Technical Document

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

PALMA FUTURO
Fruto del cumplimiento

PARTNERS of the AMERICAS
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En alianza con SAI Social Accountability International

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Contents

Executive Summary

In a context of global economic crisis derived from the COVID-19 pandemic, the palm oil sector has benefitted from an international boom in the demand for basic goods. This higher demand, along with historically high prices for palm oil in the international market, has boosted production.

Despite growth in export revenue, monetary and multidimensional poverty indicators in rural Colombia and Ecuador signal worsening economic divisions exacerbated by unacceptable labor conditions that further harm workers in the palm oil supply chain.

Palma Futuro[1] conducted a voluntary, anonymous survey of workers in palm oil extraction plants and palm fruit suppliers in Colombia and Ecuador. This survey was conducted with the support of the technology company ULULA,[2] and was designed to identify the main impacts of COVID-19 on key project stakeholders and thus provide information on how Social Compliance Systems (SCS) can help mitigate the negative effects perceived by these stakeholders.

A non-probabilistic sampling method was used for the survey with an initial sample size of 668 respondents (487 extraction plant workers and 181 fruit farms respondents). The conclusions derived from the survey data, draw relevant conclusions for the respondents. However, due to the sample size and design, it cannot be extrapolated to portray the realities of individuals in sectors not directly engaged in this survey.

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1 The *Palma Futuro* project is funded by the U.S. Department of Labor (USDOL) and implemented by Partners of the Americas and its partners, Social Accountability International (SAI) and J.E. Austin Associates (JAA). *Palma Futuro* is designed to improve the implementation of SCS that promote acceptable conditions of work and reduce child labor and forced labor in palm oil supply chains in Colombia and Ecuador. It will also disseminate best practices in SCS in these and other palm oil-producing countries, particularly Brazil and Peru. *Palma Futuro* is guided by two expected outcomes: 1) Strengthened capacity of private sector partners in the Colombian and Ecuadorian palm oil sector to implement a robust and sustainable social compliance system, and 2) Increased understanding, at regional and global levels, of promising practices in SCS in palm oil supply chains.

2 https://ulula.com

The results of the survey questions show the resilience of the palm oil sector in the face of the shocks derived from COVID-19. About 87% of workers reported receiving their payments within the contractual or agreed times, 82% kept the original type of contract (full time, temporary or seasonal) agreed with their employers prior to the pandemic, and 72.5% reported feeling safe in their workplace due to COVID-19 preventative measures.

However, workers also reported negative impacts of the pandemic in their workplace. According to the survey's results, the main negative impact was on their mental health (25.31%), with a higher incidence in women (32.5%) than in men (22.9%). The second negative effect was the impact of the pandemic on finances, with 24.3% of the respondents reporting this as the main factor and 19.2% as the secondary factor. The surveys also revealed feelings of uncertainty, as 37.1% of workers feared being fired due to the economic impact of COVID-19. Additionally, 31% did not know if they could lose their job as a result of the pandemic.

Notably, 27.2% of workers reported requiring more information about government aid, 17.3% wanted more information on access to medical services, and 8.8% reported needing more information regarding labor rights. 41.2% of the survey respondents were unaware of disciplinary measures adopted by companies in the event of non-compliance with protocols approved to face the pandemic, and 21% of workers did not know if there were accessible and anonymous complaint and suggestion channels to report issues, concerns, claims, or suggestions on the management of COVID-19.

Regarding the oil palm fruit side of the industry, about 93% of suppliers reported having paid workers on time. Approximately 85% received training on hygiene or how to stay safe at work during the pandemic, and 74% provided training to their employees and staff within their farms. A large majority (85%) reported providing health insurance for their employees, and 79% maintained the same number of workers during the pandemic.

In terms of the farm-level negative effects of the pandemic, 15.9% of the survey respondents (owners and administrators) reported family aspects as the main negatively affected area, and the same proportion (15.9%) reported financial aspects; 12% of respondents reported having lost buyers since the start of the pandemic, and 50.3% feared that COVID-19 would have negative impacts on their business in the future.

Thirty-eight point six percent of farms have not introduced disciplinary measures for workers who do not comply with the new COVID-19 protocols. Only 17.5% of the farms surveyed have implemented training for their workers, but considered that they could do more, and 5.3% have not implemented any training at all. Finally, 28.1% of the farms do not have accessible and anonymous channels for complaints or suggestions for COVID-19 management.

Thirteen (13) strategic categories were identified based on an analysis of the responses to survey questions:

- Economic crisis derived from COVID-19.
- Mental health problems derived from COVID-19.
- Perception of changes in the compensation of time worked.
- Perception of reduction in health payments by the employer.
- Perception of an increase in working hours.
- Uncertainty due to dismissals on account of the COVID-19 crisis or illness.
- Limited access to information about government programs.

- Limited access to information about medical services.
- Limited access to information on labor rights.
- Limited communication channels between employers and workers.
- Limited availability of biosecurity supplies to prevent the spread of COVID-19.
- Limited support from extraction plants to suppliers in COVID-19 mitigation.
- Perception of increased child labor within the community.

Based on prioritization and using the Vester Matrix tool, it was determined that of the 13 items analyzed, the most critical factor is *The limited access to information on labor rights*. This factor was selected as the most critical considering its influence on and interrelation with the other identified factors.

The evaluation of critical and strategic factors led to the creation and analysis of a Problem and Solution Tree to strengthen *Communication and Training in the Supply Chain*. This is one of the aspects developed in the implementation of SCS, which focuses on identifying people and groups to educate and train on labor rights in the palm oil supply chain. It also defines topics that should be included in awareness-raising activities, proactively defining accessible and efficient communication channels.

1. Introduction
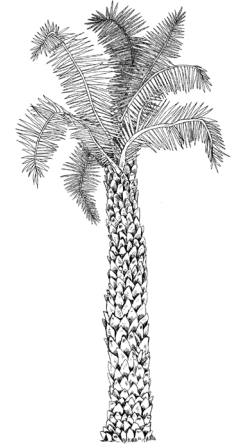
In the context of widespread regional economic crisis, the agricultural sector has benefited from the high demand for basic goods in international markets. In particular, the palm oil sector has seen significant increases in global production levels, motivated by historically high palm oil prices.

Despite positive economic indicators, social indicators have reflected a significant deterioration in quality of life in urban and rural areas. Between 2019-2020, Colombia and Ecuador have shown increases in monetary and multidimensional poverty, which must be addressed to assess and prevent potential risks, particularly for the rural population.

Anticipating the effects of COVID-19 on the living conditions of rural workers, *Palma Futuro* collected information between November and December 2020 concerning the pandemic's impacts and risks for workers of associated palm oil extraction plants and a sample of suppliers in Colombia and Ecuador. The survey results allowed to identify potential areas in which to mitigate COVID-19-related risks and negative effects for workers and supplier farms.

This technical document focuses on presenting a descriptive analysis of critical factors identified, emphasizing areas that require intervention, and their potential prioritization through methodologies taken from the Logical Framework Matrix (LFM) for project planning. According to ECLAC (2015), ''the Logical Framework is a tool that facilitates the process of conceptualization, design, execution, and evaluation of projects''. By allowing a comprehensive approach to a particular problem, the methodology constitutes a powerful toolbox that can be used for the proposed analysis to the extent that:

- It proposes a schematic process that supports a reaching of agreements about which is the main or critical problem to be addressed, as well as how to define a project or program's objectives, goals, and risks.
- It helps to focus the technical work on critical aspects by precisely identifying the
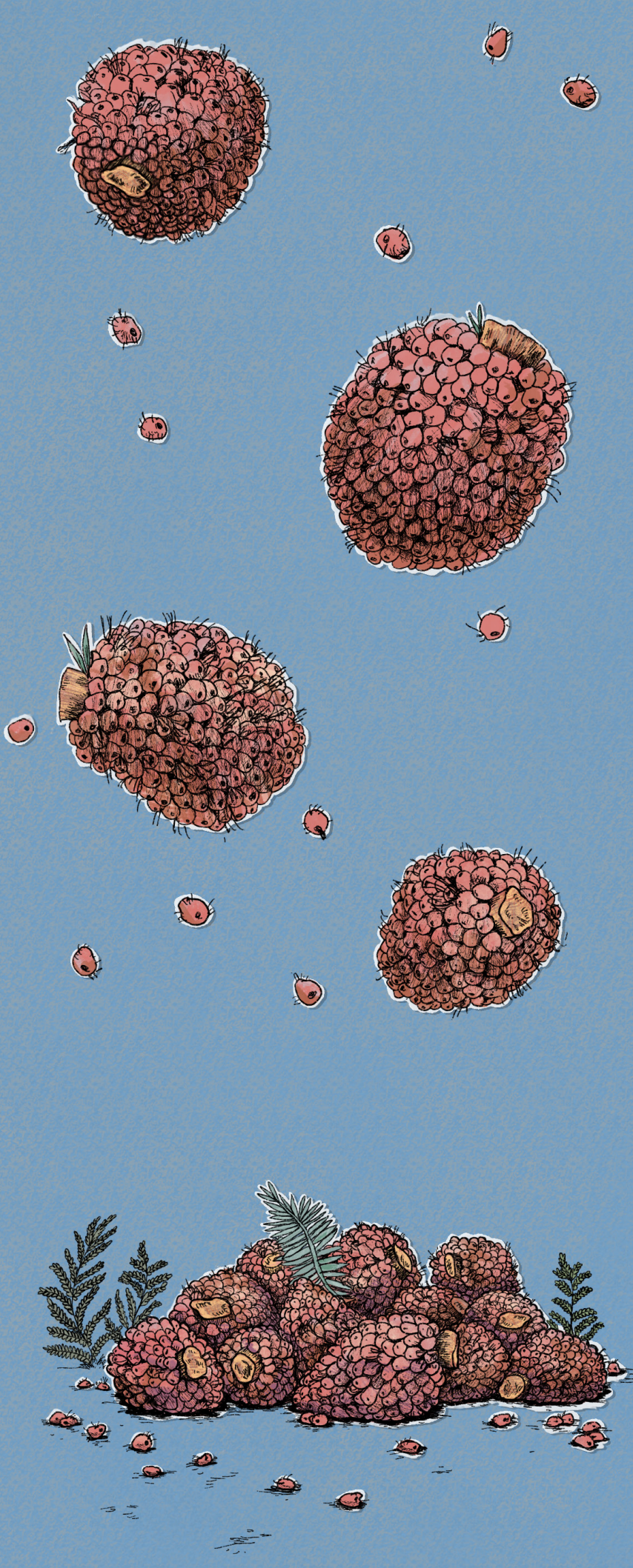
incidence and relative importance of the factors involved in the program's definition.

The tools used for the proposed analysis are those incorporated in the problem identification and assessment phase adopted by the Logical Framework, specifically the Vester Matrix, the Problem Tree, and the Solution Tree. The results of this methodology suggest that, beyond economic interventions, aspects associated with the availability of information and communication among actors are essential to mitigate labor risks derived from COVID-19. This finding is aligned with the definition of communication and training in the supply chain included in the Social Compliance Systems (SCS) promoted by *Palma Futuro*.

As a general context, *Palma Futuro*[3] is a project funded by the U.S. Department of Labor (USDOL) and implemented by Partners of the Americas and its partner organizations, Social Accountability International (SAI) and J.E. Austin Associates (JAA). *Palma Futuro* aims to improve the implementation of SCS that promote acceptable conditions of work and reduce child labor and forced labor in palm oil supply chains in Colombia and Ecuador.

Following the USDOL ComplyChain[4] tool, the SCS is one of the components of a company's Corporate Social Responsibility, sustainability, or accountability policy. More precisely, the SCS is an integrated set of policies and practices through which a company seeks to ensure maximum compliance with the elements of its code of conduct. The SCS covers social and labor issues and is implemented to ensure that companies protect workers' safety, health, and rights, as well as the rights of communities in their range of operation. For *Palma Futuro*, two

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3   For more information, see: https://www.dol.gov/agencies/ilab/palma-futuro-preventing-and-reducing-child-labor-and-forced-labor-palm-oil-supply.

4   See: https://www.dol.gov/ilab/complychain/about

tools have been adapted to address the weaknesses and risks, and strengthen the capacity of palm oil companies' implementation of SCS throughout all levels of their supply chain. These tools are the abovementioned USDOL ComplyChain and SAI's Social Fingerprint program.[5]

The USDOL ComplyChain tool provides practical, step-by-step guidance[6] on eight critical elements of social compliance and is designed for companies that do not have a SCS in place or those needing to strengthen their existing systems. The eight elements set forth in ComplyChain are:

1. Engage Stakeholders and Partners
2. Assess Risks and Impacts
3. Develop a Code of Conduct
4. Communicate and Train Across Your Supply Chain
5. Monitor Compliance
6. Remediate Violations
7. Independent Review
8. Report Performance and Engagement

Meanwhile, SAI's Social Fingerprint is a program of ratings, trainings, and tools that break down the concept of the management system into component process and 5 maturity levels. Modules include a self-assessment, independent evaluation, and an improvement plan. *Palma Futuro* adapted SAI's Social Fingerprint program to align it with the 8 elements of USDOL's ComplyChain. In doing so, the project developed two custom versions of Social Fingerprint for this project: a Social Fingerprint tool that measures the SCS management system and a Social Fingerprint tool that measures performance on labor elements (child labor, forced labor, health and safety at work, freedom of association, discrimination, disciplinary practices, working hours, wage and benefits, regular employment).

This methodology is currently implemented to address *Palma Futuro* main's objective through two expected outcomes: (i) strengthen the capacity of private sector partners in the Colombian and Ecuadorian palm oil sector to implement a robust and sustainable SCS, and (ii) increasing the understanding, at regional and global levels, of promising practices in SCS in palm oil supply chains.

The technical document is divided into six sections. The following section reviews the regional-level economic trends of the primary sector, with an emphasis on agriculture and palm oil in Colombia and Ecuador. This approach is complemented by a review of the main poverty indicators in the two countries. The third section presents the main results of the surveys implemented through the technology company ULULA,[7] regarding risks related to working conditions for workers of extraction plants linked to *Palma Futuro* and a sample of suppliers.

Having performed a descriptive analysis, the fourth section focuses on applying the Vester Matrix to identify levels of incidence of the main factors recognized from the survey

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5   See: https://sa-intl.org/programs/sa8000 and https://sa-intl.org/?fwp_search=fingerprint&s=fingerprint

6   For more information download the Comply Chain app available in App Store, Google Play, and the URL: https://www.dol.gov/ilab/complychain/

7   See: https://ulula.com/our-company/

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

results, and thus identify underlying problems in perceptions of labor rights and resources among extraction plant workers and suppliers. In accordance with the findings of section four, the fifth section develops guidelines defined in the SCS, as an instrument to create tangible benefits for the mitigation of prioritized risks. Finally, section six presents the conclusions.

2. Economic & Sectoral Context

The COVID-19 pandemic brought about the most significant global economic crisis in recent history. The World Bank (2021)[8] estimates a 3.5% contraction in the global economy, with a profound effect on developed economies (-4.7%), and a moderate aggregate effect on emerging economies and developing economies (-1.7%). However, this downturn was not felt evenly across the developing world. Even though the average contraction was less than 2%, Latin America and the Caribbean reported a drop of 6.5% in their Gross Domestic Product (GDP), making it the world's most severely affected region.

According to the Economic Commission for Latin America and the Caribbean (ECLAC) (2021)[9], COVID-19 caused more than 1.44 million deaths in the region as of August 31, 2021. This value represents 32.1% of global deaths in a region that comprises just 8.4% of the world's population. ECLAC notes that the region faces important challenges in terms of reactivation due to delays in vaccination rates compared to other regions such as North America and the European Union.[10]

Colombia and Ecuador are representative of the average dynamics within the Latin American economies. According to data of the National Administrative Department of Statistics - DANE (2021), Colombia's GDP experienced a contraction of 6.8%, the worst recorded since official data has been collected.[11] In Ecuador, data consolidated by the National Institute of Statistics (INEC) showed a decrease in GDP of 7.8% between 2019 and 2020 (GDP dynamics of both countries are shown in *Figure 1*). It is important to note that the two countries were severely affected by COVID-19 in aspects beyond their economies.

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8   See: https://www.bancomundial.org/es/publication/global-economic-prospects

9   See: https://www.cepal.org/es/enfoques/mortalidad-covid-19-desigualdades-nivel-socioeconomico-territorio

10   See: https://www.cepal.org/es/comunicados/crecimiento-america-latina-caribe-2021-alcanzara-revertir-efectos-adversos-la-pandemia

11   See: https://www.dane.gov.co/index.php/estadisticas-por-tema/cuentas-nacionales/cuentas-nacionales-trimestrales/pib-informacion-tecnica

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Particularly, Colombia's COVID-19-related death rate is 273.32 per 100,000 inhabitants, while Ecuador maintains a rate of 201.67 per 100,000 inhabitants.[12]

Figure 1: **Dynamics of the GDP for Colombia and Ecuador - Annual Variation**
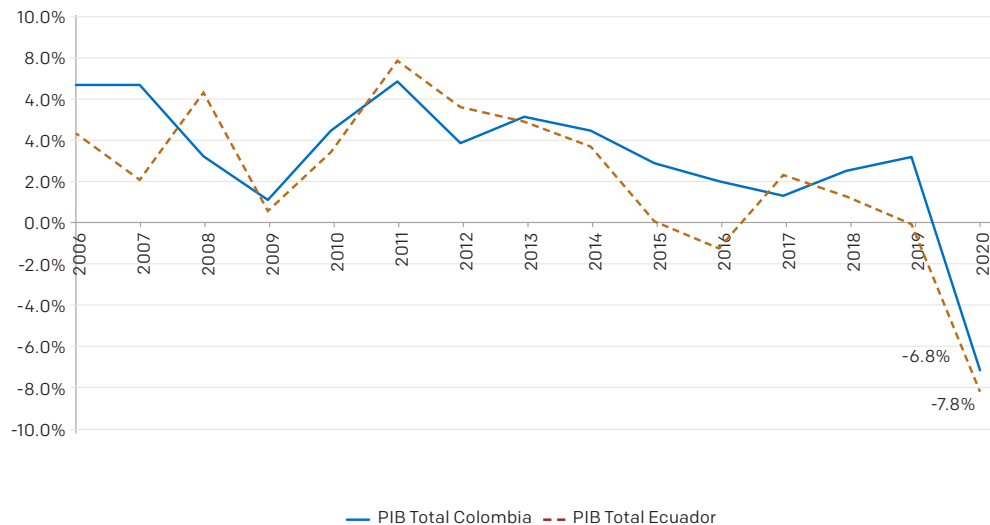

Figure 1 shows, in a line graph, the annual variation the GDP of Colombia and Ecuador from 2006 to 2020. For 2020, a contraction of 6.8% was registered in Colombia, while Ecuador presented a fall of 7.8%.
Source: DANE, INEC, prepared by *Palma Futuro*.

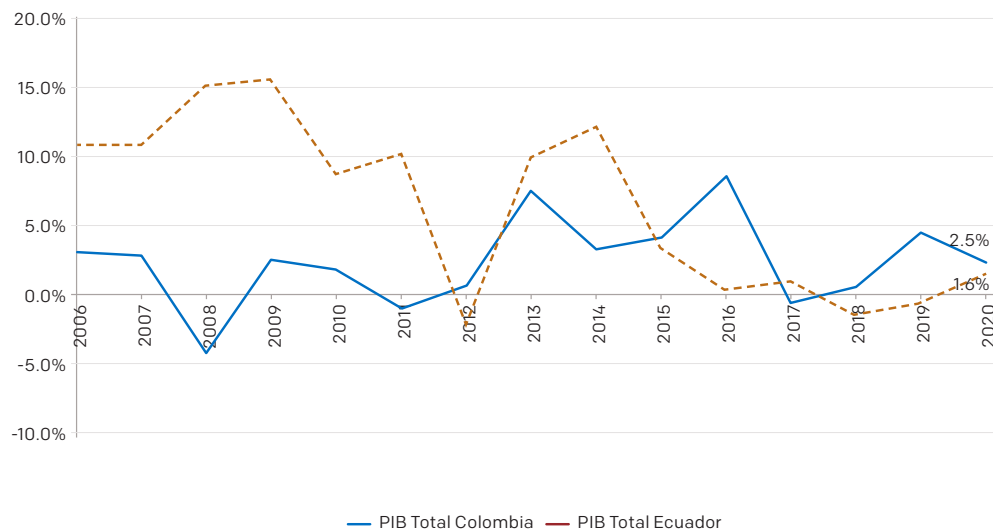*Figure 2*: **Dynamics of the Agricultural GDP for Colombia and Ecuador - Annual Variation**

Figure 2 shows, in a line graph, the annual variation of the agricultural GDP of Colombia and Ecuador. For 2020, a growth of 2.5% was registered in Colombia, while Ecuador presented a growth of 1.6%
Source: DANE, INEC, prepared by *Palma Futuro*.

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12   See: https://coronavirus.jhu.edu/data/mortality

Economic trends have a demonstrated correlation with the performance of the primary sector. For Colombia, agricultural GDP grew by 2.5% in 2020, in line with average numbers since 2006.[13] Ecuador´s primary sector GDP recorded an increase of 1.6% in 2020, marking its biggest growth since 2016.[14] Data shows a trend (***Figure 2***), where high prices of raw materials during 2020 and the classification of these sectors as a ''primary good'' allowed for sustained production levels with outstanding results that, in several cases, provided some relief to the region's battered economies.[15]

Palm oil was one of the sectors that drove the growth of the primary sector in Colombia and Ecuador. In 2020, Colombian palm oil production reached 1.56 million metric tons (mt) and the forecast for 2021, indicates that production will reach 1.65 million mt, the country´s highest yield in history. Production data for 2020 reflects a growth of 1.96% from 2019, and preliminary forecasts for 2021 reveal a growth that exceeds 2020 production by 5.84%.[16] Consistent with trends in Colombia, Ecuador's growth in the sector has also been impressive. After decreasing in 2019 (-18.31%), the country returned to levels above 540 thousand mt in 2020, which represented a growth of 18.68% compared to the previous year, and the growth forecasted for 2021 is of 0.93%, reaching 545 thousand mt. The data presented are summarized in ***Figure 3***.

To a great extent, the palm oil yields in Colombia and Ecuador are due to favorable international markets. Countries like Indonesia (44.5 million mt), Malaysia (19.7 million mt) and Thailand (3.1 million mt) are experiencing

13   See: https://www.dane.gov.co/index.php/estadisticas-por-tema/cuentas-nacionales/cuentas-nacionales-trimestrales/pib-informacion-tecnica

14   See: https://contenido.bce.fin.ec/home1/estadisticas/cntrimestral/CNTrimestral.jsp

15   See: https://www.france24.com/es/programas/econom%C3%ADa/20210520-crecimiento-precios-materias-primas-america-latina

16   See: https://www.nass.usda.gov/

record production thus far in 2021,[17] reinforced by positive price dynamics. The value of palm oil per mt reached USD 1,348.07 on November 2021, the highest value since April 2012, and continues to trend upwards (see **Figure 4**).[18]

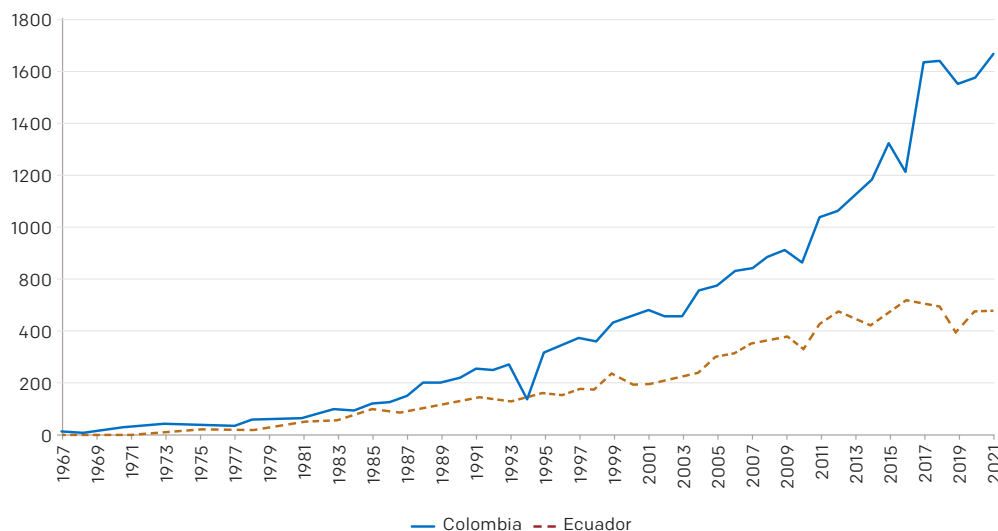*Figure 3*: **Oil Palm Production - Thousands of Metric Tons (1967-2021)**

Figure 3 shows, in a line graph, the evolution of palm oil production in Colombia y Ecuador. Currently, production in Colombia is 1.65 million mt and in Ecuador 545 thousand mt.
Source: United States Department of Agriculture, prepared by *Palma Futuro*.

Figure 4: **International Palm Oil Prices USD (Monthly Nov 1993 – Nov 2021)**

Figure 4 shows, in a line graph, the evolution of the palm oil international price. After a sustained decline since 2012, dropping to levels below USD 600, prices are currently above USD 1,100.
Source: IndexMundi, prepared by *Palma Futuro*.

17   See: https://www.indexmundi.com/agriculture/?commodity=palm-oil

18   See: https://www.indexmundi.com/commodities/?commodity=palm-oil&months=360

Although the agricultural sector and the palm oil sector maintain stable growth, it is important to note that socioeconomic conditions in Colombia and Ecuador have suffered significant setbacks due to the pandemic. According to DANE (2021), the poverty rate in Colombia was 42.5% in 2020, which indicates that 3.55 million people fell below the poverty line, with a particularly high incidence in northern cities such as Barranquilla (41.2%) and Cartagena (47.8%).[19]

It is also important to point out that although rural monetary poverty diminished in Colombia (481,000 people came out of poverty in populated and dispersed rural centers),[20] multidimensional poverty, measured using the Multidimensional Poverty Index (MPI), reported a 2.6 percentage points (p. p.) growth from 34.5% in 2019 to 37.1% in 2020. The Colombian MPI results indicate that about 324,000 people fell into a condition of multidimensional poverty, which by 2020 affected 4.25 million of Colombia's rural inhabitants. An increase in Colombia's rural MPI might create serious risks of child labor and forced labor, due to an increase in school absenteeism, which went from 4.6% in 2019 to 30.1% in 2020; and long-term unemployment, which increased from 11% in 2019 to 13.1% in 2020.[21] It is important to point out that official statistics showed that the component of the MPI associated with child labor went from 3.4% in 2019 to 2.8% in 2020. Both, the proportion, and the variation, are not statistically significant in the referenced years.

According to INEC figures, Ecuador's monetary poverty increased from 25.0% in 2019 to 32.4% in 2020. This impact was felt in urban areas, where poverty grew from 17.2% in 2019 to 25.1% in 2020, and in rural areas, which experienced an increase from 41.8% in 2019 to 47.9% in 2020.[22] Such growing poverty rates, when compared with the country's overall growth in agricultural GDP, indicate an increase in the income gap which in turn adversely affects the lower-income population. While multidimensional poverty in Ecuador reported a growth of 1.3 p. p. compared to 2019 (from 42.0% to 43.3%), this upward trend in rural MPI has been ongoing since 2016 and no relevant changes were recorded between the years of analysis.[23] However, the child labor component of the Ecuadorian MPI remains steady at 4.4% in rural areas.[24]

These factors and their impact on Colombia's and Ecuador's inhabitants' quality of life, motivated *Palma Futuro* to review a series of indicators that would create a detailed picture of current conditions for workers at palm oil extraction plants and associated suppliers in the northern Colombia and Ecuador's Esmeraldas region. The following section presents the key findings of survey results obtained by ULULA at the end of 2020.

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19   See: https://www.dane.gov.co/index.php/estadisticas-por-tema/pobreza-y-condiciones-de-vida/pobreza-monetaria

20   *Idem*

21   See: https://dane.gov.co/index.php/estadisticas-por-tema/pobreza-y-condiciones-de-vida/pobreza-multidimensional

22   See: https://www.ecuadorencifras.gob.ec/pobreza-junio-2021/

23   See: https://www.ecuadorencifras.gob.ec/pobreza-multidimensional/

24   Colombia's MPI does not measure child labor.

3. *Palma Futuro* Labor Conditions Survey

In conjunction with the technology company ULULA, *Palma Futuro*, conducted a remote survey between November and December 2020, on palm oil extraction plants and suppliers in Colombia and Ecuador. The survey was intended to explain how the COVID-19 pandemic affected palm oil producers and fruit growers, paying special attention to the consequences on working conditions and labor rights.

Surveys were applied online using interactive voice recordings. All survey questions were multiple-choice and were applied to workers of the extraction plants and suppliers working with *Palma Futuro*. An approximation was made using a Convenience Sample,[25] which is a non-probability technique in which the sample is selected based on the population available for the research. This approach is not considered to represent the entire population of palm oil extraction plant workers or suppliers in Colombia and Ecuador but provides a reasonable method by which to assess the conditions of the surveyed population as a group.

Regarding the sample size, a total of 487 extraction plant workers were surveyed to capture data associated with economic damages, personal and family effects, perceptions of working conditions, perceptions of health and safety in the workplace, and the operation of communication channels between workers and companies. On the supplier side, a total of 181 surveys were administered to fruit farm owners and administrators, emphasizing information regarding changes in farm market conditions, changes in the relationship with their workers, as well as their relationship with extraction plants, and measures taken to mitigate the spread of COVID-19 in the workplace.

It is important to note that the surveys led to conclusions being drawn regarding the conditions of the respondents, but these results cannot be extrapolated to the Colombian and Ecuadorian palm oil sectors as a whole. Results obtained from the analysis should be considered a "snapshot" of the current situation of the associated palm oil extraction plants

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25   See: https://dissertation.laerd.com/convenience-sampling.php

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

and a sample of suppliers in Colombia and Ecuador, but conclusions are not intended to be statistically significant or representative of other companies in the sector.

The proposed analysis adopted a qualitative approach based on a preliminary review of descriptive statistics. This allowed for the development of an initial approach to problems "understood as critical points that have the ability to synergistically move or change the configuration of a current situation that has been perceived as negative or problematic."[26] The outcomes of descriptive statistics were in turn categorized into four (4) thematic areas: i) areas of life most severely affected by COVID-19, ii) economic and labor conditions, iii) health and safety at work, and iv) access to information. The disaggregated results are presented below.

3.1. Extraction Plant Workers in Colombia and Ecuador

Four hundred and eighty seven surveys were administered to extraction plants' workers, 353 of which were completed by male personnel (72.5%) and 120 by female personnel (24.6%). 14 respondents (2.9%) did not disclose their gender and were therefore excluded from the analysis in order to maintain a binary disaggregation by sex in the reported statistics (**Figure 5**).

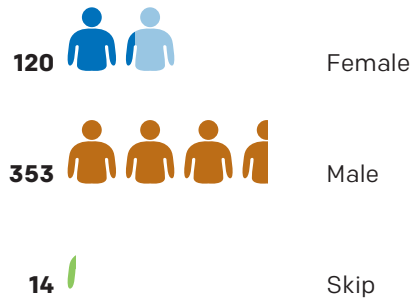*Figure 5*: Distribution of completed worker surveys - Gender

Figure 5 disaggregates the sample of extraction plant workers' survey, which was answered by 120 women, 350 men and 14 people who did not report information regarding their gender.
Source: *Palma Futuro*, ULULA

Regarding the age distribution of the surveyed population, young people (18-28 years), account for 21.8% of respondents, and individuals aged between 28 and 40 years accounted for 45.4% of the survey respondents. Interestingly, a significant proportion of the population (9.65%) were over 50 years old (**Figure 6**), the majority of whom were male.[27] Of the workers, 94.1% reported that they were hired directly by extraction plants. This value is slightly lower for women (91.7%) compared to men (94.9%). 5.2% of the respondents reported that they were hired through a supplier or contractor, with a higher proportion of women (7.5%) than men (4.5%); and 0.6% answered that they do not know or did not respond (N/R).

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26 See: http://www.sdp.gov.co/sites/default/files/guia_para_la_formulacion_pp_wf_1.pdf

27 Among the respondents, 7.19% did not report an age value.

Figure 6: Distribution of completed worker surveys - age range (%)
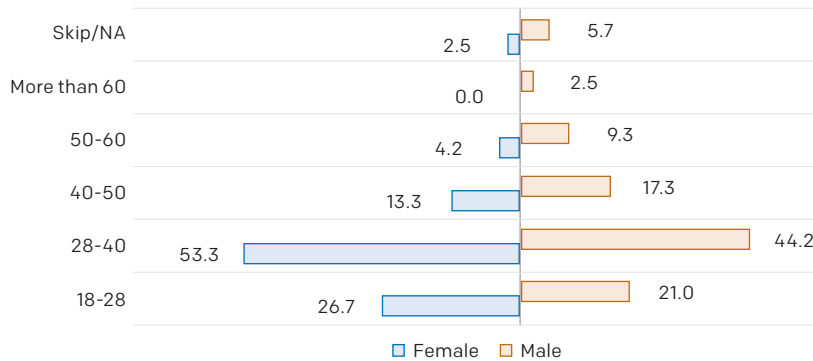

Figure 6 shows in a bar chart the disaggregation of workers by gender and age range. 44.2% of men and 53.3% of women are in the range of 28 to 40 years, being the group with the highest participation.
Source: *Palma Futuro*, ULULA

3.1.1. Areas of Life Most Severely Affected by COVID-19

Workers were asked to choose the most severely affected aspect in their lives by COVID-19 among the following options:

- My health
- My mental health
- My finances
- My work
- My family
- It has not impacted me
- No response (N/R)

Results of the selection are described in ***Figure 7*** and show that the main area of life affected was workers' mental health, with 25.3% of the respondents reporting this aspect as their main concern. This result is interesting in that it is derived mainly from the high incidence of this area of life in women (32.5%). Compared to men, the incidence of mental health as a response was significantly higher in women (9.6 p.p. higher), who ranked it as the principal negative effect even though the female population accounts for only 25.2% of the total surveys. Mental health was not the most commonly reported area of life affected among male respondents.

This can be explained by different factors, several of which are listed in ***Figure 7***. The third most severely affected factor is family. This area was also substantially higher among women (20.8%) than men (14.4%), which may be correlated with women's role as caretakers. Family and psychological aspects associated with traditional gendered social and economic roles must be taken into account when developing interventions for men and women. While gender roles cannot be generalized for all populations and communities, women's traditional roles in both the productive and reproductive sectors mean they may be responsible for generating income and caring for their families (Petit et al, 2009).[28]

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28   See: https://www.aacademica.org/000-020/523.pdf

Figure 7: **In which area of your life do you consider that COVID-19 has had the most significant impact?**[29]
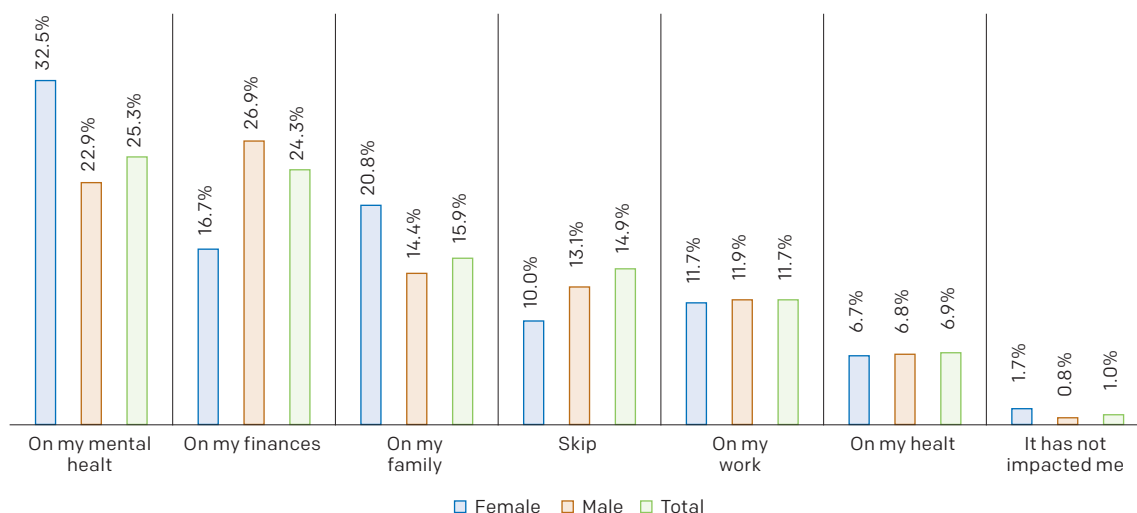

Figure 7 shows in a bar chart that mental health of workers was the most affected area with 25.3% of the responses, followed by finances (24.3%) and the family (15.9%). Mental health was the most affected factor in women and the second affectation in men. The main affectation in men was in the financial field.
Source: *Palma Futuro*, ULULA

Recognizing the psychological impact of the pandemic on women, which is especially associated with the increase in perceived stress and severe depression (Vlassopoloulos et al, 2021), institutions such as the Pan American Health Organization (PAHO, 2020) have promoted different kinds of interventions in mental health and psychosocial support (MHPSS) during the pandemic. These interventions are based on a multilevel support system that recognizes the different intensities of psychological affectation among the population due to COVID-19. Thus, the PAHO proposed four different levels, in which level 1 focuses on addressing psychosocial aspects associated with the provision of basic services and security; level 2 on promoting the strengthening of family and community support networks; level 3 on focused person to person nonspecialized supports; and finally, level 4 on specialized services.[30]

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29   Four hundred and sixty-one respondents answered this question.

30   For more information, see https://iris.paho.org/bitstream/handle/10665.2/52485/PAHONMHMHCOVID-19200026_eng.pdf?sequence=1&isAllowed=y

Figure 8: Pyramid of MHPSS in emergency settings

Specialized
services

Focused
(person-to-person)
non-specialized supports

Stretening community
and family supports

Social considerations in basic
services and security

Figure 8 describes the four levels of intervention in MHPSS. Level 1 focuses on the provision of basic services and security; Level 2 focuses on promoting the strengthening of the family and community support network; Level 3 is based on non-specialist support services focused on person; and Level 4 applies specialized services.
Source: IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings, PAHO (2020)

Continuing with the most severely affected aspects of life, 24.3% of respondents indicated that their finances were most severely affected by COVID-19. Significantly more men (26.9%) than women (16.7%), indicated that their finances were most severely impacted. This may, again, be related to the traditional role of women as caretakers and of men as ''breadwinners.'' Changes in the workplace due to COVID-19 were reported at a rate of 11.7%, with a similar percentage of responses from men and women. Notably, almost 15% of the surveyed population did not respond to this question.

Survey respondents were also asked: *In which area of your life do you consider that COVID-19 has had the second most significant effect?* Most respondents reported not having a second critical area affected by the pandemic (33.9%). Labor and financial aspects occupied second place in relevance, and family aspects continued to have a high incidence among the female population (see ***Figure 9***).

Figure 9: **In which area of your life do you consider that COVID-19 has had the second most significant effect?[31]**
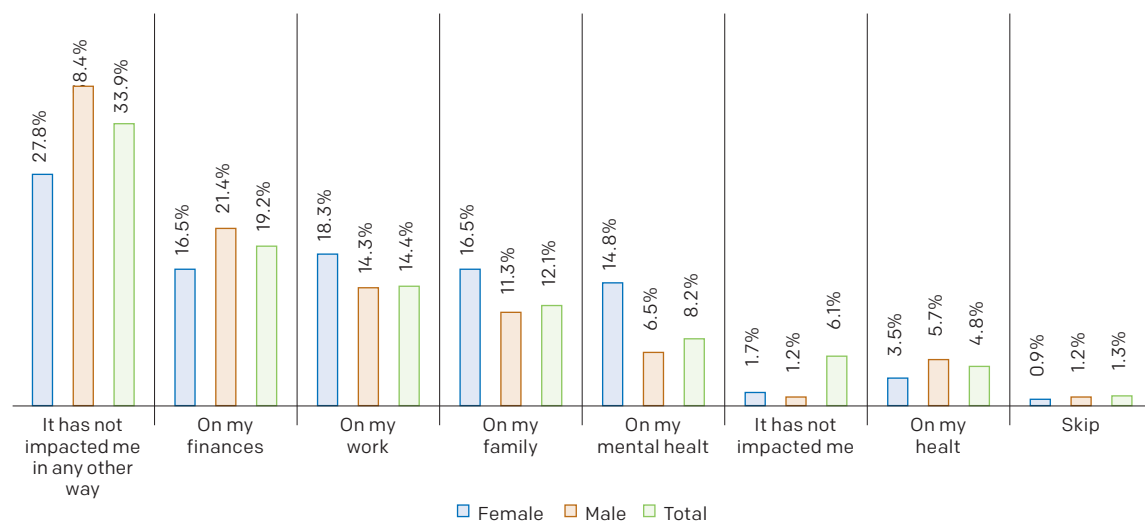

Figure 9 shows in bar chart that 33.9% of those surveyed do not show a second area of life affected. The second response in incidence is the financial part (19.2%) followed by work (14.4%) and family (12.1%).
Source: *Palma Futuro*, ULULA

The results of this question, described in ***Figure 9***, were compared with the results of the first, to create a more complete picture of the areas most severely affected by COVID-19 (***Table 1***). This analysis omitted survey respondents that report not having a second most severely affected area. Most of the respondents reported mental health as the main factor, and family as the second factor. It is also noteworthy that 32.9% of those who reported family as the main factor affected, pointed out finances as the second, which may be an indication of correlation between financial problems and internal dynamics of the household. Additionally, there is a correlation between the effects associated with health (area 1), finances (24.2%), and work (27.3%).

Table 1: **Relationship between the first and second most significant area that has been affected by COVID-19**

First Area / Second Area	It has not impacted me	It has not impacted me in any other way	My family	My finances	My health	My mental health	My work
It has not impacted me	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
My family	0.00%	26.3%	17.1%	32.9%	3.95%	3.95%	14.5%
My finances	0.9%	24.1%	13.8%	29.3%	3.45%	8.6%	19.0%
My health	0.00%	12.1%	12.1%	24.2%	15.15%	6.1%	27.3%
My mental health	0.00%	40.5%	15.7%	9.9%	3.3%	16.5%	12.4%
My work	0.00%	44.6%	7.1%	16.1%	8.9%	7.1%	14.3%

Table 1 shows the correlations between the first and second areas most affected by COVID-19. It is highlighted that 32.9% of those who reported family as the main affectation, reported finances as the second affectation. Additionally, there is a correlation between the affectations associated to health with finances (24.2%) and work (27.3%).
Source: Palma Futuro, ULULA

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31   Four hundred and fifty-four respondents answered this question.

According with the survey answers, 4 out of 10 workers feared that the impact of COVID-19 could lead to their dismissal from the company (**Figure 10**), and a significant proportion (31.0%) did not know if the situation could eventually cause their dismissal. This also accounts for the flow of information between the company and workers, and its impact on their quality of life.

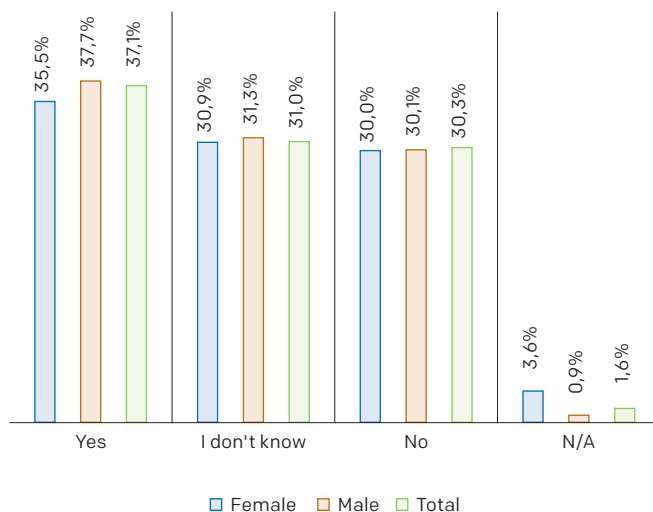*Figure 10*: **Do you fear that the impacts of COVID-19 on businesses could lead to you or others in your Company being dismissed?**[32]

Figure 10 shows a bar chart in which 37.1% of the extraction plant workers fear that the COVID-19 pandemic could lead to their dismissal. 31% of the respondents indicated that they do not know, while 30.3% do not fear being fired.
Source: *Palma Futuro*, ULULA

3.1.2. Economic and Labor Conditions

Having analyzed the questions related to the impact of COVID-19 on workers' individual lives, the survey questions for workers concerning economic and labor matters at extraction plants were analyzed. In response to the first question, concerning changes to contracts, 82.0% of the respondents reported having kept their type of contract unchanged; 12.9% indicated changing to a part-time contract, with a notably higher incidence in men (14.3%) compared to women (9.2%); and 2.1% reported having had their contract changed to a temporary one. 1.6% of the workers indicated having had their work modality to changed to full time during the pandemic. The results are summarized in *Figure 11.*

Aspects relating to wages and workday length also present interesting findings, whereby 81.4% of workers expressed having kept their pay unchanged during the last three months, while 11.4% reported a reduction for the same period. Among the men, 13.7% reported having had their salary reduced, compared to 4.5% of women (*Figure 12*).

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32   Four hundred and twenty-nine respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Figure 11: Has the type of contract you have with your employer changed as a result of COVID-19?[33]
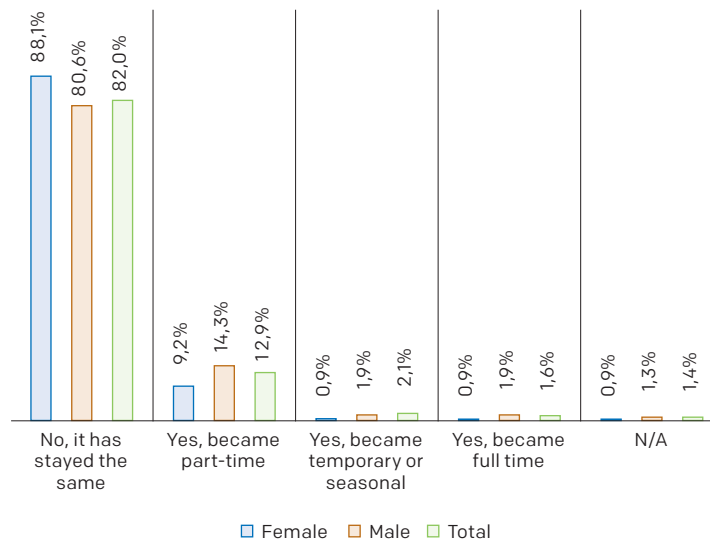

Figure 11 shows in a bar chart that 82% of the workers kept the type of contract. The proportion is higher in women (88.1%). 12.9% of workers changed the type of contract to part-time.
Source: *Palma Futuro*, ULULA

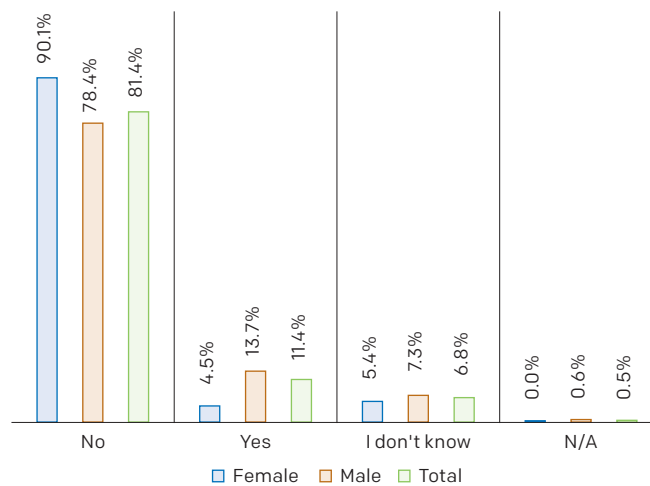*Figure 12*: Has your salary been reduced in the last 3 months?[34]

Figure 12 shows in bars that 81% of the respondents did not report reductions in their salary in the last three months. The proportion is higher in women (90.1%). 11.4% reported that there was a reduction.
Source: *Palma Futuro*, ULULA

17% of workers recorded a reduction in their working hours, while 16.1% stated that their working hours had been increased. More men reported increases (17.1%), although a significant proportion of women (12.6%) also reported a longer working days (*Figure 13*).

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33 Four hundred and twenty-seven respondents answered this question.

34 Four hundred and twenty-nine respondents answered this question.

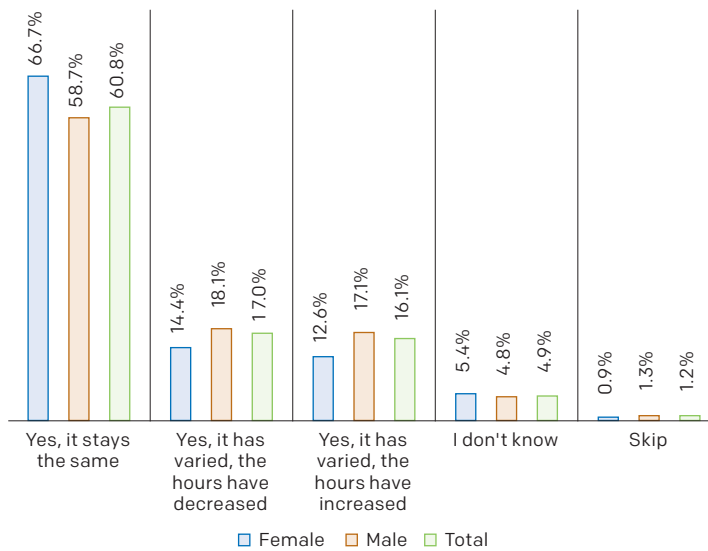*Figure 13*: Due to COVID-19, has your working day increased or decreased?[35]

Figure 13 shows in a bar chart that 60.8% of the respondents did not report increases in their working hours. Likewise, 17% of those surveyed reported a reduction while 16.1% reported increases.
Source: *Palma Futuro*, ULULA

Finally, workers were asked if they have observed changes in the under 18-year-old population that has been working in their community since the start of COVID-19. 10.4% of workers reported observing increases in the number of children working since the start of the pandemic. However, a similar proportion (9.5%) reported observing a reduction in this number. It is important to point out that 29.5% think that the levels of child labor have remained unchanged, while 47.1% of those surveyed indicate they do not know whether there have been changes or not (***Figure** 14*).

Figure 14: In your community, have you seen changes in the number of under 18-year-olds working since the start of COVID-19?[36]
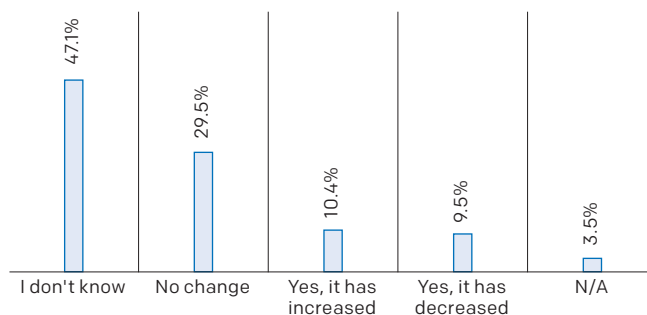

Figure 14 shows in a bar chart that 47.8% of the respondents reported not knowing if there had been changes in the number of people under the age of 18 who work. 29% reported not having observed changes, while 10.4% reported increases, although 9.5% reported reductions.
Source: *Palma Futuro*, ULULA

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35   Four hundred and twenty-nine respondents answered this question.

36   Four hundred and thirty-one respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

3.1.3. Health and Safety at Work

The third group of questions concerned occupational health and safety issues. The following issues were addressed in this group: the dynamics regarding the employer's contribution to social security, the implementation of biosafety measures, and the workers' perception of how people with or in contact with suspected or confirmed cases of COVID-19 were treated.

Of the workers, 63.5% reported that their employer made no changes to their health insurance payments. However, 15.9% of workers reported a reduction in the employer's contribution to health insurance since the start of the pandemic (***Figure 15***). Notably, this factor is aligned with the workers who reported changes to their part-time or temporary contract (12.9% and 2.1% respectively). However, 11.3% of the workers who did not report a change in their type of contract also reported a reduction in the employer's contributions to health insurance.

Figure 15: **Has your employer changed his/her contribution to your healthcare provider since the start of COVID-19?**[37]
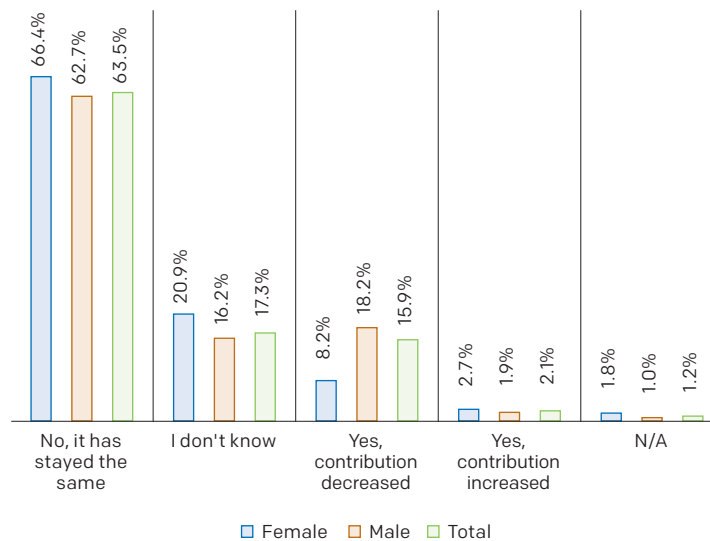

Figure 15 shows in a bar chart that 63.5% of workers reported not having presented variations in healthcare payments by the employer. However, 15.9% of workers reported a reduction in the healthcare contribution by the employer since the start of the pandemic.
Source: *Palma Futuro*, ULULA

Overall, a high rate of respondents reflected positively on their employers' COVID-19 mitigation efforts (***Figure 16***). In total, 72.5% of workers reported that adequate measures have been incorporated in their workplace and that they felt safe at work. The perception of safety was higher in women (80.0%) than it was in men (69.6%), and 24.1% reported that, although changes have been introduced, the company could do more. Regarding health issues associated with COVID-19, 23% of workers indicated that they did not know whether they could lose their job due to illness, although only 6.8% reported fearing losing their job as a result of getting infected. Interestingly, 69.7% of the respondents were not afraid of losing

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37   Four hundred and twenty-seven respondents answered this question.

their job due to illness, which is surprisingly high due to widespread uncertainty surrounding the pandemic. The perception of job stability was higher in women (79.1%) than in men (66.5%) (***Figure 17***).

    Figure 18 shows that most workers have not felt discriminated against or have not been unfairly treated for having COVID-19, or for being related to suspected or confirmed cases, while 21.6% stated that the question does not apply because they have not been affected by the virus.

Figure 16: **Do you feel safe in your workplace with the changes introduced to mitigate COVID-19?**[38]
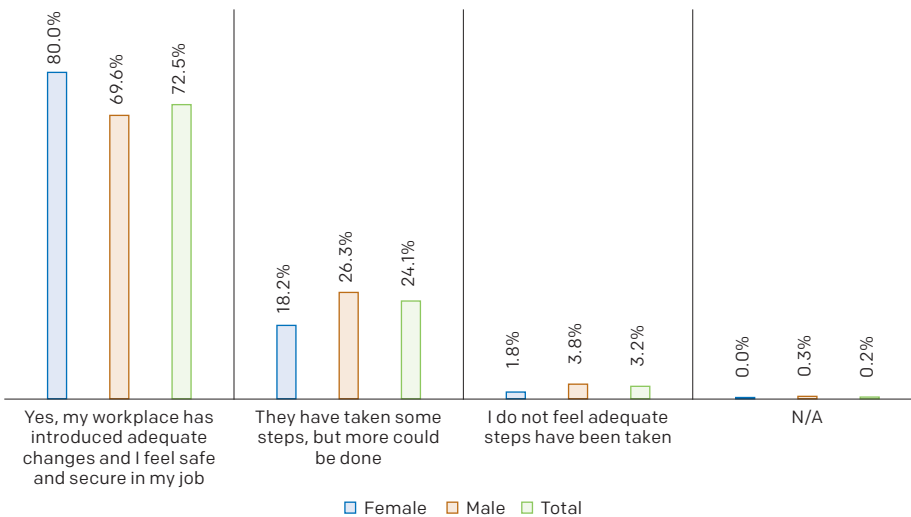
Figure 16 shows in a bar chart that 72.5% of workers reported feeling safe at work due to the changes introduced in their company to prevent the COVID-19 spread. However, 24.1% reported that measures have been taken, but more could be done.
Source: *Palma Futuro*, ULULA

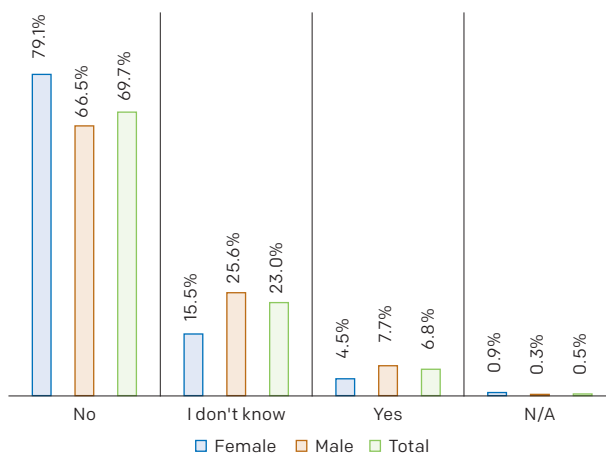*Figure 17*: **Do you fear that you could lose your job if you become sick?**[39]

Figure 17 shows in a bar chart that 69.7% of workers reported not fearing losing their job due to illness. In the other hand, 23% do not know if they can lose their job for this reason.
Source: *Palma Futuro*, ULULA

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38   Four hundred and thirty-two respondents answered this question.

39   Four hundred and twenty-six respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Figure 18: **Have you felt unfairly treated in your company for having COVID-19 or being related to a suspected or confirmed case?[40]**
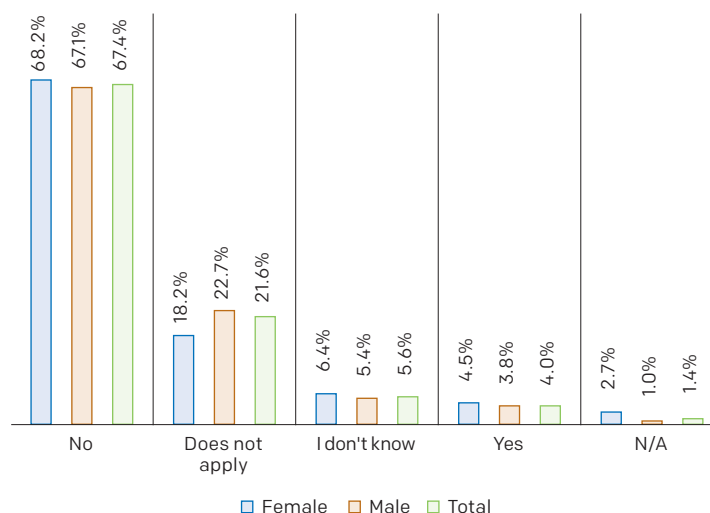

Figure 18 shows in a bar chart that 67.4% of workers reported not having felt unfairly treated for having COVID-19 or having been related to a suspected or confirmed case. 21.6% of the respondents reported that the question did not apply to them.
Source: *Palma Futuro*, ULULA

3.1.4. Access to Information

The survey also analyzed aspects concerning workers' access to information. Workers expressed that they would like their employers to provide more information or training in the context of the pandemic, as well as a greater degree of communication between the company and its workers.

Two questions were asked in this section:

- In what area do you need more information?[41]
- In what other areas do you need information?[42]

For the first question, 27.2% of those surveyed reported requiring more information regarding government programs. Although specific government programs were not specified, it may be inferred that resources to mitigate the economic impact of COVID-19 would be of particular interest (for example Solidarity Income[43] or Extraordinary Payments to *"Más Familias en Acción"*[44] in Colombia; or the Family Protection Bond in Ecuador[45]). Of the respondents, 17.3% reported requiring more information on health topics; 12.2% on hygiene and prevention measures for COVID-19 at work; 8.8% on labor rights; and 5.3% on COVID-19 prevention measures at home.

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40   Four hundred and twenty-six respondents answered this question.

41   Four hundred and fifty-two respondents answered this question.

42   Four hundred and fifty respondents answered this question.

43   See: https://ingresosolidario.prosperidadsocial.gov.co/

44   See: https://prosperidadsocial.gov.co/Noticias/prosperidad-social-inicia-ultimo-ciclo-de-pagos-del-2021-para-familias-en-accion/

45   See: https://www.banecuador.fin.ec/2020/03/31/inicia-el-pago-del-bono-de-proteccion-familiar-por-emergencia/

In terms of the second question, 26.5% of the respondents reported not requiring more information on any aspect. For the the second complementary question *In what other area do you need information?*, 32.7% of the workers surveyed reported not requiring more information, making it the most frequently selected option. Men and women differed in their responses to these questions. Most women reported not requiring additional information (30.4% in the first question and 38.3% in the second); while the response most commonly selected by men was access to government programs.

Figure 19: **Has the communication between the company and the workers been transparent and timely in relation to COVID-19?[46]**
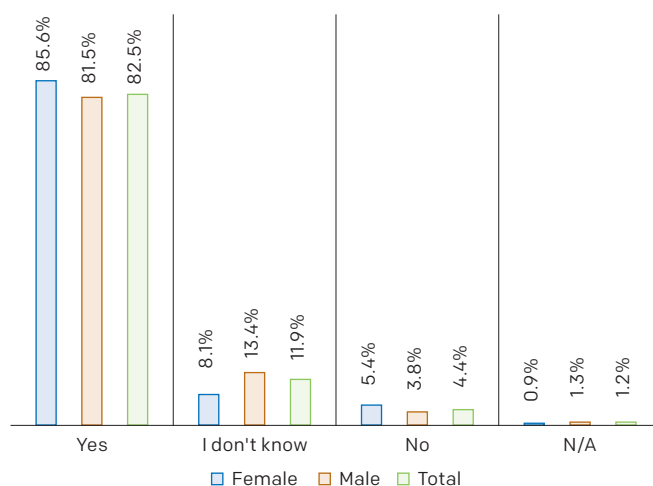
Figure 19 shows in a bar chart that 82.5% of those surveyed reported that communications between the company and the workers have been timely and transparent regarding COVID-19. However, 11.9% and 4.4% do not know if the communication is transparent or timely or consider that it does not meet the characteristics described.
Source: *Palma Futuro*, ULULA

Of the survey respondents, 82.5% reported that communication has been timely and transparent in relation to COVID-19. However, 11.9% did not know whether the communication has been transparent or timely, and 4.4% believed it has not been transparent or timely (***Figure 19***). Importantly, 21% of workers surveyed did not know whether their employers provided an accessible and anonymous complaints channel to report or offer suggestions on how to manage COVID-19 within extraction plants; and 11.7% of the workers reported that there is no such channel (***Figure 20***).

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46   Four hundred and twenty-eight respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Figure 20: **Is there an accessible and anonymous complaint channel to report or provide suggestions on how to manage COVID-19 in your workplace?[47]**
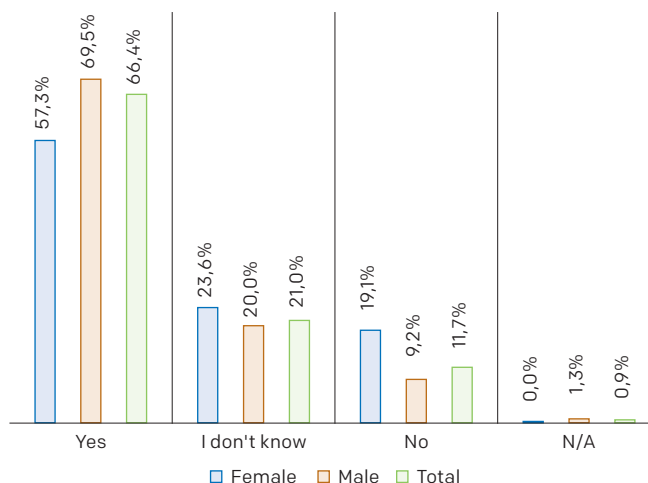

Figure 20 shows in a bar chart that 21.0% of workers did not know if there was an accessible and anonymous complaints channel to report or provide suggestions regarding the management of COVID-19; and 11.7% of workers affirmed that the aforementioned channel did not exist.
Source: *Palma Futuro*, ULULA

The preliminary results of the descriptive analysis reveal the sector's outstanding level of adaptation to the shock derived from the pandemic. Responses indicated thorough commitment to training in hygiene and safety at work, which likely explains workers' largely positive perception of safety. In labor-related matters also, the results indicate the implementation of good hiring practices and recognition of time worked, representing companies' efforts to maintain good working conditions even in a crisis scenario. However, challenges related to working hours and aspects associated with the areas of life affected persist. The negative effects in aspects such as mental health, general health and finances stem from uncertainty and factors related to communication between the company and workers.

3.2. Supplier Farms in Colombia and Ecuador

A total of 181 fruit supplier farm surveys were applied in Colombia and Ecuador using ULULA services. Of the total respondents, 58 were women (32.0%) and 123 were men (67.0%); 8.3% were aged between 18 and 28 years; 15.5%, between 28 and 40 years; 28.7% between 40 and 50 years; 35.9% between 50 and 60 years; and 11.6% over 60 years.

A much more diverse age distribution is observed compared to surveyed extraction plant workers with a concentration of people in the 40-50 age range (29.2% of the total completed surveys), as well in the 50-60 age range (36.9%). As for population over 60 years of age, important gender gaps are observed where men in this age range participate with 16.3% of the total surveyed population, while women represent only 1.7%. Age distribution disaggregated by gender is presented in ***Figure 21***.

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47   Four hundred and twenty-eight respondents answered this question.

Figure 21: **Distribution of surveys - Age range (%)**

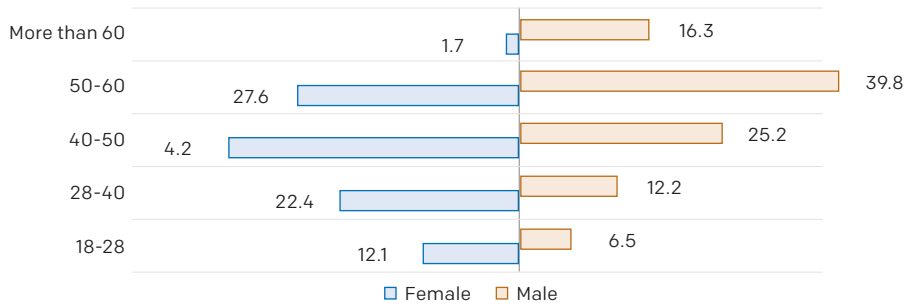|	Female	Male
More than 60	1.7	16.3
50-60	27.6	39.8
40-50	4.2	25.2
28-40	22.4	12.2
18-28	12.1	6.5

Figure 21 shows in a bar chart the age distribution of those surveyed in supplier farms. The population is concentrated in the age ranges between 50 and 60 years old (39.8% of men and 27.6% of women) and between 40 and 50 years old (25.2% of men and 36.2% of women).
Source: *Palma Futuro*, ULULA

Additional questions were asked concerning the size and number of workers on farms. 74.1% of the surveyed farms have 0 to 50 hectares (ha), while 12.9% have 50 to 100 ha, and an equivalent proportion (12.9%) have more than 100 ha. Of the farms surveyed, 11.8% reported not having employees other than the owners; 75.0% reported having between 1 and 50 workers; 5.9% indicated having more than 100 employees; 4.4% between 50 and 100 workers; and 2.9% reported not having any workers.[48]

3.2.1. Areas most severely affected by COVID-19

The analysis of supplier farms was not disaggregated by gender because responses are associated with the dynamics of the owners and farms as producer entities, and gender was not determined to be a relevant factor when assessing these dynamics. The survey included two questions related to the areas most severely affected by COVID-19:

- In which area do you consider that COVID-19 has had the most significant impact?
- In which area do you consider that COVID-19 has had the second most significant impact?

The suppliers' most common response was *It has not impacted me* with 35.8% of the responses. Impacts related to family and finance both received 15.9% of responses each. A significant proportion (10.8%) reported suffering effects in all areas, while 8.0% reported impacts on the farm or in the business (***Figure 22***).

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48   The question associated with the number of workers was answered by 68 farms out of 181 surveyed.

Figure 22: **In which area do you consider that COVID-19 has had the most significant impact?**[49]
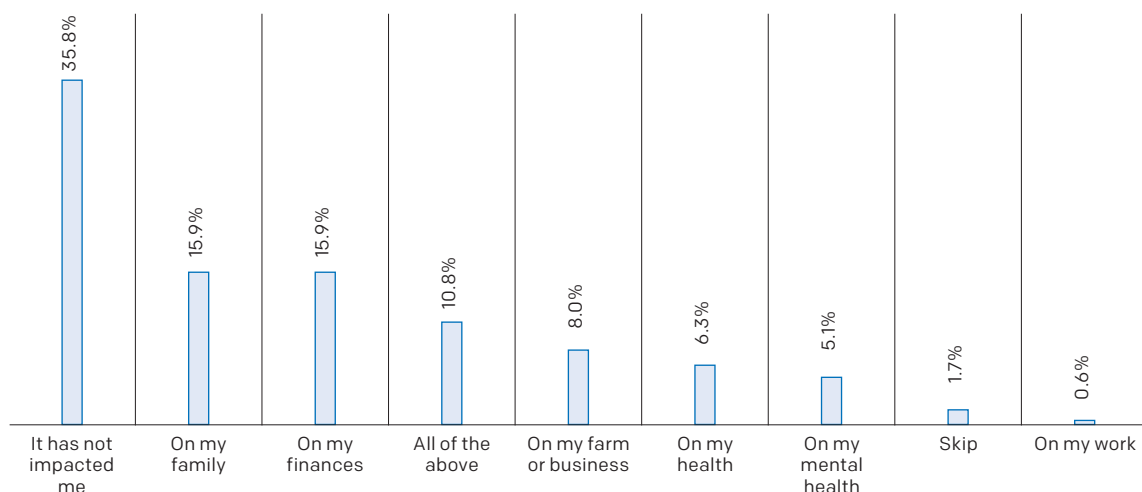

35.8%	It has not impacted me
15.9%	On my family
15.9%	On my finances
10.8%	All of the above
8.0%	On my farm or business
6.3%	On my health
5.1%	On my mental health
1.7%	Skip
0.6%	On my work

Figure 22 shows in a bar chart that the answer "it has not impacted me" predominates with 35.8% of the answers in suppliers; followed by the family sphere and finances, which accumulated 15.9% of the responses each. Also, an important share (10.8%) reported being affected in all areas; while 8.0% reported damage to the farm or business.
Source: *Palma Futuro*, ULULA

The question, *In which area do you consider that COVID-19 has had the second most significant impact?* ratifies results of the main question, also showing high participation of the survey respondents who do not report any negative impact, followed by family and financial areas (18.9% each). Results are detailed in ***Figure 23***.

Figure 23: **In which area do you consider that COVID-19 has had the second most significant impact?**[50]

32.6%	No other ways
18.9%	On my family
18.9%	On my finances
8.6%	On my health
5.7%	On my mental health
5.7%	Skip
4.0%	On my farm or business
3.4%	It has not impacted me
2.3%	On my work
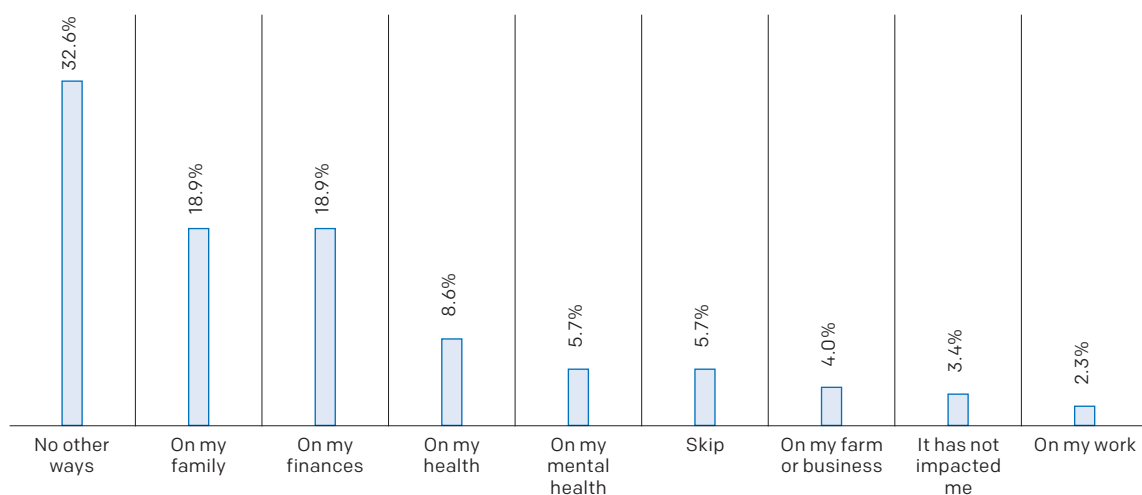
Figure 23 shows in a bar chart the reaffirmation of the predominance of the unaffected respondents (32.6%) followed by family and financial spheres (18.9% each).
Source: *Palma Futuro*, ULULA

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49   One hundred and seventy-six respondents answered this question.

50   One hundred and seventy-five respondents answered this question.

Reported economic impacts of the pandemic appear to be relatively stable. Among the farms, 78.3% reported having maintained their relationship with buyers, with 5.1% reporting increases in their customer base, while 12.0% indicated that they had lost customers (***Figure 24***). Of the survey respondents, 78.2% reported always receiving payments for fruit deliveries on time, while 14.4% reported payments were "Sometimes on time," and 3.4% reported they were "Never on time" (***Figure 25***). Although indicators show economic stability for most of the respondents, 50.3% of the farms fear that COVID-19 will have negative effects on their business (***Figure 26***).

Figure 24: **Has your relationship with your buyers changed since the beginning of COVID-19?[51]**
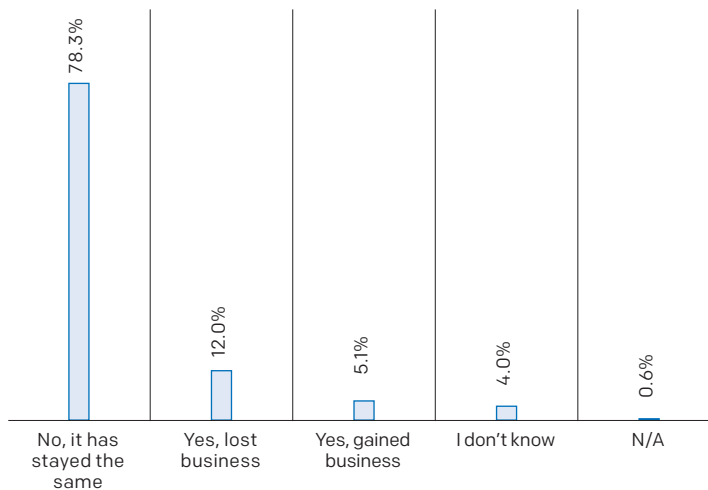
Figure 24 shows in a bar chart that 78.3% of the respondents reported having maintained their relationship with buyers unchanged and 5.1% registered increases in their client base, although 12.0% indicated having lost customers.
Source: *Palma Futuro*, ULULA

Figure 25: **In the last 6 months, were your fruit deliveries paid for on time?[52]**
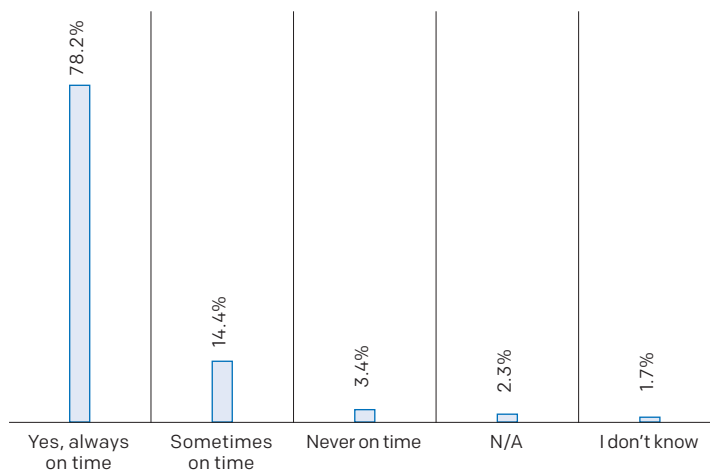
Figure 25 shows in a bar chart that 78.2% of respondents reported receiving payments always on time, while 14.4% chose the option "sometimes on time" and 3.4% the option "never on time".
Source: *Palma Futuro*, ULULA

51   One hundred and seventy-five respondents answered this question.

52   One hundred and seventy-four respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

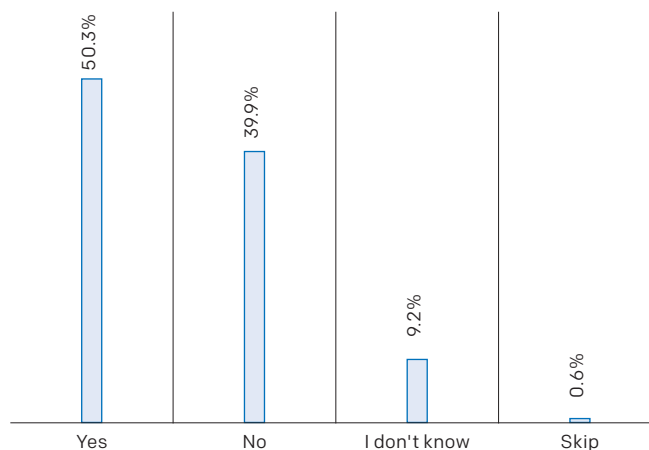*Figure 26*: **Are you afraid that COVID-19 will have negative effects on your business in the future?**[53]

Figure 26 shows in a bar chart that 50.3% of the farms feared that COVID-19 would have negative effects on their business, 39.9% reported not being afraid and 9.2% did not know.
Source: *Palma Futuro*, ULULA

Of the farms included in the survey, 93.2% reported having always paid their workers on time; 91.4% reported having paid the same amount despite the pandemic, and 5.2% reported having increased payments to workers. It is important to note that these values were self-reported by the farms surveyed, and that only 58 farms answered the questions described in *Figure 27* and *Figure 28*.

Figure 27: **Have you changed your employee payments in the previous 3 months?**[54]
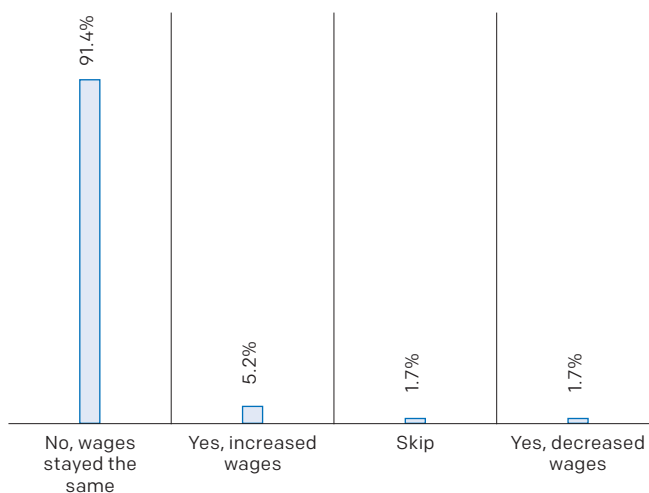
Figure 27 shows in a bar chart that 91.4% of the farms that answered the question, maintained payments to their workers in the previous 3 months. 5.2% reported increases and 1.7% reported decreases in wages.
Source: *Palma Futuro*, ULULA

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53 One hundred and seventy-three respondents answered this question.

54 Fifty-nine respondents answered this question.

Figure 28: Have you paid your workers on time in the previous 3 months?[55]
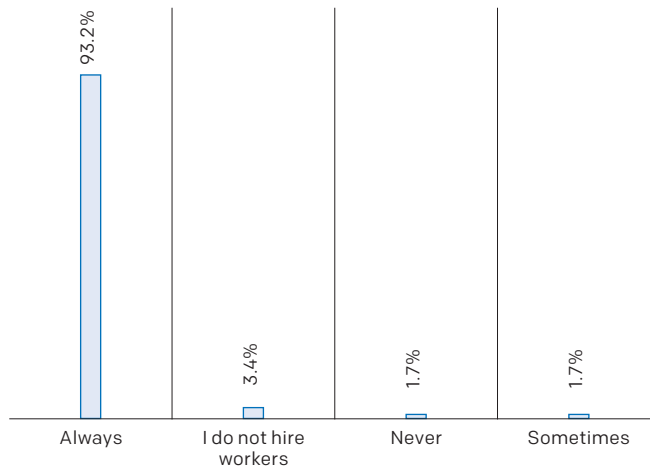

Figure 28 shows in a bar chart that 93.4% of the farms that answered that they have always paid their workers on time in the previous 3 months. 3.4% reported not having workers and 1.7% reported never paying on time or sometimes on time.
Source: *Palma Futuro*, ULULA

Of those surveyed, 58.6% reported that there is no change in rates of child labor in their communities, while 5.2% of the respondents have seen increases in the number of children working since the beginning of the pandemic. (***Figure 29***).

Figure 29: In your community, have you seen changes in the number of under 18-year-olds working since the start of COVID-19?[56]
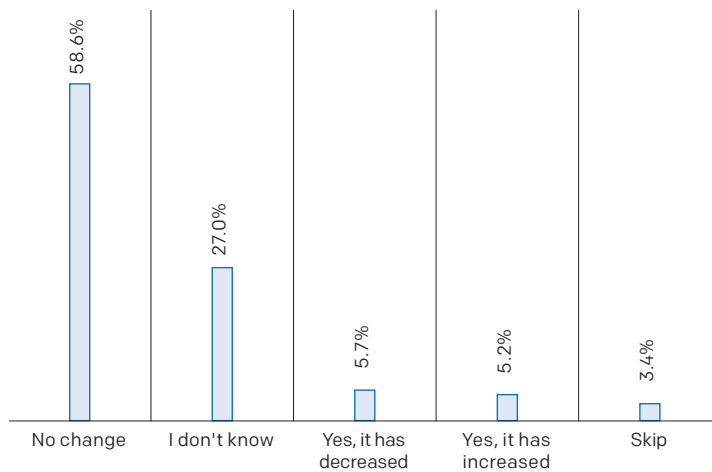
Figure 29 shows in a bar chart that 58.6% report that there is no change in people under 18 years old working in the community, while 5.2% (9 people) of the respondents have seen increases in the number of children and adolescents working since the start of COVID-19. However, 5.7% reported decreases in the number of individuals under 18 years old working, and 27% do not know.
Source: *Palma Futuro*, ULULA

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55 One hundred and seventy-three respondents answered this question.

56 One hundred and seventy-four respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

3.2.2. Health and Safety at Work

Health and safety aspects at work reveal marked differences compared to what is observed in the extraction plants surveyed. Regarding access to measures to mitigate the spread of COVID-19 in the181 farms surveyed, 22.8% reported having some supplies, but not all those required, while 5.8% do not have the appropriate supplies. While 68.4% of the respondents have appropriate supplies, about 31.6% of the farms reported not having enough elements to carry out their activities, while effectively preventing contagion (soap, drinking water, towels for single-use, and personal protective equipment).

Figure 30: Do you have the appropriate supplies to prevent contagion on farms?[57]
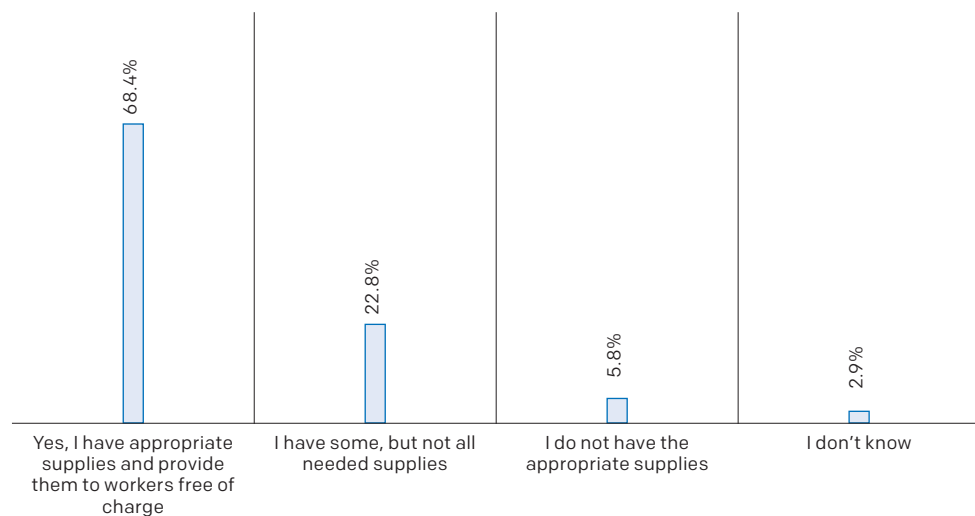
Figure 30 shows in a bar chart that 68.4% of the respondents have the appropriate implements to prevent the spread of COVID-19 (soap, drinking water, single-use towels, and personal protective equipment). 22.8% reported having some implements, but not all the required ones, while 5.8% reported not having the appropriate implements.
Source: *Palma Futuro*, ULULA

Of a subsample of 126 farms, all smaller than 50 ha, 15.1% reported not having health insurance. Although 84.9% report some type of enrollment in an entity that provides health services, 15.1% do not, accounting for a significant portion of the population. Finally, it is important to highlight that farms value the contribution and support of extraction plants in terms of COVID-19 prevention, control, and mitigation (32.6%). However, 54.1% of suppliers indicate that the support could be better and 9.3% did not receive support from the extraction plant in dealing with COVID-19.

3.2.3. Access to Information

Supplier farms were asked about the areas in which they would like to have more information. The results suggest different needs and desires among surveyed suppliers compared to those of surveyed extraction plant workers. Among the farms, 30.1% reported requiring more information on all possible options, while 17.9% and 17.3% respectively, reported requiring information regarding government aid and labor rights (***Figure 31***). In general, fruit suppliers have a significant interest in having more inputs on hand that allow them to better adapt to the consequences of the pandemic.

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57   One hundred and seventy-one respondents answered this question.

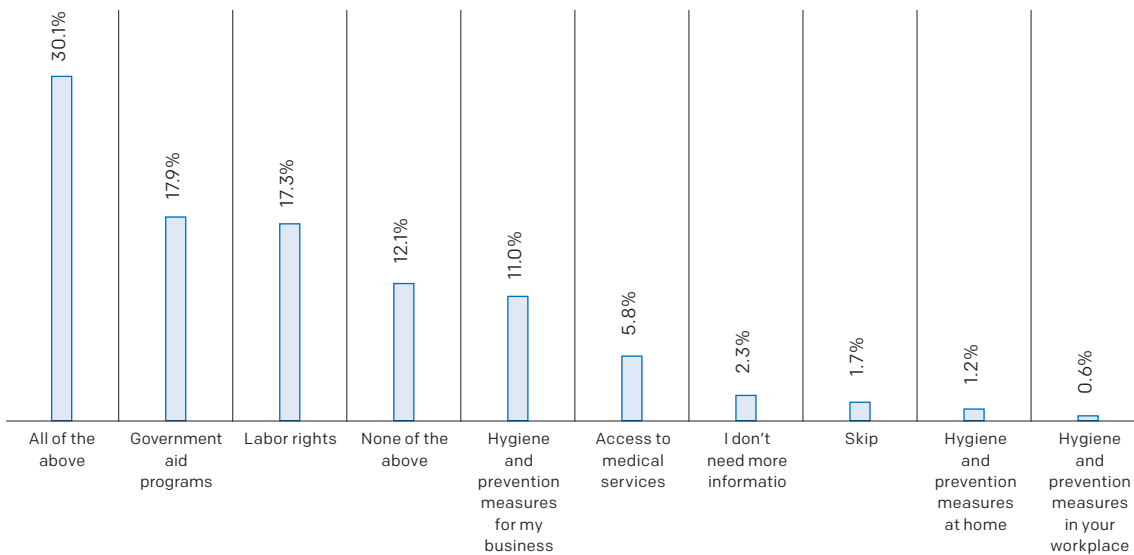*Figure 31*: **In which areas do you need more information?**[58]

Figure 31 shows in a bar chart that 30.1% of the respondents reported requiring information on all possible options (government aid, labor rights, hygiene and prevention measures for business, work and at home, and access to medical services), while 17.9% and 17.3% reported requiring information regarding government aid and information on labor rights specifically.
Source: *Palma Futuro*, ULULA

Of the farms surveyed, 85.3% have received training in hygiene or how to stay safe at work (***Figure 32***), and 73.7% have provided training to employees[59] (***Figure 33***). However, 28.1% of the respondents indicated that there is no accessible and anonymous complaints channels available to report or provide suggestions on how to manage COVID-19 on their farm (***Figure 34***).

Figure 32: **Have you received training in hygiene or how to stay safe at work during the pandemic?**[60]
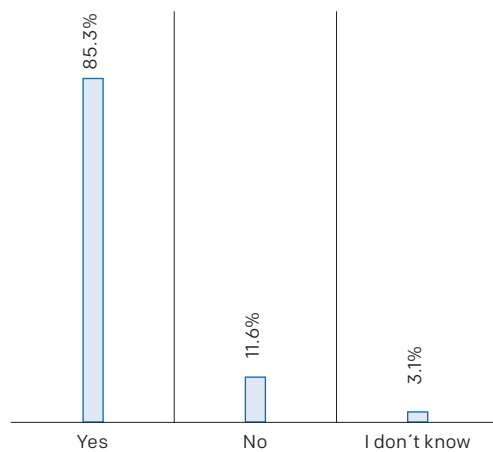
Figure 32 shows in a bar chart that 85.3% of the respondents on farms received training in hygiene or how to stay safe at work.
Source: *Palma Futuro*, ULULA

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58 One hundred and seventy-three respondents answered this question.

59 This percentage was calculated based on 57 providers who answered the question and have collaborators.

60 One hundred and twenty-nine respondents answered this question.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Figure 33: **Have you provided training in hygiene or how to stay safe at work during the pandemic?**[61]
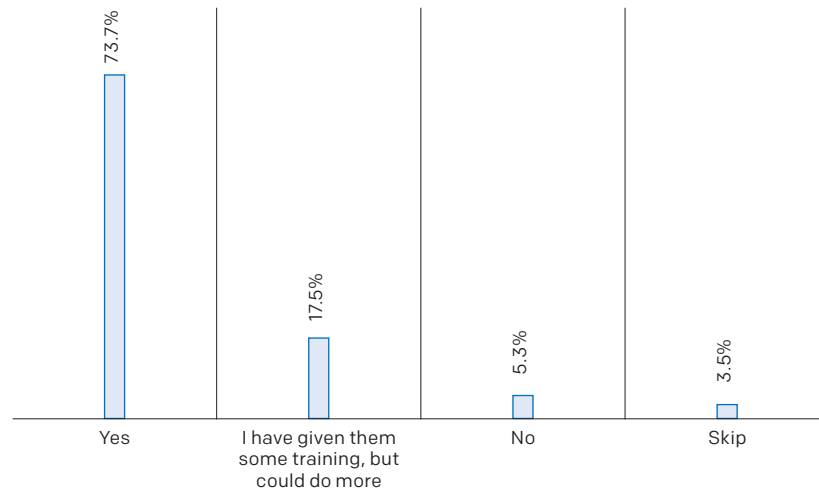

Figure 33 shows in bar charts that 73.7% of the respondents in farms have provided training in hygiene or how to stay safe at work, and 17.5% reported that, having provided training, could do more in this field.
Source: *Palma Futuro*, ULULA

Figure 34: **Is there an accessible and anonymous complaints channel to report or provide suggestions on how to manage COVID-19 on your farm?**[62]
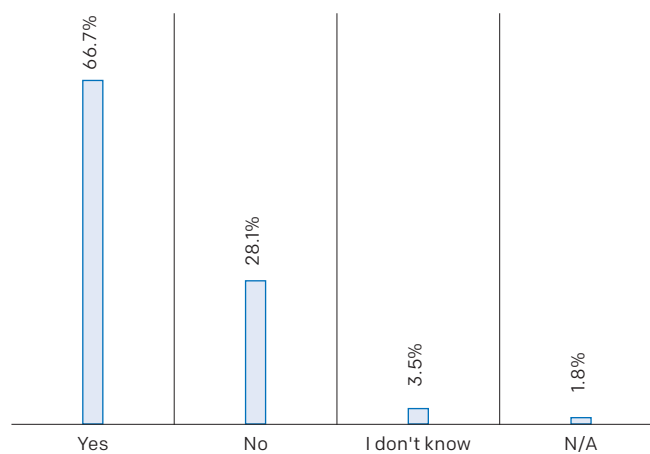
Figure 34 shows in a bar chart that, although 66.7% of the people who answered the question reported that there is an accessible and anonymous complaints channel to report suggestions regarding the management of COVID-19 on their farm, 28.1% indicated that there is no such channel and 3.5% do not know if it exists.
Source: *Palma Futuro*, ULULA

61 Fifty-seven respondents answered this question.

62 Fifty-seven respondents answered this question.

Regarding supplier farms, positive results are observed in labor-related issues, with more than 90% of the providers maintaining the type of hiring (full time, temporary, or seasonal) with their workers; and about 80% maintaining their staff. Likewise, a high rate of farms received and provided training in hygiene and how to stay safe at work during the pandemic and provided resources to prevent contagion. Economic shocks from the pandemic do not seem to have substantially affected farm conditions, although there is uncertainty regarding the future of the business.

Having analyzed the descriptive statistics of the surveys carried out by *Palma Futuro*, with the support of ULULA, a methodology based on a Vester Matrix was implemented to identify priority aspects. The following section presents the results of this prioritization, as well as the definition of potential actions that can contribute to improving conditions at extraction plants and farms, in a context in which access to information takes a crucial role in the well-being and mitigation of uncertainty in the context of the pandemic.

4. Policy Analysis: Strategic Actions to Mitigate Problems Derived from the COVID-19 Pandemic

Tools that make up the LFM were used to extract information from the data and add value to the descriptive statistics of the survey. According to ECLAC (2015), the LFM is a tool that brings a comprehensive approach to a particular problem in order to provide the inputs for the design, execution, and evaluation phases of programs or projects to address it. For the proposed analysis, the tools used are those that were incorporated in the design phase, specifically the Vester Matrix, the Problem Tree, and the Solution Tree.

These tools were selected because their joint implementation is part of a schematic process used to reach agreements in identifying the main or critical problem to be addressed, as well as how to define the objectives, goals and risks of a program or project. They also provide a logical approach to objectively identifying the incidence and relative importance of the factors involved in program definition.

In the first place, the Vester Matrix was used to identify potential causes and consequences of a problematic situation through an arrangement of rows and columns to categorize the data. For this analysis, 13 factors were selected, considering their incidence based on the descriptive analysis in Section 3, and their relationship with *Palma Futuro*. The following factors were taken into account:

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Factors associated with the economic context - Economic Crisis derived from COVID-19

- Among the extraction plant workers, 24.3% consider that their finances was the main area of their lives that was affected.
- Among the fruit suppliers, 50.3% fear that COVID-19 will have future effects on their business.

Factors associated with mental health

- Mental health was the aspect of life most severely affected by the pandemic, with 25.3% of extraction plant workers considering that COVID-19 had an impact on their mental health, and the proportion increases to 32.5% in women.

Recognition of time worked (compensation) and increased working hours

- Among the extraction plant workers, 11.9% reported not receiving payment for the additional time worked. The proportion is higher among women with 16.4%.
- Among the extraction plant workers 11.4% reported reductions in their salary.

It is important to note that these two factors may be related to issues of clarity in information between employers and workers.

Health payments

- Among the extraction plant workers, 15.9% perceived a decrease in the employers' payments to health coverage.
- Of the farms, 15.1% reported not having health insurance.

Uncertainty

- Of the extraction plants workers, 23.0% fear losing their job due to illness.
- Among the workers, 37.1% fear that the impact of COVID-19 could lead to their dismissal from the company, and 30.3% do not know if the situation could lead to their dismissal.
- Of the farms, 50.3% fear that COVID-19 will have negative effects on their business.

Access to information

- Among workers, 27.2% would like more information on government programs, while among suppliers this percentage reaches 17.9%.
- Among the workers, 17.3% would like more information on medical services.
- Among the 17.3% would like more information on labor rights, and among workers, this percentage reaches 8.8%.

Communication and relationship

- Among workers, 21% do not know if there is an accessible and anonymous complaints channel to report or provide suggestions on how to manage COVID-19 in their workplace, and 11.7% affirm that there is no such channel.
- Among suppliers, 28.1% indicate that there is no accessible and anonymous complaints channel to report or offer suggestions on how to manage COVID-19 in their workplace.
- Among suppliers, 54.1% indicate that the extraction plants' efforts in the prevention, control, and mitigation of COVID-19 could be improved.

Child labor

- Among workers, 10.4% reported that there may have been an increase in the number of children under 18 years of age working in their community since the start of the pandemic, while this percentage reached 5.2% among suppliers.

Regarding the child labor component, although the questions on the presence or not of workers under the age of 18 are not conclusive, it was decided to incorporate the factor given its relevance for *Palma Futuro*, whose objective is *to improve the implementation of SCS that promote acceptable conditions of work and reduce child labor and forced labor in the palm oil supply chains.* Thus, including this in the analysis can provide inputs about the causes of the problem in the communities, as well as feasible strategies to address child labor.

Based on these findings, the results for workers of extraction plants and suppliers were grouped to create the following categories, which, in turn, reflect the problems identified in the analysis:

P1: Economic crisis derived from COVID-19.
P2: Mental health problems derived from COVID-19.
P3: Perception of changes in compensation for time worked.
P4: Perception of reduction in health payments by the employer.
P5: Perception of increased working hours.
P6: Uncertainty due to dismissals on account of the COVID-19 crisis or illness.
P7: Limited access to information on government programs.
P8: Limited access to information on medical services.
P9: Limited access to information on labor rights.
P10:Limited communication channels between employers and workers.
P11: Limited availability of biosecurity supplies to prevent the spread of COVID-19.
P12:Limited support from extraction plants to suppliers in COVID-19 mitigation.
P13:Perception of increased child labor within the community.

Following the Vester Matrix methodology, the previously identified problems should be related based on their degree of conceptual (not statistical) causality taking into account the parameters defined in **Table 2**. An assigned rating will allow for the establishment of the intensity of the association between problems, and thus create a logical order based on their degree of dependence and influence.

Table 2. **Qualification Parameters for the Relationship between Problems**

Qualification Criteria	Definition
0	Does not cause it
1	Indirect-weak causal relationship
2	Mean causal relationship
3	Direct- Strong causal relationship

Table 2 shows the levels of causality proposed for the analysis of problems using the Vester Matrix. The value will be 0 if there is no causality, 1 if there is indirect or weak causality, 2 if it is medium, and 3 if there is direct or strong causality.
Source: *Palma Futuro*, CEPAL (2021)

In order to illustrate the previous point, the first question to complete the matrix should be the following: To what extent can the economic crisis derived from COVID-19 (P1) cause mental health problems originating from the pandemic (P2)? If it is assumed that there is a strong causal relationship, the box located in Column 2 Row 1 will have the value of 3. This exercise will be carried out iteratively until the relationships between problem n (Pn) and the problem n-1 (Pn-1) is qualified. The exercise performed is described in **Table 3**.

Once the degrees of conceptual causality between the identified problems have been defined, the next step is to add the influences and dependencies. In this sense, the sum of the rows of the matrix will indicate the problem's influence, which will be higher as the problem is identified as a potential root of other problems. On the other hand, the sum of the columns will give the dependency, which is understood as the degree to which the identified problem Pn is caused by other problems (*P*1, *P*2,...,*Pn*-1).

Table 3: Vester Matrix – Relationship of Problems Identified in the ULULA Surveys

Code	Variable	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	INFLUENCE
P1	Economic crisis derived from COVID-19	0	3	3	3	3	3	0	0	3	0	3	1	3	25
P2	Mental healt problems derived from COVID-19	0	0	0	0	0	3	0	0	0	0	0	0	0	3
P3	Perceptions of changes in the compensation of time worked	0	3	0	1	3	2	0	0	0	0	0	0	1	10
P4	Perception of reduction in healt contributions by the employer	0	2	0	0	1	1	0	0	0	0	0	0	1	5
P5	Perception of increase in wor-king hours	0	3	2	1	0	0	0	0	0	1	0	0	1	8
P6	Uncertainty due to dismissals on acount of the COVID-19 crisis illness	0	3	1	1	0	0	0	0	0	1	0	0	1	7
P7	Limited access to information on goverrnment programs	0	2	2	2	2	2	0	3	3	0	1	0	3	20
P8	Limited access to information on medical services	0	2	0	0	0	1	0	0	0	0	2	0	1	6
P9	Limited access to information on labor rights	0	1	3	3	3	3	0	1	0	3	2	1	3	23
P10	Limited communication channels between company employers and workers	0	1	0	0	2	3	3	3	3	0	0	0	3	18
P11	Limited avability of items to prevent contagion	0	2	0	0	2	0	0	0	0	0	0	0	0	4
P12	Limited avability of items to prevent contagion the spread of COVID-19	0	1	1	0	0	1	3	3	3	1	1	0	2	16
P13	Perception increasing in the child labor within the community	0	1	2	0	2	1	0	0	1	0	0	0	0	7
DEPENDENCE		0	24	14	11	18	20	6	10	13	6	9	2	19	93

Table 3 shows the values included in the Vester Matrix for each problem.
Source: *Palma Futuro*

Based on the results of the analysis, the problems can be graphed in a cartesian plane divided into four (4) quadrants according to their degree of dependence and / or influence. Each quadrant will establish the degree of importance of the problems as defined in **Table 4.**

Table 4: Interpretation of Quadrants by Type of Problem

Quadrant 1: Passive Problems Problems that have a low causal influence but have a high dependence on other problems identified. Passive problems can be understood as the consequences of other problems.	**Quadrant 2: Critical Problems** Problems that have high causality, but in turn are also rooted in other identified problems.
Quadrant 3: Indifferent Problems Problems of low causal influence and low dependence on other problems. In general, they are considered as low priority problems within the context of the analysis.	**Quadrant 4: Active Problems** Problems that have a great influence on most of the other problems, but with low dependence on other problems. These problems are fundamental, since they are considered as causes of other problems identified.

Table 4 shows the types of problems analyzed in each quadrant. Within the first quadrant, the definition of passive problems is included; quadrant 2 shows the definition of critical problems; quadrant 3 the definition of indifferent problems is included; and quadrant 4 shows the definition of active problems.
Source: *Palma Futuro*

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

The cuts of the axes that determine the quadrants will be defined by the highest value found in the rows divided by 2 (25/2), with which the vertical line that cuts the X axis is drawn, and by the highest value of the columns divided by 2 (24/2) for the construction of the horizontal line that cuts the Y axis (See Table 3 for highest values in rows and columns). The location of the problems in the cartesian plane is presented in **Figure 35**. As an example, P9, with an influence of 23 and a dependency of 13, will be located in the coordinate (23,13). The classification of problems is presented below:

- **Critical problem (core problem):** P9.
- **Active problems (causes):** P1, P7, P10 y P12.
- **Passive problems (effects):** P2, P3, P5, P6, P13.
- **Indifferent problems:** P4, P8, P11.

This classification allows for the creation of the Problem Tree as a graphical representation of causes and effects of the problems found. For the specific case of this document, the central problem was identified as *Limited access to information on labor rights*. This problem was complemented in the analysis with its specific effect, in which it is understood that limited access to this type of information can lead to its consequent non-compliance. P9 was classified as the only critical problem according to the methodology used.

Figure 35: **Classification of Problems According to their Degree of Influence and Dependence**
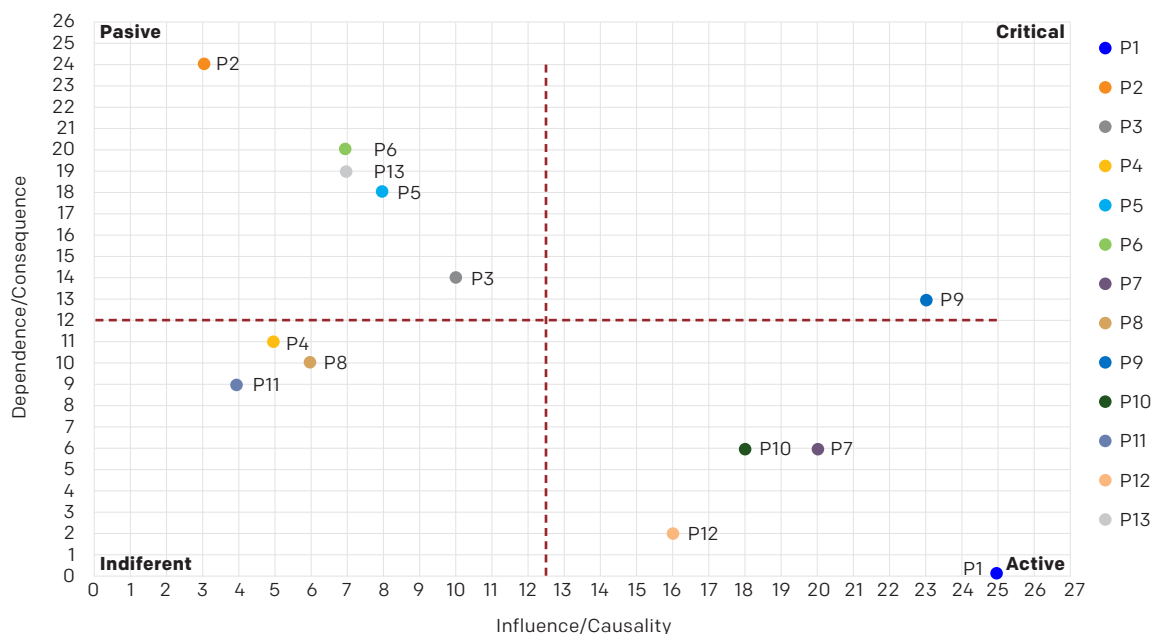
Figure 35 graphically shows, in a cartesian plane, the classification of the 13 problems analyzed within the quadrants of Table 4.
Source: *Palma Futuro*

Regarding this low level of access, the main causes or roots of the tree are considered to be the active problems corresponding to:

P1: Economic crisis derived from COVID-19.
P7: Limited access to information on government programs.
P10:Limited communication channels between company and workers.
P12: Limited support from extraction plants to suppliers in COVID-19 mitigation.

On the other hand, the consequences of the causes and the problem (tree leaves) are passive problems:

P2: Mental health problems derived from COVID-19.
P3: Perception of changes in compensation for time worked.
P5: Perception of increased working hours.
P6: Uncertainty due to dismissals on account of the COVID-19 crisis or illness.
P13:Perception of increased child labor within the community.

The graphic representation of these roots (causes) and leaves (consequences) is displayed in the Problem Tree (**Figure 36**).

Figure 36: **Problem Tree**
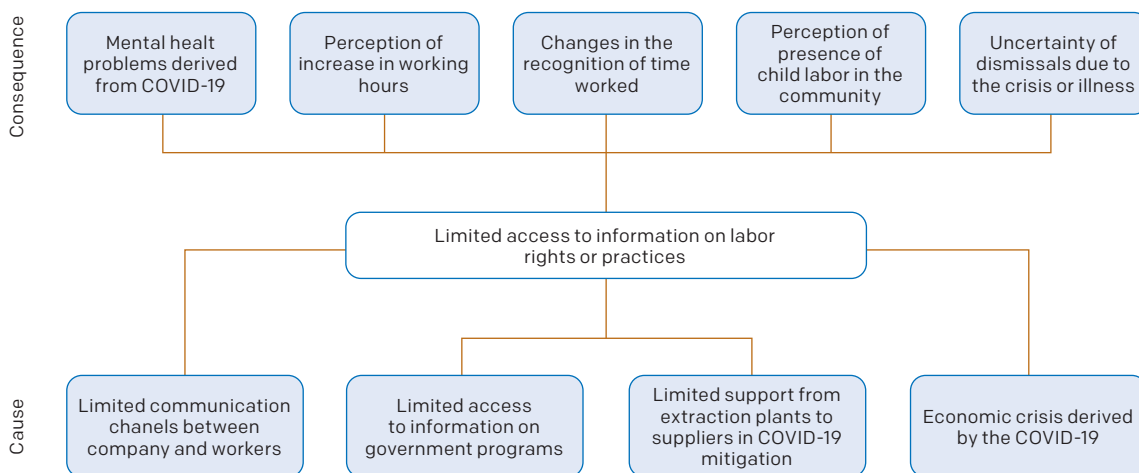
Figure 36 graphically expresses the Problem Tree which locates the causes of the central problem in the roots, the critical problem in the tree, and the consequences of the critical problem in the leaves.
Source: *Palma Futuro*

5. Social Compliance Systems as a tool for problem solving

As already mentioned, the *Limited access to information on labor rights and practices and its consequent non-compliance* was identified as the critical problem, or the central problem using the Vester Matrix methodology and the Problem Tree. Following the methodology, the next step was to define the Solution Tree, which expresses in positive terms (the solution) the problems reflected in the Problem Tree (***Figure 36***). This step is illustrated in ***Figure 37***.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

Figure 37: Solution Tree
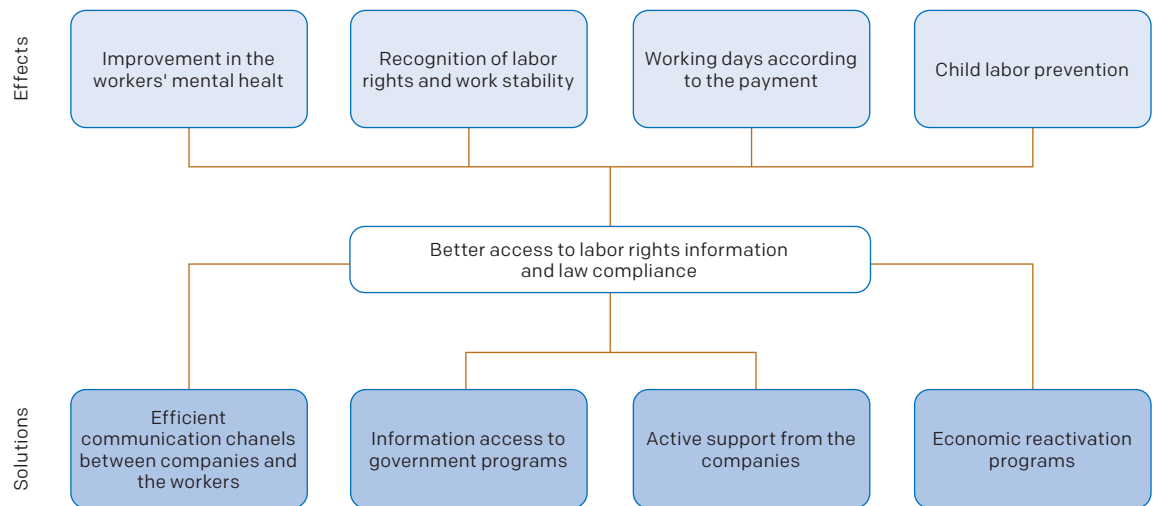
Figure 37 graphically expresses the Solutions Tree, which places the solutions proposed to the critical problem in the roots, the direct result of solving the critical problem in the stem, and the effects of solving the critical problem in the leaves.
Source: *Palma Futuro*

According to this analysis, the solution to the central problem is based on implementing measures that allow *Greater access to information on labor rights and practices and thus improve compliance*. This factor is one of the central elements of SCS. An adequate implementation of SCS requires a constant flow of information between the ''staff'' of the organizations, workers, community, and stakeholders. With this, access to clear and timely information is an element embedded in each of the components of both the Management System Process Categories and Labor Performance Elements (***Figure 38***).[63]

Several components of the Management System are based on a permanent and dynamic dialogue between all actors. It is important to emphasize that the Management System must be integrated, which means, among other things, that each component must support the correct implementation of all elements of labor performance, and thus guarantee compliance with labor standards and acceptable conditions of work.

63   See: https://sa-intl.org/programs/sa8000 and https://sa-intl.org/?fwp_search=fingerprint&s=fingerprint

Figure 38: Management Systems Process Categories and Labor Performance Elements
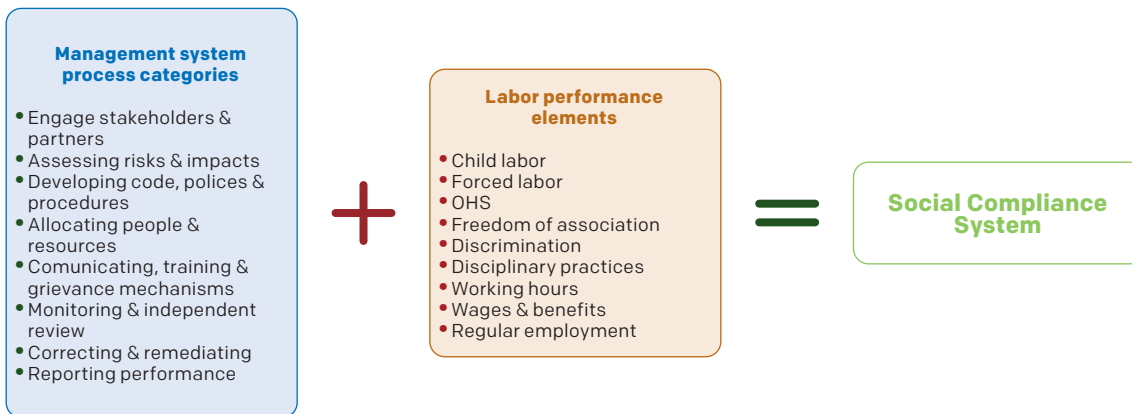
Figure 38 describes the components of the Management System (see the 8 components described in the USDOL Comply Chain) and the elements of labor performance that include child labor, forced labor, OHS, freedom of association, non-discrimination, disciplinary practices, work schedules, wages and benefits, and regular work.
Source: SAI

The first component that guarantees better access to information is *Involvement with Stakeholders*,[64] which requires organizations to constantly identify and interact with all those actors who are related to the development of their activity, or who are affected by it. In particular, it is of the utmost importance for organizations to maintain a constant dialogue with their workers, unions, and other groups that promote labor rights, and monitor agreements, commitments, and progress made within the innards of this interaction.

Another component, *Communication, Training and Complaints Mechanisms*[65] is intended to support the organization to develop permanent and effective communication channels and procedures. This includes an adequate reception and management of inquiries, complaints, claims, and suggestions that workers, the community, and other stakeholders may have regarding compliance with labor regulations and other organizational issues. It is important to monitor commitments acquired and make the answers to requests public.

The *Performance Reports*[66] component ensures that the organization periodically reports its performance to internal and external interested parties, and that it complies with all elements that guarantee decent work. Organizations generally rely on producing newsletters that are massively disseminated, creating and efficient and thorough information channel.

These three components require the commitment of the organization's senior management, as well as the design of policies, processes, and procedures to be implemented, evaluated and provided with continued feedback. There is also a need for the design of strategies to allow effective and constant communication between stakeholders, and a permanent effort to keep communication channels open, both within organizations, and with external stakeholders.

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64   See: https://www.dol.gov/ilab/complychain/

65   Idem.

66   Idem.

Labor Conditions in the Palm Oil Sector: Risks and Proposals in the Context of COVID-19 in Colombia and Ecuador

6. Conclusions

This technical document shows that, in the context of a tumultuous pandemic economy, employers in the palm industry managed to maintain working conditions of a large part of their workforce, they were able to create protocols to promote safe and secure work environments, preserving the well-being of supply chain actors, particularly supplying farms.

Results of the descriptive analysis show the capacity of extraction plants and suppliers to adapt to the shock derived from the pandemic. Most workers surveyed reported having received training in hygiene and safety at work and indicated that they felt safe thanks to measures taken by the companies to mitigate the impact of COVID-19. In labor matters, more than 80% of the survey respondents reported having received their payments on time and keeping their contracts unchanged. The foregoing accounts for companies' efforts to maintain the conditions of their workers in a crisis scenario.

More than 90% of the farms reported that they maintained the same type of contract with their workers, with 5.2% saying that they had increased payments to their employees. Businesses maintained their normal trend in terms of sales, although there has been a loss of supplier customers and a generalized uncertainty regarding business future. A large group of surveyed extraction plant workers made the same observation. Finally, about 85% of the suppliers reported having received training in hygiene or how to stay safe at work during the pandemic by palm nuclei (*núcleos palmeros*), and 74% replicated this training inside their farm.

Finally, the pandemic also revealed opportunities for improvement in communications. *Palma Futuro*'s analysis identified seven of the thirteen most critical aspects extracted from the survey, as associated with access to information. The analysis conducted using the Vester Matrix identified the need to establish greater access to information on labor rights and practices. This factor is aligned with *Palma Futuro*'s central purpose of improving SCS implementation to promote acceptable conditions of work and prevent child labor and forced labor in the palm oil supply chain. Implementing SCS can boost communication regarding rights and labor practices. It has the potential to have a positive impact on workers' safety, their mental health, reinforce compliance with regulations, and improve the company management and performance systems, guaranteeing efficient and socially sustainable production.

Exhibits

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