER <i>Question relevant when: S1Q08K =55</i>	
 S1Q08L	S1Q08L. Who owns the land you work on? <i>SELECT ALL THAT APPLY</i>	2 FURUKAWA 3 EL CHILENO/PINOCHO 4 ABACA ECUADOR 5 ME OR MY FAMILY 6 OTHER INDIVIDUAL 5 OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9

Field	Question	Answer
 S1Q08L_OTHER	RECORD OTHER <i>Question relevant when: S1Q08L = 55</i>	
 S1Q11	S1Q11. In which of these activities have you engaged in the most recent month you worked? <i>READ ALOUD RESPONSE OPTIONS AND SELECT ALL THAT APPLY</i>	11. Maintaining plants (chapeo) 22. Pulling up the shoots (deshije) 33. Harvesting abaca leaves (tumbado) 44. Cutting abaca stalks to extract fibers (tuzeo) 55. Transporting abaca materials (burreo) 66. Processing abaca fibers (maquineo) 77. Drying abaca fibers (tendaleo) 88. Classifying abaca fibers for processing 99. Twisting/spinning abaca fibers into specific forms 100. Cooking for the workers 77. DON'T KNOW 99. REFUSED
 S1Q11_OTHER_WORK	S1Q11_OTHER_WORK. Other than the activities already mentioned, did you do any other activities related to the production of abaca?	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
 S1Q11_OTHER_WORK_FOLLOW_UP	S1Q11_OTHER_WORK_FOLLOW_UP. What other work related to the abaca industry did you do? <i>Question relevant when: S1Q11_OTHER_WORK = 1</i>	

Field	Question	Answer
S1Q11A	S1Q11A. On which of these activities do (did) you spend the most time? <i>Question relevant when:</i> <i>numselected_S1Q11_tot > 0</i>	1 1. Maintaining plants (chapeo) 2 2. Pulling up the shoots (deshije) 3 3. Harvesting abaca leaves (tumbado) 4 4. Cutting abaca stalks to extract fibers (tuzeo) 5 5. Transporting abaca materials (burreo) 6 6. Processing abaca fibers (maquineo) 7 7. Drying abaca fibers (tendaleo) 8 8. Classifying abaca fibers for processing 9 9. Twisting/spinning abaca fibers into specific forms 10 10. Cooking for the workers 55. OTHER WORK RELATED TO ABACA : ... 77. DON'T KNOW 99. REFUSED
SECTION 2: RECRUITMENT <i>Group relevant when: (CONSENT = 1) and (S1Q02 > 17 or S1Q02 = -76) and (S1Q01 = 1) and (S1Q07 does not equal 77) and (S1Q07 does not equal 99) and (JOB_END_FLAG does not equal 1) and (DOES_NOT_KNOW_FLAG does not equal 1)</i>		
S2Q01	S2Q01. Next we would like to ask you a few questions about how you started in your job. Did anyone help you get this job?	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S2Q01A	S2Q01A. Who helped you get this job? <i>INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anyone else?" BEFORE MOVING ON.</i>	1 CONTRACTOR OR TENANT 2 FIELD BOSS 3 LAND OWNER 4 MEMBER OF YOUR FAMILY

Field	Question	Answer
	<i>Question relevant when: S2Q01 = 1</i>	6 FRIEND 5 55. OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q01A_OTHER	RECORD OTHER <i>Question relevant when: S2Q01A = 55</i>	
S2Q02	S2Q02. Did you feel compelled to take this job? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q02A	S2Q02A. Why did you feel compelled to take this job? INTERVIEWER: SELECT ALL THAT APPLY. ASK "Any other reason?" AT LEAST TWICE BEFORE MOVING ON. <i>Question relevant when: S2Q02 = 1</i>	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR MANIPULATION OF DEBT (DEBT TO EMPLOYER) 5 55. OTHER 5 7 77. THREAT OF LOSS OF HOUSING/LAND 8 8. BORN INTO AN ABACALERA FAMILY/CAMP 5 55. OTHER 5 6 66. JOB OPPORTUNITIES ARE SCARCE/I WOULDN'T HAVE MONEY/ETC 6

Field	Question	Answer
		7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q02A_OTHER	S2Q02A_OTHER. RECORD OTHER <i>Question relevant when: S2Q02A = 55</i>	
S2Q03	S2Q03. Do (did) you have a written contract for this work? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q03A	S2Q03A. Did you have a verbal agreement for this work? <i>Question relevant when: S2Q03 does not equal 1 and S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q04	S2Q04. Think about what your [boss] told you before you started the job. Now think about the job you're actually doing. Did the conditions of the job you were promised actually happen? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q04A	S2Q04A. Which elements did not happen? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY. ASK "Anything else?" TWICE BEFORE MOVING ON.] <i>Question relevant when: S2Q04 = 2</i>	1. NATURE OF THE JOB 1 (FUNDAMENTAL DUTIES OF THE JOB, TYPE OF JOB) 22. WORK TASKS 33. HOURS 44. EARNINGS 55. LIVING CONDITIONS 66. HAZARDS

Field	Question	Answer
		77. JOB LOCATION 88. FORMALITY OF WORK 99. EMPLOYER 5 55. OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
S2Q04A_OTHER	S2Q04A_OTHER. RECORD OTHER <i>Question relevant when: S2Q04A =55</i>	
S2Q04B	S2Q04B. What would have happened if you had asked for the work or conditions you were promised? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY. ASK "Any other reason?" TWICE BEFORE MOVING ON.] <i>Question relevant when: S2Q04 = 2</i>	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE 1 AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON 2 RESPONDENT'S MOVEMENT 3. DEBT BONDAGE OR 3 MANIPULATION OF DEBT (DEBT TO EMPLOYER) 5. WITHHOLDING OF VALUABLE 5 DOCUMENTS BY EMPLOYER 7. THREAT OF LOSS OF 7 HOUSING/LAND 9. DISMISSAL OR THREATS OF 9 DISMISSAL 5 55. OTHER 5 6 66. NOTHING 6 7 77. DON'T KNOW 7 9 99. REFUSED 9

Field	Question	Answer
S2Q04B_OTHER	S2Q04B_OTHER. RECORD OTHER <i>Question relevant when: S2Q04B = 55</i>	
SECTION 3: LIVING CONDITIONS <i>Group relevant when: (CONSENT = 1) and (S1Q02 > 17 or S1Q02 = -76) and (S1Q01 = 1) and (S1Q07 does not equal 77) and (S1Q07 does not equal 99) and (JOB_END_FLAG does not equal 1) and (DOES_NOT_KNOW_FLAG does not equal 1)</i>		
S3Q01	S3Q01. Does (Did) your [boss] provide your housing? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q01A	S3Q01A. Does your [boss] deduct the cost of housing from your earnings? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q01B	S3Q01B. Could you have lived somewhere else and still work at your job? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q01C	S3Q01C. Why not? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY] <i>Question relevant when: S3Q01B = 2</i>	1. EMPLOYER, MANAGER, I WOULD NOT LET ME/ THEY REQUIRE THAT I LIVE HERE 2. I CAN'T AFFORD TO LIVE SOMEWHERE ELSE 3. NO ALTERNATIVE DUE TO REMOTENESS OF WORKSITE 55. OTHER 77. DON'T KNOW

Field	Question	Answer
		99. REFUSED
S3Q01C_OTHER	S3Q01C_OTHER. RECORD OTHER <i>Question relevant when: S3Q01C = 55</i>	
S3Q02	S3Q02. I would like to ask you a few questions about your field accommodations. How would you describe the quality of your accommodations-- Would you say good, ok, or bad? <i>Question relevant when: S3Q01 = 1</i>	11. GOOD 22. OK/FINE 33. BAD 77. DON'T KNOW 99. REFUSED
S3Q02A	S3Q02A. Do (Did) you have access to clean water in or near your field accommodations? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q02AA	S3Q02AA. Do you field accommodations have... READ ALOUD RESPONSE OPTIONS AND SELECT ALL THAT APPLY <i>Question relevant when: S3Q01 = 1</i>	11. Electricity 22. Sanitation and sewer services (hygienic services) 33. Garbage collection services 66. NONE 77. DON'T KNOW 99. REFUSED
S3Q02B	S3Q02B. Are the conditions in the field accommodations harmful to your health? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED

Field	Question	Answer
S3Q02C	S3Q02C. Do (Did) you feel safe in your field accomodations? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q02D	S3Q02D. How many people sleep (slept) in the room you sleep (slept) in, including yourself? <i>Question relevant when: S3Q01 = 1</i>	11. 1-4 PEOPLE 22. 5-8 PEOPLE 33. 9 OR MORE PEOPLE 77. DON'T KNOW 99. REFUSED
S3Q03	S3Q03. READ: Now I will ask you about your freedom of movement at work and outside of work. During working hours, can (could) you leave (have left) leave your workplace if needed? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q03A	S3Q03A. Why can't you leave your workplace during working hours? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY] <i>Question relevant when: S3Q03 = 2</i>	1. SUBJECT TO FINES/DEDUCTIONS/DISMISSAL 22. SUBJECT TO VERBAL ABUSE 3. PHYSICALLY UNABLE TO LEAVE 44. REPUTATION WOULD SUFFER 55. OTHER 77. DON'T KNOW 99. REFUSED
S3Q03A_OTHER	S3Q03A_OTHER. RECORD OTHER	

Field	Question	Answer
	<i>Question relevant when: S3Q03A =55</i>	
S3Q03B	S3Q03B. How are you prevented from leaving? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY] <i>Question relevant when: S3Q03A , '3')</i>	1. WOULD BE STOPPED BY SUPERVISOR 1 22. GUARDS 33. LOCKED DOORS/GATES 4. ISOLATED WITHOUT TRANSPORT 4 5. SUBJECTED TO PHYSICAL VIOLENCE 5 55. OTHER 5 77. DON'T KNOW 7 99. REFUSED 9
S3Q03B_OTHER	S3Q03B_OTHER. RECORD OTHER <i>Question relevant when: S3Q03B =55</i>	
S3Q04	S3Q04. Are you free to leave the area of your lodgings outside of work hours? <i>Question relevant when: S3Q01 = 1</i>	11. YES 22. NO 77. DON'T KNOW 7 99. REFUSED 9
S3Q04A	S3Q04A. Who prevents you from coming and going outside of work hours? [INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY] <i>Question relevant when: S3Q04 = 2</i>	11. GUARD/FIELD BOSS 22. CONTRACTOR/RENTER 33. FAMILY/SPOUSE 55. OTHER 5 77. DON'T KNOW 7 99. REFUSED 9

Field	Question	Answer
S3Q04A_OTHER	S3Q04A_OTHER. RECORD OTHER <i>Question relevant when: S3Q04A = 55</i>	
S3Q05	S3Q05. Does your [boss] hold any of your important documents, such as your ID (cedula)? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S3Q05A	S3Q05A. Can you access your documents if needed? <i>Question relevant when: S3Q05 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
SECTION 4: HOURS, DEBT AND PAYMENT <i>Group relevant when: (CONSENT = 1) and (S1Q02 > 17 or S1Q02 = -76) and (S1Q01 = 1) and (S1Q07 does not equal 77) and (S1Q07 does not equal 99) and (JOB_END_FLAG does not equal 1) and (DOES_NOT_KNOW_FLAG does not equal 1)</i>		
S5Q10	S5Q10. On average, how many hours do you work per day?	
S5Q11	S5Q11. How many days do (did) you usually work each week?	11 DAY 22 DAYS 33 DAYS 44 DAYS 55 DAYS 66 DAYS 77 DAYS - 777. DON'T KNOW - 999. REFUSED

Field	Question	Answer
S5Q10A	S5Q10A. What would happen if you refused to work over 8 hours per day? INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON. Question relevant when: S5Q10 > 8 and S1Q09 = 1	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE 1 AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON 2 RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR 3 MANIPULATION OF DEBT (DEBT TO EMPLOYER) 44. LOSS OF WITHHELD WAGES 5. LOSS OF WITHHELD 5 DOCUMENTS 77. LOSS OF HOUSING/LAND 9. DISMISSAL OR THREATS OF 9 DISMISSAL 10. FINE OR SALARY REDUCTION 55. OTHER 66. NOTHING/EARN LESS 6 MONEY/REPUTATION WOULD 6 SUFFER 77. DON'T KNOW 99. REFUSED
S5Q10A_OTHER	S5Q10A_OTHER. RECORD OTHER Question relevant when: S5Q10A = 55	
S5Q10A_alt	S5Q10A_alt. What would happen if you refused to work over 40 hours per week? INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON.	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE 1 AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER

Field	Question	Answer
	<i>Question relevant when: S5Q10 < 9 and hours_wk > 40 and S1Q09 = 1</i>	2. RESTRICTION ON 2 RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR 3 MANIPULATION OF DEBT (DEBT TO EMPLOYER) 44. LOSS OF WITHHELD WAGES 5. LOSS OF WITHHELD 5 DOCUMENTS 77. LOSS OF HOUSING/LAND 9. DISMISSAL OR THREATS OF 9 DISMISSAL 10. FINE OR SALARY REDUCTION 10 55. OTHER 55 66. NOTHING/EARN LESS 6 MONEY/REPUTATION WOULD 6 SUFFER 77. DON'T KNOW 77 99. REFUSED 99
S5Q10A_alt_OTHER	S5Q10A_alt_OTHER. RECORD OTHER <i>Question relevant when: S5Q10A_alt = 55</i>	
S5Q12	S5Q12. Are you required to work non-stop without breaks during the working day? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 77 99. REFUSED 99
S4Q01	S4Q01. Sometimes workers are in debt to their employers or recruiters, for example after buying food or receiving part of	11. YES 22. NO 77. DON'T KNOW 77

Field	Question	Answer
	their salary in advance. The next questions are about debt to your boss. Has your [boss] charged you excessive or unagreed amounts for food, lodging, or supplies (beds or other goods)? <i>Question relevant when: S1Q09 = 1</i>	9 99. REFUSED 9
S4Q01A	Have these amounts put you in debt with your [boss]? <i>Question relevant when: S4Q01 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q01AA	S4Q01AA. Have you been fined at work? IF NEEDED: For example, fines for workplace violations or failure to reach production targets <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q01B	S4Q01B. Has you gone into debt with your [boss] due to fines? <i>Question relevant when: S4Q01AA = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q01BB	S4Q01BB. Do you have any debt with your [boss]? <i>Question relevant when: S4Q01A does not equal 1 and S4Q01B does not equal 1 and S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q01BB_alt	S4Q01BB_alt. Do you have any other debt with your [boss]? <i>Question relevant when: S4Q01A = 1 or S4Q01B = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7

Field	Question	Answer
		99. REFUSED
S4Q01C	S4Q01C. Does your [boss] unfairly increase the amount of your debt over time? <i>Question relevant when: S4Q01A = 1 or S4Q01B = 1 or S4Q01BB = 1 or S4Q01BB_alt = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S4Q01D	S4Q01D. If you were to leave your job before paying off your debt, what would happen? <i>INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON.</i> <i>Question relevant when: S4Q01A = 1 or S4Q01B = 1 or S4Q01BB = 1 or S4Q01BB_alt = 1</i>	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON RESPONDENT'S MOVEMENT BY EMPLOYER 5. LOSS OF WITHHELD DOCUMENTS BY EMPLOYER 7. LOSS OF HOUSING/LAND 8. ARREST OR PROSECUTION 10. DEDUCTION OF AMOUNT OWED FROM THE FINAL PAYMENT 11. WITHHOLDING OF MATERIAL GOODS AS COLLATERAL 55. OTHER 66. NOTHING 77. DON'T KNOW 99. REFUSED
S4Q01D_OTHER	S4Q01D_OTHER. RECORD OTHER <i>Question relevant when: S4Q01D = 55</i>	

Field	Question	Answer
S4Q01E	S4Q01E. How often do you receive your pay? <i>Question relevant when: S1Q09 = 1</i>	1 DAILY 2 WEEKLY 3 BI-WEEKLY 4 MONTHLY - 7 77. DON'T KNOW 7 - 9 99. REFUSED 9
S4Q01F	S4Q01F. How much are you paid [disp_S4Q01E]? <i>IF NEEDED, SAY: Please only include the earnings from your basic wages, not any overtime pay or bonuses you may receive.</i> <i>Question relevant when: S1Q09 = 1 and S4Q01E > 0</i>	
S4Q01G	S4Q01G. Does your [boss] deduct anything from your pay? <i>Question relevant when: S1Q09 = 1 and S4Q01F > 0</i>	11. YES 22. NO 7 7 77. DON'T KNOW 7 9 9 99. REFUSED 9
S4Q01H	S4Q01H. How much does your [boss] deduct [disp_S4Q01E]? <i>Question relevant when: S4Q01G = 1</i>	
S4Q01J	S4Q01J. What are the deductions for? <i>Question relevant when: S4Q01G = 1</i>	11. FOOD 22. LODGING 33. USE OF TOOLS 4. REPAYMENT OF SALARY ADVANCE 4 5 5 55. OTHER 5 7 7 77. DON'T KNOW 7

Field	Question	Answer
		9 99. REFUSED 9
S4Q01J_OTHER	RECORD OTHER <i>Question relevant when: S4Q01J =55</i>	
S4Q02	S4Q02. Approximately how much do you earn per day? <i>Question relevant when: S1Q09 = 2</i>	
S4Q02A	S4Q02A. On a typical month, are your earnings less than \$460 USD? <i>INTERVIEWER: IF RESPONDENT IS PAID IN KIND, ASK RESPONDENT TO ESTIMATE WHETHER VALUE IS LESS THAN \$460 USD</i> <i>Question relevant when: S5Q11 < 0 or S5Q10 < 0 or S4Q01F < 0 or S4Q01E < 0</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q03	S4Q03. Who pays you? <i>Question relevant when: S1Q09 = 1</i>	11. CONTRACTOR OR TENANT 22. FIELD BOSS 33. LAND OWNER 44. MEMBER OF YOUR FAMILY 55. COMPANY 5 55. OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q03_OTHER	S4Q03_OTHER. RECORD OTHER <i>Question relevant when: S4Q03 =55</i>	
S4Q04	S4Q04. Are your earnings enough to meet your basic needs ?	11. YES 22. NO 7 77. DON'T KNOW 7

Field	Question	Answer
		9 99. REFUSED 9
S4Q05	S4Q05. Does your employer impose a production quota/target? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
SECTION 4: HOURS, DEBT AND PAYMENT > quotagroup_start		
S4Q05A	S4Q05A. What is the daily quota/target? ENTER NUMBER <i>Question relevant when: S4Q05 = 1</i>	
S4Q05A_UNIT	S4Q05A_UNIT INDICATE THE UNIT OF MEASUREMENT <i>Question relevant when: S4Q05 = 1</i>	11. TONS 22. KG 33. BUNDLE 44. LOG 5 55. OTHER 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q05A_UNIT_OTHER	S4Q05A_UNIT_OTHER. RECORD OTHER <i>Question relevant when: S4Q05A_UNIT = 55</i>	
S4Q05B	S4Q05B. Do you consider the quota/target to be a reasonable amount for an individual worker working alone? <i>Question relevant when: S4Q05 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q05C	S4Q05C.	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE 1

Field	Question	Answer
	What would happen if you failed to meet the quota/target? <i>INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON.</i> <i>Question relevant when: S4Q05 = 1</i>	AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON 2 RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR 3 MANIPULATION OF DEBT (DEBT TO EMPLOYER) 44. LOSS OF WITHHELD WAGES 5. LOSS OF WITHHELD 5 DOCUMENTS 77. LOSS OF HOUSING/LAND 9. DISMISSAL OR THREATS OF 9 DISMISSAL 1 10. FINE OR SALARY DEDUCTION 0 5 55. OTHER 5 66. NOTHING/EARN LESS 6 6 MONEY/REPUTATION WOULD 6 SUFFER 7 77. DON'T KNOW 7 9 99. REFUSED 9
S4Q05C_OTHER	S4Q05C_OTHER. RECORD OTHER <i>Question relevant when: S4Q05C = 55</i>	
SECTION 5: WORKING CONDITIONS <i>Group relevant when: (CONSENT = 1) and (S1Q02 > 17 or S1Q02 = -76) and (S1Q01 = 1) and (S1Q07 does not equal 77) and (S1Q07 does not equal 99) and (JOB_END_FLAG does not equal 1) and (DOES_NOT_KNOW_FLAG does not equal 1)</i>		
S5Q02	S5Q02. Does your work involve anything that risks your health or safety?	11. YES 22. NO 7 77. DON'T KNOW 7

Field	Question	Answer
		99. REFUSED
S5Q02A	S5Q02A. What are the risks to your health or safety? INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON. Question relevant when: S5Q02 = 1	1. RESPIRATORY PROBLEMS DUE TO ABACÁ DUST 22. EXTREME HEAT 33. HEARING DAMAGE 4. DANGEROUS OR SHARP TOOLS OR FIBERS 5. ACCIDENTS FROM USING DECORTICATING MACHINERY 6. CARRYING UNREASONABLY HEAVY LOADS 7. BITES BY SNAKES OR OTHER SPECIES PRESENT IN THE WORK AREA 8. ACCIDENTS CAUSED BY A FALLING STALK DURING THE "TUMBADO" PROCESS 55. OTHER 77. DON'T KNOW 99. REFUSED
S5Q2A_OTHER	S5Q02A_OTHER. RECORD OTHER Question relevant when: S5Q02A = 55	
S5Q03	S5Q03. Does your [boss] provide you with the personal protective equipment (PPE) needed to perform your job safely? Question relevant when: S5Q02 = 1 and S1Q09 = 1	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S5Q03A	S5Q03A. Does your [boss] regularly update the	11. YES 22. NO

Field	Question	Answer
	personal protective equipment to ensure it is in proper condition? <i>Question relevant when: S5Q03 = 1</i>	7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q04	S5Q04. I will read a list of protective gear. Please tell me which items you usually wear when working: <i>INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY. INCLUDE ALL PPE USED WHETHER PROVIDED BY EMPLOYER OR WORKER.</i>	11. Protective goggles 22. Ear-plugs 33. Respirator or dust-mask 4 4. Protective clothing such as coveralls 55. Gloves 66. Work boots 5 55. other? 5 7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q04_OTHER	S5Q04_OTHER. RECORD OTHER <i>Question relevant when: S5Q04 =55</i>	
S5Q05	S5Q05. Does your [boss] provide you with the training needed to perform your job safely? <i>Question relevant when: S5Q02 = 1 and S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q06	S5Q06. Does your [boss] endanger your life by failing to take proper safety precautions? <i>Question relevant when: S5Q02 = 1 and S1Q09 = 1</i>	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q07	S5Q07. What would happen if you refused to do these hazardous activities?	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE AGAINST RESPONDENT OR

Field	Question	Answer
	INTERVIEWER: SELECT ALL THAT APPLY. ASK "Any other reason?" AT LEAST TWICE BEFORE MOVING ON. Question relevant when: S5Q02 = 1 and S1Q09 = 1	RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON 2 RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR 3 MANIPULATION OF DEBT (DEBT TO EMPLOYER) 44. LOSS OF WITHHELD WAGES 5. LOSS OF WITHHELD 5 DOCUMENTS 77. LOSS OF HOUSING/LAND 9. DISMISSAL OR THREATS OF 9 DISMISSAL 10. FINE OR SALARY DEDUCTION 0 55. OTHER 5 66. NOTHING/EARN LESS 6 MONEY/REPUTATION WOULD 6 SUFFER 77. DON'T KNOW 7 99. REFUSED 9
S5Q07_OTHER	S5Q07_OTHER. RECORD OTHER Question relevant when: S5Q07 =55	
S5Q08	S5Q08. Have you ever gotten hurt or sick because of your work in this job?	11. YES 22. NO 77. DON'T KNOW 7 99. REFUSED 9
S5Q08A	S5Q08A.	1. INJURIES TO THE LIMBS 1 (ARMS AND LEGS)

Field	Question	Answer
	What types of injury or sickness have you had? INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY Question relevant when: S5Q08 = 1	2. INJURY TO OR DEAFNESS IN EARS 33. EYE INJURY 44. DAMAGE TO THE LUNGS 55. SEVERING OF LIMB 66. SNAKE OR LIMB BITE 7. CUTS OR WOUNDS FROM SHARP OBJECTS (KNIVES, MACHETES) 88. BODY ACHES 55. OTHER 77. DON'T KNOW 99. REFUSED
S5Q08A_OTHER	S5Q08A_OTHER. RECORD OTHER Question relevant when: S5Q08A =55	
S5Q08B	S5Q08B. How did you get hurt or sick? INTERVIEWER: LISTEN AND SELECT ALL THAT APPLY Question relevant when: S5Q08 = 1	11. CUT FROM PLANT/FIBER 22. TOOL ACCIDENT 3. MACHINERY ACCIDENT (ABACA DECORTICATING MACHINE) 44. INHALATION OF ABACA DUST 5. INHALATION OF OIL LAMP SMOKE 6. FIGHTS AND ARGUMENTS WITH WORK COLLEAGUES OR FAMILY MEMBERS 77. CARRYING HEAVY LOADS 88. SNAKE BITE 55. OTHER 77. DON'T KNOW

Field	Question	Answer
		99. REFUSED
S5Q08B_OTHER	S5Q08B_OTHER. RECORD OTHER <i>Question relevant when: S5Q08B = 55</i>	
S5Q09	S5Q09. Does your [boss] require you to work when you are seriously sick or injured? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S5Q09A	S5Q09A. What would happen if you refused to work while sick or injured? <i>INTERVIEWER: SELECT ALL THAT APPLY. ASK "Any other reason?" AT LEAST TWICE BEFORE MOVING ON.</i> <i>Question relevant when: S5Q09 = 1</i>	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR MANIPULATION OF DEBT (DEBT TO EMPLOYER) 4. LOSS OF WITHHELD WAGES 5. LOSS OF WITHHELD DOCUMENTS 7. LOSS OF HOUSING/LAND 9. DISMISSAL OR THREATS OF DISMISSAL 10. FINE OR SALARY REDUCTION 55. OTHER 66. NOTHING 77. DON'T KNOW

Field	Question	Answer
		99. REFUSED
S5Q09A_OTHER	S5Q09A_OTHER. RECORD OTHER <i>Question relevant when: S5Q09A = 55</i>	
S5Q13	S5Q13. Can you raise concerns about your working conditions without fear of the consequences? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S5Q15	S5Q15. Does your [boss] do anything to prevent you from quitting your job? <i>Question relevant when: S1Q09 = 1</i>	11. YES 22. NO 77. DON'T KNOW 99. REFUSED
S5Q15A	S5Q15A. How does (did) your [boss] keep you from quitting your job? <i>INTERVIEWER: SELECT ALL THAT APPLY. ASK "Anything else?" AT LEAST TWICE BEFORE MOVING ON.</i> <i>Question relevant when: S5Q15 = 1</i>	1. THREATS OF OR SUBJECTION TO PHYSICAL VIOLENCE AGAINST RESPONDENT OR RESPONDENT'S FAMILY BY EMPLOYER 2. RESTRICTION ON RESPONDENT'S MOVEMENT BY EMPLOYER 3. DEBT BONDAGE OR MANIPULATION OF DEBT (DEBT TO EMPLOYER) 4. WITHHOLDING OF WAGES 5. WITHHOLDING OF VALUABLE DOCUMENTS 7. THREAT OF LOSS OF HOUSING/LAND 55. OTHER

Field	Question	Answer
		666. NO COERCION ("NEEDED 6 JOB, COULDN'T QUIT") 7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q15A_OTHER	S5Q15A_OTHER. RECORD OTHER <i>Question relevant when: S5Q15A =55</i>	
S5Q01	S5Q01. Do children under age 18 work at the place where you work?	11. YES 22. NO 7 77. DON'T KNOW 7 9 99. REFUSED 9
S5Q01A	S5Q01A. In which of these activities do children and adolescents (under age 18) who work participate? READ ALOUD RESPONSE OPTIONS AND SELECT ALL THAT APPLY <i>Question relevant when: S5Q01 = 1</i>	11. Maintaining plants (chapeo) 22. Pulling up the shoots (deshije) 3 3. Harvesting abaca leaves (tumbado) 4 4. Cutting abaca stalks to extract fibers (tuzeo) 5 5. Transporting abaca materials (burreo) 6 6. Processing abaca fibers (maquineo) 77. Drying abaca fibers (tendaleo) 8 8. Classifying abaca fibers for processing 9 9. Twisting/spinning abaca fibers into specific forms 1 10. Cooking for the workers 0 5 55. OTHER 5 7 77. DON'T KNOW 7

Field	Question	Answer
		99. REFUSED
S5Q01A_OTHER	RECORD OTHER <i>Question relevant when: S5Q01A = 55</i>	
S5Q01B	S5Q01B. On average, at what age do children start working in abaca? <i>Question relevant when: S5Q01 = 1</i>	
interviewer_notes	INTERVIEWER NOTES	

ABACA WORKER QUALITATIVE GUIDE

CONSENT_2	Thank you very much for answering these questions. If you are willing, we'd like to ask you more about your experiences. This part of the interview will be more of a conversation, so we can learn more about your work and living conditions from your own perspective. • As we discussed before, your participation in this study is voluntary. If you choose to talk with me, you can choose to not answer some questions or end the interview at any time. • The interview will take about 30 more minutes. • Do you have any questions? [IF YES, ANSWER BEFORE CONTINUING] • Do you agree to participate in this interview?	1 YES 2 NO
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	Question relevant when: forcedlabor = 1	
CONSENT_2_record	I would like to ask your permission to record this interview. The audio recordings will not be shared with anyone. The recordings will be kept safely in a locked facility until they are transcribed word for word, then they will be destroyed. The transcribed notes will not contain any names or information that will identify you. May I record the interview to facilitate my recollection? (If yes, switch on the recorder). Question relevant when: CONSENT_2 , '1')	1 YES 2 NO
IN-DEPTH QUALITATIVE INTERVIEW		
Group relevant when: CONSENT_2 , '1')		
RECORDING_PROMPT	START RECORDING READ UNIQUE ID ALOUD FOR AUDIO RECORDING: 2CDC8TX Question relevant when: CONSENT_2_record , '1')	
RESPONDENTID_DISPLAY	WRITE THE UNIQUE ID ON YOUR NOTES: 2CDC8TX Question relevant when: CONSENT_2_record , '2')	
qual1	AGE: [S1Q02] BORN: [S1Q04_OTHER][S1Q04A_disp] HAS BEEN WORKING IN ABACA SINCE: [S1Q06_YEAR] STILL HAS JOB: [S1Q07_disp] MAIN ACTIVITY: [S1Q11A_disp]	
qual2	INTRODUCTION	

qual3	Could you please tell me about your work? a. How long have you been doing it? b. Please tell me about a typical workday.	
qual4	You told [INTERVIEWER] that you work for a boss. Who is your boss? PROBE: CONTRACTOR, LAND TENANT, EMPLOYEE OF COMPANY Does anyone give your boss instructions? (PROBE: Hours of work, location of work, tasks to do, method of doing work) <i>Question relevant when: S1Q08 = 1</i>	
qual5	You told [INTERVIEWER] that you don't work for a boss. TMMT. Does anyone give you instructions? (PROBE: Hours of work, location of work, tasks to do, method of doing work) <i>Question relevant when: S1Q08 = 2</i>	
qual6	RECRUITMENT	
qual7	You told [INTERVIEWER] that a [S2Q01A]: [S2Q01A_OTHER] helped you get your job. TMMT. PROBE IF RELEVANT: a. Was there a recruitment fee? If so, how much and how did you pay it? b. Did you take on any debt during recruitment? If so, please explain what the debts are for, who they are to, and how much you owe. <i>Question relevant when: S2Q01 = 1</i>	
qual8	You told [INTERVIEWER] that you were compelled to take this job because	

	[disp_S2Q02A]: [S2Q02A_OTHER]. TMMT. <i>Question relevant when: S2Q02 , '1') and (S2Q02A , '1') or S2Q02A , '2') or S2Q02A , '3') or S2Q02A , '5') or S2Q02A , '6') or S2Q02A , '7'))</i>	
qual9	Did you take this job because of any debts that you have? a. Are these debts from before this job or after? Please explain? b. (IF PREVIOUSLY MENTIONED RECRUITMENT DEBTS) Are these the same debts from recruitment you mentioned before?	
qual10	Do you have to work to pay off any wage advances you received from the recruiter or your employer? a. Please explain the amount you received and how much you need to repay b. Did you reach an agreement with your employer or recruiter about how and when you will repay the advance? <i>Question relevant when: S1Q09 = 1</i>	
qual11	You told [INTERVIEWER] you have a written contract. Were you given a chance to read it? Did you understand it? Do you have a copy of it? <i>Question relevant when: S2Q03 = 1</i>	
qual12	You told [INTERVIEWER] that you were misled about [disp_S2Q04A]: [S2Q04A_OTHER] TMMT You told [INTERVIEWER] that if you asked for the conditions originally promised,	

	[disp_S2Q04B][S2Q04B_OTHER] TMMT <i>Question relevant when: S2Q04 = 2</i>	
qual13	What were you told about this job before you took it? Does your work match what you were originally promised (EXAMPLES: wage, location, type of work)? TMMT. a. Do you feel that you were tricked into taking a job that is worse than what you agreed to do when you were recruited / hired? If so please explain how it is worse. Would you have taken this job if you had known the real conditions? Why? <i>Question relevant when: S2Q04 = 1</i>	
qual14	You told [INTERVIEWER] that your employer holds your important documents. TMMT. PROBE: Who keeps them and why? Can you access them if needed? <i>Question relevant when: S3Q05 = 1</i>	
qual15	WORKING CONDITIONS	
qual16	How would you describe your overall working conditions? If you had known about the conditions of your workplace would you still have taken this job?	
qual17	Please describe your relationship with your employer a. Have you ever experienced any harassment or abuse by your employer? Tell me more about that. b. Have you seen any other workers experience any harassment or abuse? Can you tell me about one example? <i>Question relevant when: S1Q09 = 1</i>	

qual18	You told [INTERVIEWER] that you can't leave freely during the workday. TMMT. <i>Question relevant when: S3Q03 = 2</i>	
qual19	TARGET/QUOTA AND PACE <i>Question relevant when: S4Q05 = 1 or S4Q05C , '1') or S4Q05C , '2') or S4Q05C , '3') or S4Q05C , '4') or S4Q05C , '5') or S4Q05C , '7') or S1Q09 = 1 or S5Q12 = 1 or S5Q12 = 2</i>	
qual20	You told [INTERVIEWER] that your daily target/quota is [S4Q05A][S4Q05A_UNIT]. a. Do you have enough time during your normal hours to do your work? b. Does anyone help you achieve this target? (PROBE FOR CHILD/FAMILY LABOR) <i>Question relevant when: S4Q05 = 1</i>	
qual21	You told [INTERVIEWER] that if you fail to meet your target/quota, [disp_S4Q05C]: [S4Q05C_OTHER] <i>Question relevant when: S4Q05C , '1') or S4Q05C , '2') or S4Q05C , '3') or S4Q05C , '4') or S4Q05C , '5') or S4Q05C , '7')</i>	
qual22	Does your employer do anything to make you work harder or faster? <i>Question relevant when: S1Q09 = 1</i>	
qual23	You told [INTERVIEWER] that you work nonstop without breaks. TMMT. How does your employer prevent you from taking breaks? <i>Question relevant when: S5Q12 = 1</i>	

qual24	Can you tell me about any breaks you take during your day such as for meals or to use the bathroom? <i>Question relevant when: S5Q12 = 2</i>	
qual25	HOURS AND BREAKS	
qual26	You told [INTERVIEWER] that you work [S5Q10] hours per day on average, [S5Q11] days per week on average. Are your hours pretty consistent? TMMT. IF WORKS OVER 8 HR/DAY OR 40 HR/WK: a. Are you paid for your time over 8 hours per day or 40 times per week? Are you paid at a higher rate for this time?	
qual27	You told [INTERVIEWER] that if you refused to work over 8 hr/day or 40 hr/wk, [disp_S5Q10A]: [S5Q10A_OTHER] TMMT <i>Question relevant when: S5Q10A , '1') or S5Q10A , '2') or S5Q10A , '3') or S5Q10A , '4') or S5Q10A , '5') or S5Q10A , '7') or S5Q10A =55</i>	
qual27A	You told [INTERVIEWER] that if you refused to work over 8 hr/day or 40 hr/wk, [disp_S5Q10A]: [S5Q10A_OTHER] TMMT <i>Question relevant when: S5Q10A_alt , '1') or S5Q10A_alt , '2') or S5Q10A_alt , '3') or S5Q10A_alt , '4') or S5Q10A_alt , '5') or S5Q10A_alt , '7') or S5Q10A_alt =55</i>	
qual28	EARNINGS AND DEBT <i>Question relevant when: S1Q09 = 1</i>	

qual29	Can you tell me how you are paid? (PROBE: cash, mobile transfer, bank transfer) a. How much are you paid and how often? b. Is this always the same or does it change? Are your payments ever late? TMMT c. If your payments are late or less than agreed have you talked to your employer about it? Please explain what happened if you did. d. (IF PAID IN PIECE-RATE) Do you think you are paid fairly for the work you do? Please explain. <i>Question relevant when: S1Q09 = 1</i>	
qual30	You told [INTERVIEWER] that you don't have any debt with your employer. I just want to confirm: a. Has your boss ever lent you money? b. Have you ever gone into debt with your employer to buy food or tools? IF YES: c. Please explain to whom, in exchange for what, and the amount of the debt. d. How long have you had this debt? How are you repaying it? e. What are the terms of your debt (interest, etc) and do you think they are fair? Please explain. <i>Question relevant when: S4Q01A does not equal 1 and S4Q01B does not equal 1 and S4Q01BB does not equal 1 and S4Q01BB_alt does not equal 1</i>	
qual31	You told [INTERVIEWER] you have been in debt to your employer before. TMMT. a. PROBE: to whom, in exchange for what, and the amount of the debt.	

	b. How long have you had this debt? How are you repaying it? c. What are the terms of your debt (interest, etc)? <i>Question relevant when: S4Q01A = 1 or S4Q01B = 1 or S4Q01BB = 1 or S4Q01BB_alt = 1</i>	
qual32	You told [INTERVIEWER] you were charged unagreed or excessive charges by your employer for food, housing, or something else. TMMT. PROBE FOR RESULTING DEBT. <i>Question relevant when: S4Q01A = 1</i>	
qual33	You told [INTERVIEWER] you were you put into debt or further into debt through fines or penalties by your employer. TMMT. <i>Question relevant when: S4Q01B = 1</i>	
qual34	You told [INTERVIEWER] que su [boss] injustamente aumenta el monto de la deuda con el paso del tiempo. TMMT. <i>Question relevant when: S4Q01C = 1</i>	
qual35	You told [INTERVIEWER] that if you leave your job without paying your debt, [disp_S4Q01D]: [S4Q01D_OTHER] TMMT <i>Question relevant when: S4Q01D , '1') or S4Q01D , '2') or S4Q01D , '5') or S4Q01D , '7') or S4Q01D , '8')</i>	
qual36	HAZARDS	
qual37	What are the most hazardous (dangerous) parts of your job? How often do you do these things? a. Was it clear you would do these things before you started the job? b. What effects have these tasks had on your health?	

	c. Have you ever refused a task because it was too dangerous?	
qual38	You told [INTERVIEWER] that if you refused to do hazardous work, [disp_S5Q07]: [S5Q07_OTHER] TMMT <i>Question relevant when: S5Q07 , '1') or S5Q07 , '2') or S5Q07 , '3') or S5Q07 , '4') or S5Q07 , '5') or S5Q07 , '7')</i>	
qual39	What PPE does your employer provide? Do you buy anything for yourself? TMMT. a. Do you have everything you need? What would it help to have? b. Is it good quality? (PROBE FOR HOW OLD THE EQUIPMENT IS OR WHEN WAS THE LAST TIME IT WAS UPDATED) <i>Question relevant when: S5Q03 = 1</i>	
qual40	You mentioned that your employer doesn't provide you any PPE. Do you buy anything for yourself? TMMT. a. Do you have everything you need? What would it help to have? <i>Question relevant when: S5Q03 = 2</i>	
qual41	You mentioned that your employer doesn't provide any training. What kind of training would help you stay safe? <i>Question relevant when: S5Q05 =2</i>	
qual42	You mentioned that your employer provides training. TMMT. <i>Question relevant when: S5Q05 =1</i>	
qual43	When [INTERVIEWER] asked you, "Does your [boss] endanger your life by failing to take proper safety precautions?", you said, "Yes." TMMT.	

	<i>Question relevant when: S5Q06 = 1</i>	
qual44	You told [INTERVIEWER] you were injured by at work. TMMT. (PROBE FOR INJURIES IN RELATION TO OLD/ABSENT MACHINES/PPE) <i>Question relevant when: S5Q08 = 1</i>	
qual45	You told [INTERVIEWER] that you have to go to work when you're sick or injured because: [disp_S5Q09A]: [S5Q09A_OTHER] TMMT <i>Question relevant when: S5Q09A , '1') or S5Q09A , '2') or S5Q09A , '3') or S5Q09A , '4') or S5Q09A , '5') or S5Q09A , '7')</i>	
qual46	GRIEVANCES <i>Question relevant when: S5Q13 = 2</i>	
qual47	You told [INTERVIEWER] you can't complain about your conditions of work. TMMT. PROBE FOR COERCION/THREATS. Have you ever yeard of anything happening to someone who complained? TMMT. <i>Question relevant when: S5Q13 = 2</i>	
qual48	FREEDOM TO QUIT <i>Question relevant when: S5Q15A , '1') or S5Q15A , '2') or S5Q15A , '3') or S5Q15A , '4') or S5Q15A , '5') or S5Q15A , '7')</i>	
qual49	You told [INTERVIEWER] that you can't quit your job if you want to because [disp_S5Q15A]: [S5Q15A_OTHER] TMMT <i>Question relevant when: S5Q15A , '1') or S5Q15A , '2') or S5Q15A , '3')</i>	

	or S5Q15A , '4') or S5Q15A , '5') or S5Q15A , '7')	
qual50	LIVING CONDITIONS <i>Question relevant when: S3Q01 = 1</i>	
qual51	Please tell me about the housing provided by your employer. a. Did you choose to do so or was it required by your employer? Please explain. b. Do you have to pay for the housing? c. How many people do you share it with? Are they family or others? d. Where do you get your drinking water? e. What kind of sanitation facilities does it have? f. How safe do you feel in your house? TMMT. e. If you had known about the housing conditions, would you still have taken this job? TMMT.	
qual52	Where do you buy food and clothing? A. Do you ever buy these items with credit? Under what terms? PROBE FOR LOANS FROM EMPLOYER, OR DEBT TO EMPLOYER-OWNED STORE	
qual53	You told [INTERVIEWER] that you can't move freely after the workday. TMMT. <i>Question relevant when: S3Q04 = 2</i>	
qual54	If you were to leave your job how soon would you have to leave your housing? Do you have any other housing? Is this a reason for staying in this job?	
qual55	SUPPLY CHAIN	

qual56	I would like to ask you a few questions about the abaca fibers. a. Do you know where the abaca goes after it leaves your workplace? b. How is it sold? c. How is it transported before/after sale? d. Who buys it? e. What products in your (village/town/city) contain abaca? Is there any way to know if it contains abaca from your workplace? f. Do you ever buy products containing abaca? Tell me more about what you purchase and how you use it.	
qual57	CHILDREN	
qual58	CHILDREN Do you have children? Do they work in abaca? IF HAS A CHILD WORKING IN ABACA: a. How old are they? b. For each child under 18, by age, ask: i. What tasks does s/he do? ii. What hazards is s/he exposed to? (PROBE: (heavy loads, heavy machinery, excessive noise, dust/fumes, long hours in hot sun, night work, dangerous animals, repetitive tasks) iii. How many hours per day does s/he work? How many days per week? iv. Does s/he go to school? If yes, does work affect his/her schooling? If no, why not? IF DOES NOT HAVE A CHILD WORKING IN ABACA Are there any workers under age 18 at your worksite? PROBE: work tasks, hours, hazards	

qual59	CONCLUSION	
qual60	Is there anything else you would like to share about your work in abaca?	
qual61	What are your hopes for the future?	
end_int	END INTERVIEW Thank you very much for sharing your experience. <i>Question relevant when: forcedlabor = 0 or CONSENT_2 , '2')</i>	

LABOR RIGHTS AND LABOR CONDITIONS KEY INFORMANT INTERVIEW—INTERVIEW PROTOCOL

Introduction Questions (KII's):

1. Could you please tell me your role and what you focus on?
 - a. Is there another experience you have in relation to the abaca industry?
 - b. Can you describe your organization's work directly related to workers' rights in the abaca industry in Ecuador?
2. What is your overall impression of working conditions in the abaca industry?
 - a. What are the main issue areas you are aware of?
 - b. What do you think of worker-employer relations in the industry?

Recruitment

3. How do individuals become employed in the abaca sector and what recruitment methods are used by employers?
 - a. (PROBE AS RELEVANT): How common is employment through a third-party recruiter such as a subcontractor or through an employment agency? If there is no recruitment, how do plantations secure abaca workers? Please explain.
 - b. Are you aware of any fees / the typical amount associated with the use of recruiters in the abaca industry?
4. Are promises made to workers a part of the recruitment methods used? If so what kinds of promises?
 - a. In your opinion/experience are those promises being met?
5. Do workers in the abaca sector typically have a written contract, a verbal contract or no contract?
 - a. If written, do workers usually understand the contents of the contract? (Probes: WRITTEN IN A LANGUAGE THE WORKER CAN UNDERSTAND; WORKER IS LITERATE OR ALLOWED TO HAVE SOMEONE READ IT; WORKER IS GIVEN SUFFICIENT TIME TO EXAMINE THE CONTRACT)
 - b. If a non-written contract, who receives payment for abaca? How is payment distributed among workers? What ages are the workers who receive payment?
6. Are you aware of any reports of anyone being sold or taken by force to work in the abaca sector?

Earnings, Hours, Benefits & Debt

7. In your experience, what are the key issues that workers face in terms of their wages and benefits in the abaca sector? (EXAMPLES INCLUDE: LOW WAGES, WITHHELD WAGES, WAGE DEDUCTIONS, ETC)
 - a. How and how often are workers paid?
8. Are workers paid according to a piece rate or quota system?
 - a. If so: what are the typical targets and are those targets reasonable/achievable?
9. How many hours does an average worker typically work? Do they receive pay for all these hours?
 - a. How common is it for workers to work overtime or past their agreed hours?
 - b. What happens to workers if they refuse to work overtime?
10. How common is it for workers in the abaca sector to be in debt to employers or recruiters?
 - a. What kinds of borrowing and pay-back arrangements have you seen?
 - b. How often are workers unable to leave their jobs because of debt to an employer or recruiter?
11. If workers work on an abaca farm, how many workers are required to harvest 5 hectares of abaca?

Working Conditions, Hazardous Work & Coercion:

12. What are the main risk factors for labor exploitation in the abaca sector?
 - a. What factors make a worker in this sector more vulnerable to exploitation?
 - i. (PROBE FOR SPECIFICS ON DEMOGRAPHICS – AGE RANGE, GENDER, MIGRATORY STATUS)
 - b. In what parts of the industry and its supply chain is labor exploitation most present / visible?
 - i. What are the risk factors at each stage (particularly harvest and processing)
 - ii. Are you aware of any specific companies that are particularly exploitative? Please explain. (PROBE FOR FURUKAWA AND CURRENT WORKING CONDITIONS IN THE COMPANY)
 - iii. (IF FURUKAWA IS MENTIONED), are there any of the working conditions in Furukawa also seen in other plantations or companies and/or the sector as whole?
 - iv. Are there any plantations or companies that are known to you personally, or by reputation, that do not exploit labor as others in the industry?
13. What are the most common hazards workers face in the abaca sector?
 - a. In your understanding, are there sufficient health and safety standards in place in the abaca sector? Please explain.
14. How common is it to hear of or witness coercion or threats from employers towards workers?
 - a. Please explain the specific situations when this occurs and any types of workers more likely to experience it.
15. How common is it that workers are unable to leave their jobs if they wanted? Please explain.
 - a. Do workers who leave or attempt to leave their job face any negative consequences from their employers?

Surveillance & Living Conditions

16. What kind of involvement do employers have in workers' lives outside of work?
17. How do workers access goods and services to meet their basic needs?
 - a. Are workers reliant on employers for these items? Please explain.
 - i. Are workers provided with these items on credit? Under what conditions?
18. By your estimation what proportion of workers live in employer-provided housing?
 - a. Is this housing free or is there a fee? If a fee, how much?
 - b. Can those workers come and go freely outside of working areas – including into the nearest town or village?
 - c. Are workers able to live somewhere outside of employer-provided housing if they wanted? Please explain why or why not.
19. (SKIP IF NOT IN EMPLOYER PROVIDED HOUSING) Can you describe the living conditions of those in employer provided housing? (PROBE FOR: ACCESS TO WATER, ELECTRICITY, HEATING, SIZE, CONSTRUCTION MATERIALS, NUMBER OF FAMILIES/PERSONS TO A HOME, ETC)
20. Have you heard of situations where employers monitor or limit the communications of their workers? Please explain.
21. How common is it for an employer or recruiter to hold onto a workers' identity documents?
 - a. How are workers able to regain or access their documents?

Grievance procedures & Industry/Government Initiatives:

22. What level of understanding do workers have of their rights? Please explain and identify any areas where awareness is low.
23. What mechanisms are available to workers for submitting grievances?
 - a. Are workers likely or able to access those mechanisms? Why or why not?
 - b. How common is it for workers to experience retaliation for doing so? Please explain.
24. Besides your own organization, what other entities are actively working to improve labor conditions?
 - a. PROBE FOR GOVERNMENT EFFORTS, INDUSTRY EFFORTS, AND UNION EFFORTS
 - b. How effective have these efforts been and what key gaps (e.g. policy) remain for protecting workers' rights and improving their working conditions?
25. Worker organizations? Unions? Ban against sectors in Ecuador- has adversely affected grassroots organization?

Child Labor

26. Do you know if there are minors under 18 working in the abaca industry?
 - a. If so, how common is it? In which stages and activities does it occur? What factors drive child labor in the industry?

Conclusion:

27. Who are the main stakeholders in the abaca industry of Ecuador involved in the sale and processing of abaca using forced labor?
28. What types of (downstream) goods are being produced from abaca obtained through forced labor?
29. Could you suggest any organizations or individuals that are well-informed about the abaca sector supply chain or forced labor in the industry that we could interview?
30. Is there anything else you'd like to add?

SUPPLY CHAIN KEY INFORMANT INTERVIEW—INTERVIEW PROTOCOL

Introduction Questions (KII's):

1. Could you please tell me your role and what you focus on?
 - a. Is there another experience you have in the abaca industry?
2. Can you describe your organization's work directly in the abaca industry?
 - a. PROBE FOR WHAT KIND OF ACTIVITIES IN THIS AREA DO YOU AND YOUR ORGANIZATION UNDERTAKE?

Supply Chain Theme General:

3. Could you please tell me how the production of abaca works in Ecuador?
 - a. What laws and regulations are central to operations in the abaca industry?
4. How important is the abaca industry to Ecuador? How important is it to the regions within Ecuador, such as Los Rios, Esmerlads, etc.?
 - a. Are most plantations large-scale or small-scale? What is the average size of abaca plantations?
 - b. What has/have been the most significant change(s) to the industry in the last few years? Please explain.
5. Have there been any recent socio-political events that have impacted the supply chain? [PROBE FOR FURUKAWA CASE] Please explain.
 - a. How have they impacted your company/plantation?
6. Who are the major stakeholders and influencers in the abaca industry?

Production:

7. Could you please describe the production process of abaca from the beginning to the end? Where do you or your company/plantation become involved in that process?
 - a. How are these goods transported from one location to the next? How does your company transport/receive the good?
8. After harvesting and processing, what processing occurs in Ecuador?
 - a. What about specifically in your province/city? Where are the main processing areas (PROBE FOR GEOGRAPHY)?
 - b. What goods (including byproducts and downstream goods) are produced in-country? Of these, which are the most common (or produced) by your company/plantation?
 - c. Is harvested abaca consumed domestically or for export? Please explain.
9. Is there a list of production sites, warehouses, or processing facilities in Ecuador? How would we be able to access it?
 - a. PROBE IF PARTICIPANT IS WILLING TO SHARE THE INFORMATION OF WHO TO CONTACT TO GET ACCESS.
 - b. (IF PROCESSOR ASK) Do you have a list of production sites that are a part of your supply chain? Tell me more about how that list is updated/maintained.
 - c. (IF TRADER ASK) Do you have a list of production sites or processing facilities that you sell to? Tell me more about how that list is updated/maintained.

Tracing and Due Diligence:

10. What types of products does abaca from Ecuador end up in? (PROBE FOR BOTH INTERMEDIARY GOODS AND FINISHED/END GOODS)? (IF APPICABLE: WHICH OF THOSE GOODS DOES YOUR COMPANY MAKE?)
11. How might one track abaca made at a particular farm through the domestic supply chain?

- a. Could you walk us through how your company does this?
 - b. Is there a point in the supply chain where you anticipate tracking would no longer be possible? (PROBE FOR SPECIFICS ON WHAT STAKEHOLDER THE TRACEABILITY ENDS WITH, EX: INTERMEDIARY BUYER, EXPORTER, ETC.)
 - i. (SPECIFIC PROBE) When does the mixing of abaca from different sites occur, how does mixing occur?
- 12. What oversight is being conducted by the government when it comes to labor standards within the abaca industry and its supply chain. How does this impact your company?
 - a. PROBE FOR SPECIFICS ON WHAT THE INITIATIVES ARE AND WHO IS PROMOTING THEM (E.G. GOVERNMENT, INTERNATIONAL CORPORATIONS, DOMESTIC COMPANIES))
 - b. What about any supply chain traceability initiatives specifically? Please explain the stakeholders involved, including your own company.
 - c. What are the different certifications available for companies in the supply chain and how common are they?
 - i. How are these certifications monitored/approved and is your company a part of any of them? If so, please explain how you got approved and how you are monitored for compliance.
- 13. What due diligence initiatives does your company participate in to monitor labor conditions on the (site type) you source from?
 - a. (IF NOT ANSWERED IN PREVIOUS QUESTION) What supply chain or industry certifications does your company currently have? Can you please explain the process involved in obtaining the certification(s) and how you are monitored for compliance?
 - i. (IF NOT ANSWERED IN PREVIOUS QUESTION) Are you actively working to obtain any additional certifications in the near future? Please tell me more about that.

Sourcing Questions for buyers (middlemen, traders, and processors)

- 14. Where do you source your abaca from?
 - a. PROBE (geographical region, names of sites, etc) PROBE SPECIFICALLY FOR SAMPLE AREA
 - b. Please explain your sourcing process (buying method, transportation process, etc)
 - c. Do you keep the abaca you buy from each source separate and at what point do you combine abaca from multiple sources? Please explain.
- 15. How often do you source abaca from these places within (SAMPLE AREA)?
 - a. Are there times of the year when this changes? Please explain.
 - b. How do you determine how much you buy from a source?
- 16. (IF NOT COVERED PREVIOUSLY) Who are your primary buyers domestic and/or international of envelopes/ropes/ twines/fishing lines/nets?
 - a. PROBE (regions, companies, countries, specific industry)

Post Export Questions

- 17. How would you describe the role of abaca exports from Ecuador in the global trade of abaca?
 - a. What are some international markets?
 - i. Are there any recent changes (emerging/declining) in these markets? (PROBE FOR COUNTRIES AND/OR COMPANIES)

18. Who are the major players/stakeholders in (import country of focus) that import abaca from Ecuador? Please explain.
 - a. Who are the major exporters and importers involved in this? Can you describe in what product form the good is exported to Ecuador?
 - b. Are you aware of situations where the importing company in (import country of focus) is formally connected to the exporter in Ecuador? (PROBE FOR CONTRACTS, OWNERSHIP, PART OF SAME LARGER COMPANY, ETC)
19. Does (import country of focus) produce abaca domestically?
 - a. How have changes in domestic production impacted/changed imports of abaca?
 - b. At what stage do abaca imports become mixed with domestically produced abaca?
20. Does the downstream use of abaca imported from Ecuador differ from the downstream use of domestically produced abaca?

Labor Questions

21. What is your overall impression of working conditions in the abaca industry?
 - a. What are the main issues you are aware of? (PROBE FOR CHILD/FORCED LABOR IF NOT STATED)
22. What can you tell us about labor standards in the abaca industry, especially when it comes to harvest/extraction sites?
 - a. What are the primary concerns across the industry when it comes to labor standards?
 - b. How are labor standards enforced at your workplace and who enforces them?
23. During which stages of the abaca supply chain are risks for forced labor most prevalent?
 - a. What are the risk factors at each stage?

Conclusion:

24. Could you suggest any organizations or individuals that are well-informed about the abaca supply chain or forced labor (DEPENDING ON PROFILE/SENSITIVITY, CHANGE 'FORCED LABOR' FOR OTHER TERMINOLOGY: LABOR EXPLOITATION, LABOR CONDITIONS) in the industry that we could interview?
 - a. (IF APPLICABLE BASED ON RESPONDENT TYPE: PROBE IF THE INDIVIDUAL HAS ANY ADDITIONAL REPORTS OR DATA THEY ARE ABLE TO SHARE SUCH AS ANY LISTS MENTIONED IN QUESTION 9)
25. Is there anything else you'd like to add?

APPENDIX 6: FORCED LABOR INDICATORS MAPPED TO QUESTIONNAIRE ITEMS

Forced labor occurs if there is both involuntary work <u>and</u> coercion at any of the 3 stages:		
Recruitment stage		
Category of indicator	Indicator	Indicator present if...
Involuntary work	Forced recruitment	S2Q02=1 & S2Q02A = 1, 2, 3, 5, or 7
	Deceptive or fraudulent recruitment	s2q04a=1, 3, 4, 5, 6, 7, 8, or 9
Coercion	Physical or sexual violence	S2Q02A=1 or S2Q04B=1
	Restrictions on workers' movement	S2Q02A=2 or S2Q04B=2
	Abuse or manipulation of debt	S2Q02A=3 or S2Q04B=3
	Retention of cash, assets, or identity documents	S2Q02A=5 or S2Q04B=5
	Threat of loss of housing/land provided by employer	S2Q02A=7 or S2Q04B=7
Employment stage		
Category of indicator	Indicator	Indicator present if...
Involuntary work	Hazardous or degrading working conditions	S5Q03=2 or S5Q05=2 or S5Q06=1 or S5Q09=1
	Onerous working hours or work schedule	S5Q10 > 12 or S5Q10*S5Q11 > 52 or S5Q12=1
	Degrading work-related living conditions	((S3Q01C_1=1) or (S3Q01A=1 & S3Q01C_3=1)) and [(S3Q02=3) + (S3Q02A=2) + (S3Q02B=1) + (S3Q02C=2) + (S3Q02D=3) >=2]
	Abuse or manipulation of debt	S4Q01A=1 or S4Q01B=1 or S4Q01C=1
Coercion	Physical or sexual violence	S4Q01D=1 or S4Q05C=1 or S5Q07=1 or S5Q09A=1 or S5Q10A=1 or S5Q10A_alt=1 or S3Q03B=5

	Restrictions on workers' movement	S4Q01D=2 or S4Q05C=2 or S5Q07=2 or S5Q09A=2 or S5Q10A=2 or S5Q10A_alt=2 or (S3Q03B= 1, 2, 3, or 4) or (S3Q04A=1 or 2)
	Abuse or manipulation of debt	S4Q05C=3 or S5Q07=3 or S5Q09A=3 or S5Q10A=3 or S5Q10A_alt=3
	Withholding of wages	S4Q05C=4 or S5Q07=4 or S5Q09A=4 or S5Q10A=4 or S5Q10A_alt=4
	Retention of cash, assets, or identity documents	S4Q01D=5 or S4Q05C=5 or S5Q07=5 or S5Q09A=5 or S5Q10A=5 or S5Q10A_alt=5 or S3Q05A=2
	Threat of loss of housing/land provided by employer	S4Q01D=7 or S4Q05C=7 or S5Q07=7 or S5Q09A=7 or S5Q10A=7 or S5Q10A_alt=7
	Threat of arrest	S4Q01D=8
Employment separation stage		
Category of indicator	Indicator	Indicator present if...
Involuntary work	Inability to terminate employment	S5Q15=1 & S5Q15a=1, 2, 3, 4, 5, or 7
Coercion	Physical or sexual violence	S5Q15A=1
	Restrictions on workers' movement	S5Q15A=2
	Abuse or manipulation of debt	S5Q15A=3
	Withholding of wages	S5Q15A=4
	Retention of cash, assets, or identity documents	S5Q15A=5
	Threat of loss of housing/land provided by employer	S5Q15A=7