

December 2017

# Managing deforestation risks

**Analysis of  
respondent companies  
to CDP's forests  
program**



Prepared for:



# Contents

<b>Executive Summary .....</b>	<b>03</b>
<b>Introduction.....</b>	<b>06</b>
<b>Methodology .....</b>	<b>08</b>
<b>Summary of Analyzed Companies .....</b>	<b>12</b>
<b>Risks and opportunities .....</b>	<b>16</b>
<b>Strategies .....</b>	<b>32</b>
<b>Monitoring and Traceability .....</b>	<b>51</b>
<b>Conclusions and recommendations.....</b>	<b>59</b>
<b>Annex I – Scoring Methodology.....</b>	<b>60</b>
<b>Annex II – Companies’ Score.....</b>	<b>66</b>
<b>Annex III – Questions Assessed.....</b>	<b>68</b>

# Executive Summary

**T**his report is the result of a partnership between FEBRABAN and CDP to integrate environmental information into business decision making and policies.

Recognizing CDP's experience in working with the market forces, FEBRABAN has commissioned an analysis on deforestation risks based on information reported to CDP by national and international companies, backed by the participation of over 6000 corporations, 800 institutional investors, and 500 Governments from around the world.

The analysis is based on the responses of 70 companies to the CDP's 2016 Forests Program that reported the acquisition of commodities from the following sectors in Brazil: cattle, forest products, soybean and/or Palm oil. This investor-led program invites public organizations to disclose information through a standardized questionnaire on how they manage their direct and indirect deforestation risks. From our sample of 70 companies, two subsamples were used to supplement the evaluation: one considering only companies with physical operations in Brazil (46 companies), and another representing a selection of 22 companies for further qualitative analysis of their answers.

The following tables present highlights of the analysis, which help to summarize the situation of the companies evaluated in relation to the following aspects covered in the questionnaire: risks and opportunities, strategies, and monitoring and traceability; followed by a summary of recommendations for the financial sector.



## RISKS AND OPPORTUNITIES

- ▲ The deforestation risks of most companies with operations in Brazil are already integrated into a comprehensive, company-wide risk assessment process.
- ▲ These companies experienced more derivative financial impacts of deforestation in the last 5 years than the global average<sup>1</sup>
- ▲ Most companies reporting a greater reputational impact are those involved with cattle products.
- ▲ In the analysis, all value chains reported physical impacts from deforestation.
- ▲ The key impacts reported were: higher operational costs, image damages, and supply chain disruption.
- ▲ The most cited opportunities were: increased brand value and the increasing capacity of sustainable commodity markets.

## STRATEGIES

- ▲ Most companies with operations in Brazil already has some sort of commitment to reduce deforestation<sup>2</sup>. “legality” and “zero deforestation” are Among the most-cited criteria for this.
- ▲ The forest products and palm oil chains have the highest percentage of certified products.
- ▲ Almost all companies have some kind of action to engage with suppliers to produce sustainable raw materials.
- ▲ However, these actions are not taken up across the whole supply chain, engaging, at most, only the first link of the chain and a specific group of suppliers.
- ▲ Most representative engagement actions are based on:
  - Promote the implementation of certification systems; and
  - gathering environmental and social indicators.

<sup>1</sup> 59% of the companies with operations in Brazil, 40% of the companies with economic relationship to Brazil and 33% of the global sample.

<sup>2</sup> 89% of the companies with operations in Brazil, and 70% of the global sample.

## MONITORING AND TRACEABILITY

- ▲ Almost all companies with operations in Brazil already has a system to monitor and track their produced and/or consumed products.
- ▲ However, as the percentage of produced and/or consumed products monitored varies widely, the level of traceability throughout the chain also varies.
- ▲ In the supply chain of cattle products, most companies presented a robust system, but with geographical and traceability constraints.
- ▲ Monitoring and traceability initiatives of soy products include partnerships with the third sector.
- ▲ In the case of forest products and palm oil, there is a clear orientation towards the adoption of market-recognized certifications.

## RECOMMENDATIONS TO THE FINANCIAL SECTOR

- ▲ As companies with operations in Brazil are more susceptible to financial impacts from deforestation than the others, these should be an element in the risk assessments for financial institutions.
- ▲ As monitoring systems adopted by companies vary according to their supply chain, their link of operations, and the size and stage of maturation of their sustainability practices, a case-by-case assessment is still needed.
- ▲ Risk assessment should prioritize companies operating in the cattle and soy supply chains.
- ▲ In monitoring, special attention should be given to geographical constraints and extension, the percentage of produced/purchased products, the percentage of engaged suppliers, and links of the chains involved in this.

# Introduction

**P**ublic Opinion now considers deforestation an unacceptable practice that translates itself into physical, reputational, and regulatory risks for many different companies and for the banks that finance them. This is because forests have the potential to mitigate at least one-third of the emissions reduction necessary to achieve a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels. They also retain a still underrated natural capital, including the various ecosystem services, such as the supply of raw materials, water, climate regulation, material cycling, among many others.<sup>3</sup>

As market trends are moving towards greater traceability, transparency and increased productivity in the face of scarce natural resources, combining production and conservation are crucial to Brazil's competitive profile.

A growing number of investors are setting investment and financing policies to promote deforestation risk management. In 2017, 380 institutional investors with assets of US\$29 trillion asked more than 500 companies to disclose how they are managing their direct and indirect posed by deforestation through CDP. In 2015, the world's largest sovereign wealth fund, Norwegian Government Pensions Fund Global, dropped 11 companies from their portfolio over deforestation concerns.

For putting stress on forests, livestock products, soybeans, palm oil and forest products are globally considered forest-risk commodities and have been the subject of commitments and global policies to combat deforestation. In 2016, for example, 140 global corporations have reported to CDP on commitments to reduce or eliminate deforestation and forest degradation from their supply chains.

---

<sup>3</sup> IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

There is also a growing understanding by the market that companies are co-responsible for their value chain and about the role of diligence of financial institutions in relation to their financing activities, as well as their fiduciary duty in integrating environmental risks in their decision-making processes. The best-known example in this sense is the Financial Stability Board's Task Force on Climate-related Financial Disclosures; it has recognized climate risk management as a fiduciary duty and that climate change impacts natural capital and has financial implications for various economic activities.

Thus, the strategic role of banks is to promote a model of development that enhances the natural capital by combining production and a responsible use of natural resources.

Since agribusiness accounts for 25% of Brazil's GDP and considering the importance of this activity to the credit portfolio of public and private banks, risk of deforestation management together with increased productivity in this sector will be crucial to ensure the continuity of businesses and to maintain their competitiveness in the short, medium and long-term.



# Methodology

**T**hree samples were selected based on responses from 187 companies which provided unique responses to CDP in 2016 as part of CDP's investors-led Forests Program:

**Sample of 70 companies** – companies that reported purchases and/or operations in Brazil involving at least one of the four commodities considered in this report (cattle products, forest products, soy and palm oil); this sample is used for a quantitative analysis;

**Subsample of 46 companies** – this is a cut from sample of 70, whereas only those with physical operations in Brazil are included; it complements the quantitative analysis; and

**A subsample of 22 companies** – this is a cut from the Sample of 46, designed to complement the qualitative analysis.





All companies contained in each of these samples are listed below:

## Sample of 70 companies

- ▲ Agropalma
- ▲ Ahlstrom Corporation
- ▲ Ajinomoto
- ▲ ADM
- ▲ Associated British Foods
- ▲ Avon
- ▲ Boots UK
- ▲ Brambles
- ▲ Bunge
- ▲ Cargill
- ▲ Carrefour
- ▲ Colgate Palmolive
- ▲ Crest Nicholson
- ▲ Danone
- ▲ Domtar Corporation
- ▲ DS Smith
- ▲ Empresas CMPC
- ▲ Fibria
- ▲ General Mills
- ▲ Grupo André Maggi
- ▲ Grupo Bimbo
- ▲ Grupo Herdez
- ▲ Herman Miller
- ▲ Home Retail Group
- ▲ Inditex
- ▲ International Paper
- ▲ Itochu Corporation
- ▲ Sainsbury
- ▲ JBS
- ▲ Jerónimo Martins
- ▲ Johnson & Johnson
- ▲ Kellogg Company
- ▲ Kimberly-Clark Corporation
- ▲ Kimberly-Clark de México
- ▲ Klabin
- ▲ Lojas Renner
- ▲ L'Oréal
- ▲ **Marfrig Global Foods**
- ▲ Mars
- ▲ Marubeni Corporation
- ▲ McDonald's Corporation
- ▲ Minerva Foods
- ▲ Mondi
- ▲ Multi-Color NACPG
- ▲ N Brown Group
- ▲ Natura
- ▲ **Nestlé**
- ▲ Nippon Paper Industries
- ▲ Oji Holdings Corporation
- ▲ Orkla ASA
- ▲ PepsiCo
- ▲ Reckitt Benckiser
- ▲ Saint-Gobain
- ▲ Sappi
- ▲ Sekisui Chemical
- ▲ Shiseido
- ▲ Skanska AB
- ▲ SLC Agrícola
- ▲ Smurfit Kappa Group
- ▲ Sofidel
- ▲ SWM
- ▲ Tesco
- ▲ Tetra Pak
- ▲ Toyo Seikan Group
- ▲ Travis Perkins
- ▲ **Unilever**
- ▲ Wesfarmers
- ▲ WestRock Company
- ▲ Williams-Sonoma
- ▲ Woolworths Holdings

## Subsample of 46 companies

- |                            |                               |
|----------------------------|-------------------------------|
| ▲ Agropalma                | ▲ Kimberly-Clark Corporation  |
| ▲ Ahlstrom Corporation     | ▲ Klabin                      |
| ▲ Ajinomoto                | ▲ Lojas Renner                |
| ▲ ADM                      | ▲ L'Oréal                     |
| ▲ Associated British Foods | ▲ <b>Marfrig Global Foods</b> |
| ▲ Avon                     | ▲ Mars                        |
| ▲ Brambles                 | ▲ Marubeni Corporation        |
| ▲ Bunge                    | ▲ McDonald's Corporation      |
| ▲ Cargill                  | ▲ Minerva Foods               |
| ▲ Carrefour                | ▲ Natura                      |
| ▲ Colgate Palmolive        | ▲ <b>Nestlé</b>               |
| ▲ Danone                   | ▲ Nippon Paper Industries     |
| ▲ Empresas CMPC            | ▲ Oji Holdings Corporation    |
| ▲ Fibria                   | ▲ PepsiCo                     |
| ▲ General Mills            | ▲ Reckitt Benckiser           |
| ▲ Grupo André Maggi        | ▲ Saint-Gobain                |
| ▲ Grupo Bimbo              | ▲ Sappi                       |
| ▲ Herman Miller            | ▲ SLC Agrícola                |
| ▲ Inditex                  | ▲ Smurfit Kappa Group         |
| ▲ International Paper      | ▲ SWM                         |
| ▲ JBS                      | ▲ Tetra Pak                   |
| ▲ Johnson & Johnson        | ▲ <b>Unilever</b>             |
| ▲ Kellogg Company          | ▲ WestRock Company            |

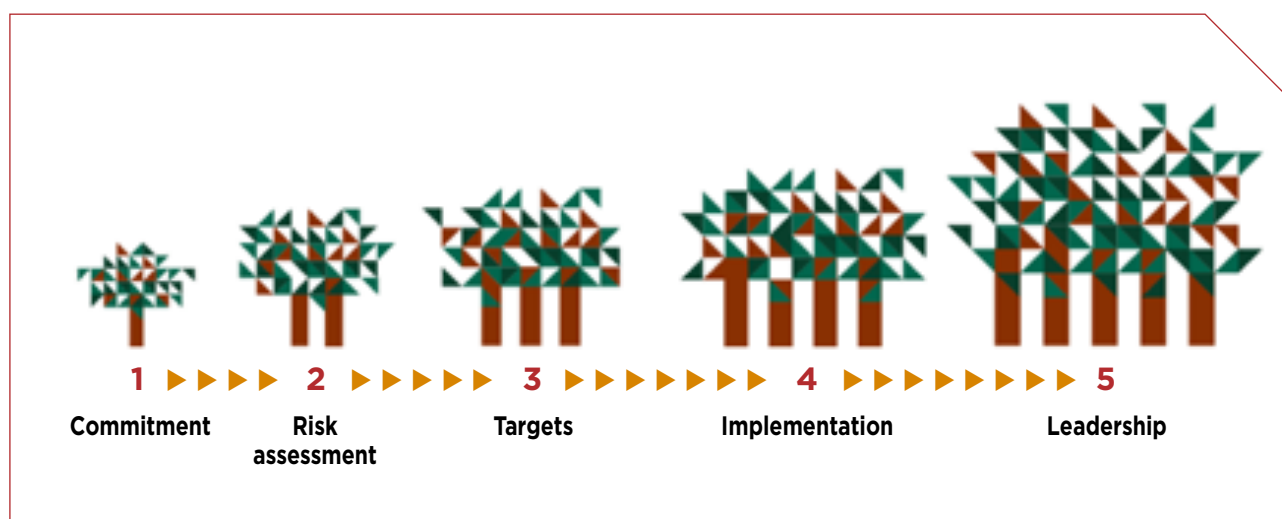
## Subsample of 22 companies

- |                             |                               |
|-----------------------------|-------------------------------|
| ▲ Agropalma                 | ▲ Johnson & Johnson           |
| ▲ Avon                      | ▲ Kimberly Clark Corporation  |
| ▲ ADM                       | ▲ Klabin                      |
| ▲ Amaggi                    | ▲ L'Oreal                     |
| ▲ Bunge                     | ▲ <b>Marfrig Global Foods</b> |
| ▲ Cargil                    | ▲ Minerva                     |
| ▲ Carrefour                 | ▲ Natura                      |
| ▲ Colgate Palmolive Company | ▲ <b>Nestlé</b>               |
| ▲ Danone                    | ▲ SLC Agrícola                |
| ▲ Fibria                    | ▲ Tetra Pak                   |
| ▲ JBS                       | ▲ <b>Unilever</b>             |

The goal of the qualitative analysis (Sample of 22 Companies) was to obtain additional information to assess the stage of direct and indirect deforestation risks management maturity of Brazilian companies.

Three global companies identified as A-scores in accordance with the CDP scoring methodology were defined as benchmarks: Marfrig, Nestlé, and Unilever. The A-score is the leadership level scoring of a company's journey across the aspects shown in Figure 1 below:

**Fig. 1 – Company's journey towards maturity and leadership according to CDP's scoring methodology**



Annex 1 of this document details CDP's scoring methodology for its Forests program. Annex 2 lists the companies' scores for each reported commodity.

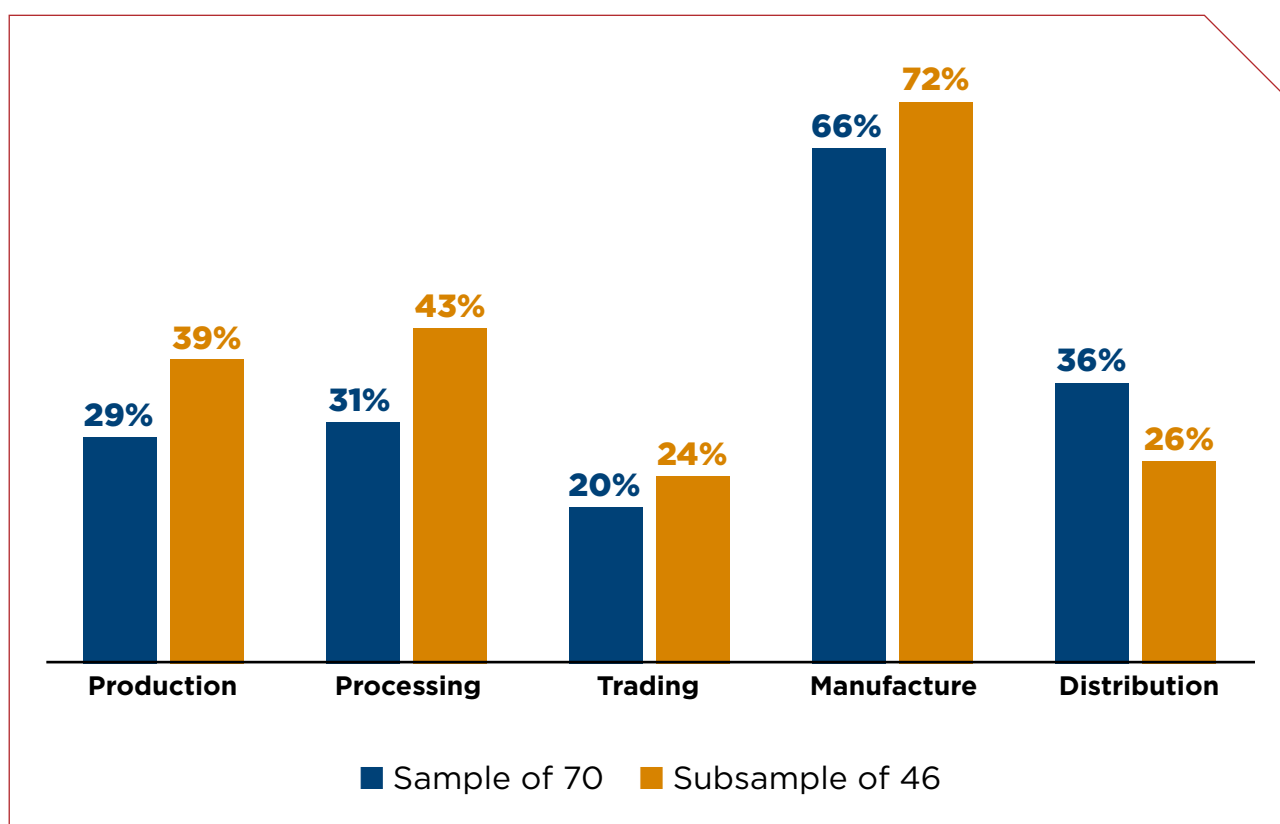
Having in mind the specific features of each sector, it is important to note that CDP data are stratified by commodity and that in most cases companies report more than one commodity, which is why in many cases the percentages do not sum up to 100%. Annex 3 lists the items from the CDP 2016 Forests questionnaire that were used in this study, as well as the detail of stratification used in each one of these questions.

# Summary of Analyzed Companies

## General Context

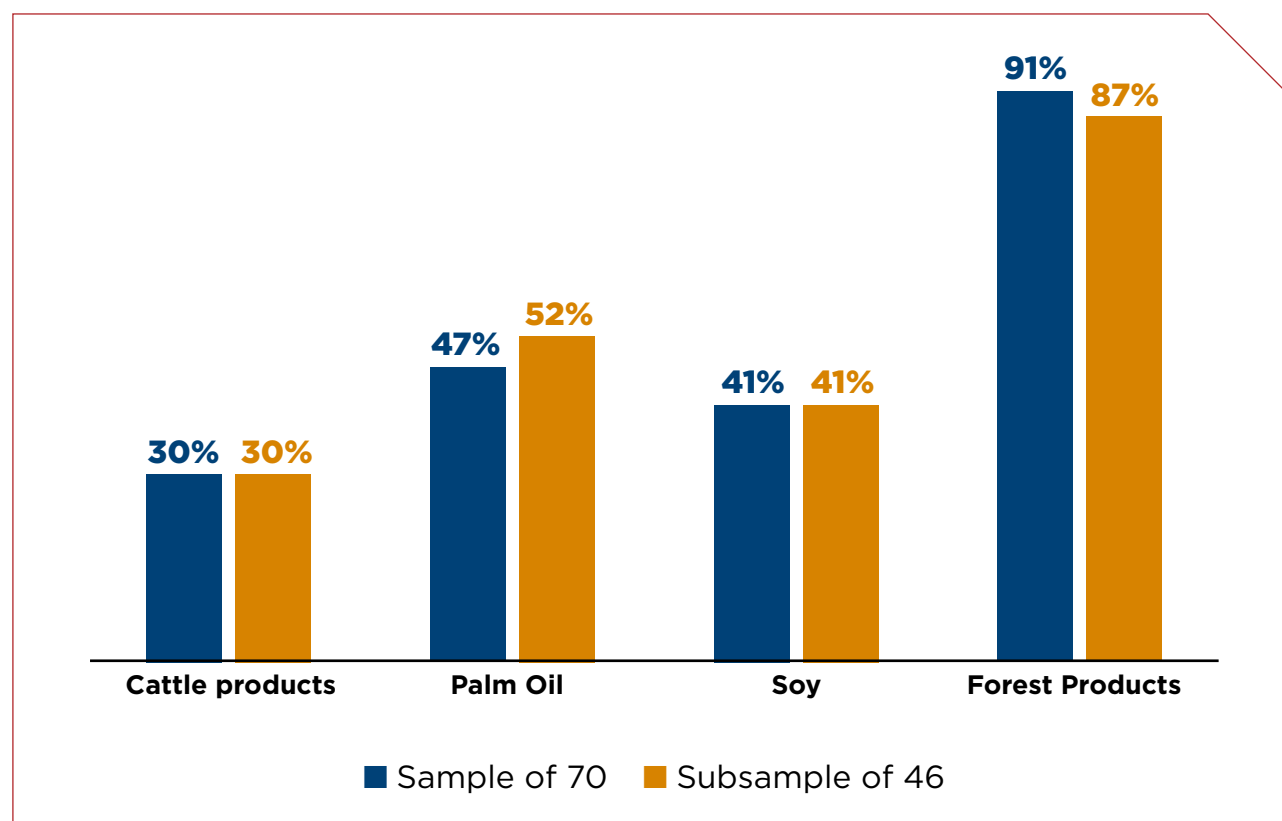
Most companies (66%) from de Sample of 70 are manufacturers of products containing one or more forest-risk commodities. The other companies operate in retailing or distribution (36%), processing (31%) and production (29%); trading being the less significant (20%). The main difference in relation to the sample that contains only companies with physical operations in Brazil is that, in the latter, there is a greater number of processing (43%) and production (39%) companies, although manufacture (72%) still is the best-represented class.

**Chart 1 – Respondents by value-chain link**



Most companies of the Sample of 70 reported purchases or operations with forest products (91%), followed by palm oil (47%), soy (41%) and cattle products (30%). It should be noted that companies may report to more than one product. As demonstrated in the graph below, the sample of 46 companies followed the same trend.

**Chart 2 – Respondents by forest-risk commodities**

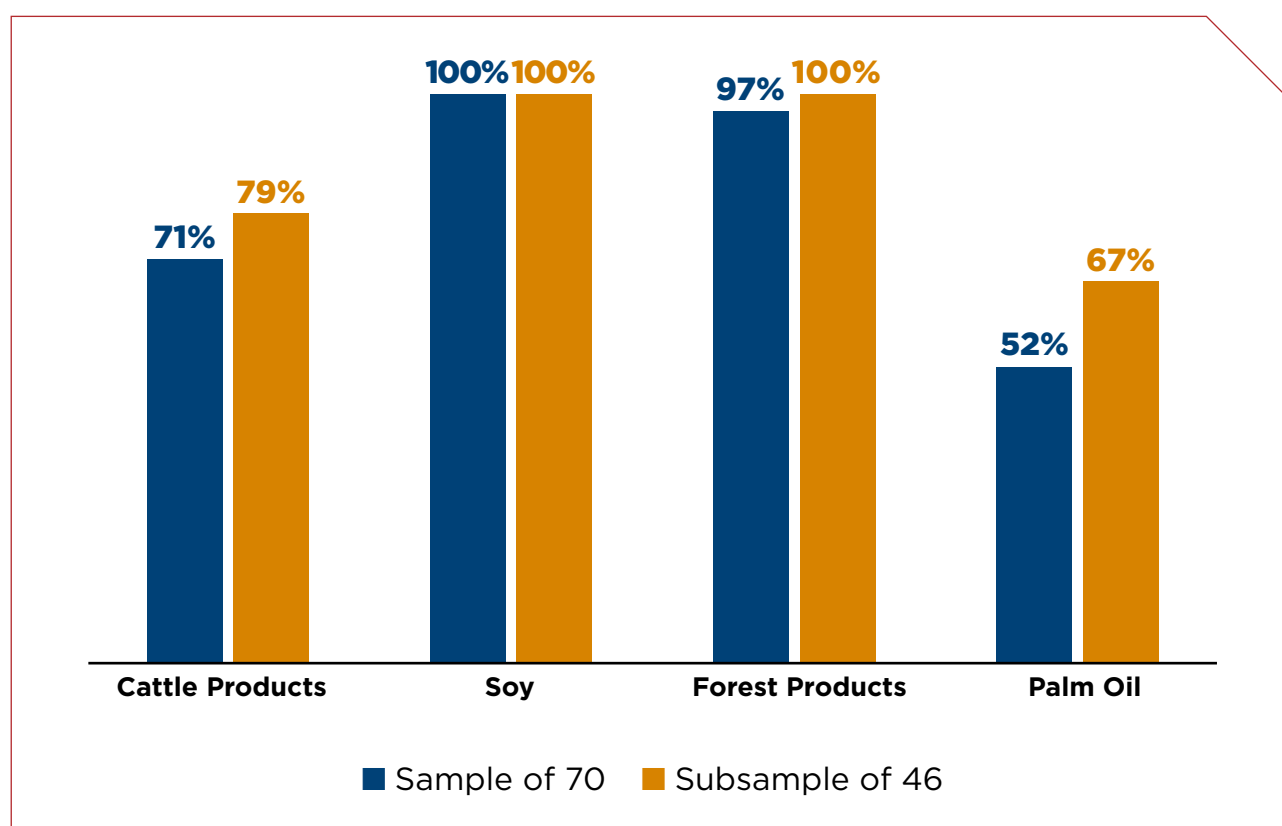


## Map of Commodities

As the sample contains companies with physical operations in Brazil or with reported purchases of commodities from Brazil, naturally the country stands out as the main supplier of raw material, but other key players in the international trade of commodities are also quoted.

In relation to cattle products, 71% of respondents pointed Brazil as the country of origin of their supply, followed by the United States (43%). In the case of soy, both samples indicated Brazil as the country of its origin for 100% of respondents, followed by India and Argentina (50%). In the case of forest products, 97% of companies in the sample of 70, and 100% in the sample of 46 reported that their raw materials come from Brazil, followed by the United States (70%) and Canada (59%). The countries of Southwest Asia dominate the market of palm oil, Indonesia is the source for 100% of respondents and Malaysia for 94%. Brazil is indicated only by 52% of companies as a source of this raw material.

**Chart 3 – Companies that reported purchase and/or production of commodities from Brazil**



The percentage of companies reporting that more than half of their revenue depends on the four forest-risk commodities is higher among respondents of forest products (33%); cattle products (14%), palm oil (13%) and soy (11%).

To manage the environmental and social risks associated with the production of these commodities, we have been working to lead the industry towards a multi-stakeholder platform and transformational change in the practices of production and procurement. As Vice President of the Sustainability Committee of the Consumer Goods Forum and a founding member of the Tropical Forest Alliance, we work with value chain strategies, using sustainable purchasing guides, regional actions, and international policies. We are running our Unilever Sustainable Living Plan and the Unilever Sustainable Agriculture Code. Each product has its own procurement strategy.

#### **Unilever**

Excerpt from the company's response to CDP's 2016 Forests Program

On May 7, 2015, ADM announced its new Commitment to No Deforestation and to build traceable and transparent agricultural supply chains that protect forests worldwide. The commitment includes provisions related to no deforestation, no expansion on peat and no exploitation with a focus on palm and soy supply chains.

#### **ADM**

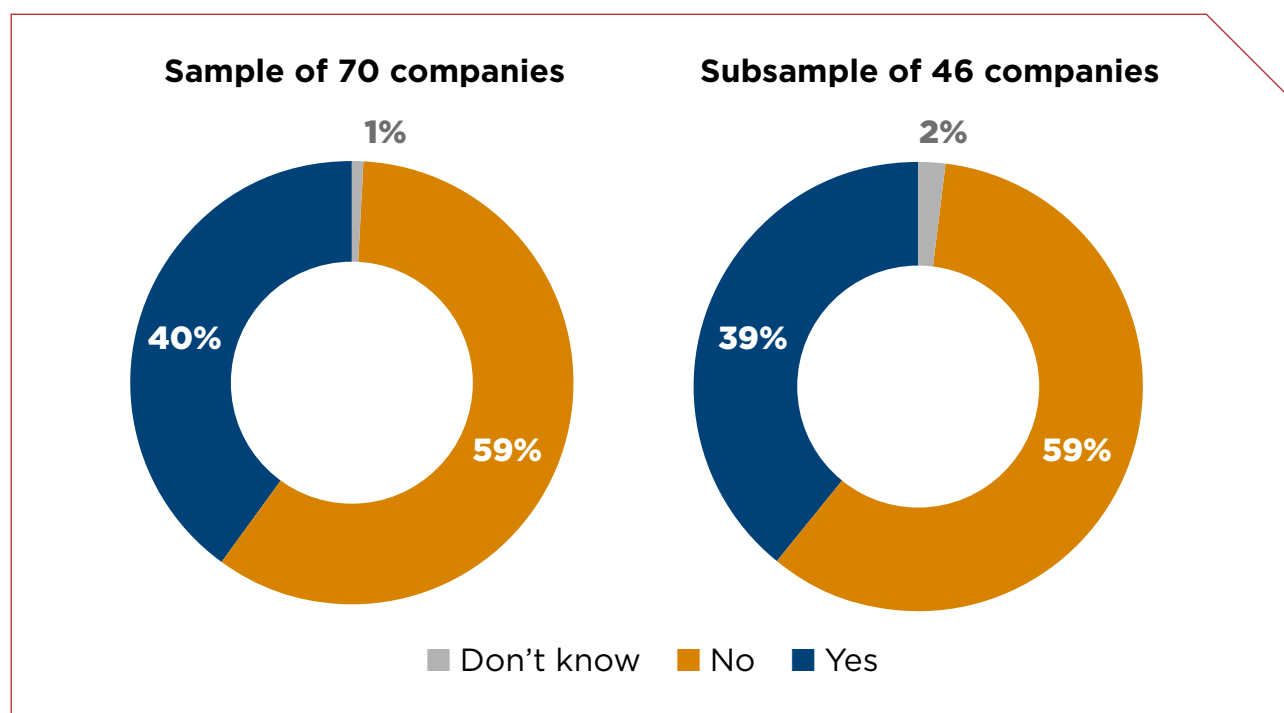
Excerpt from the company's response to CDP's 2016 Forests Program

# Risks and opportunities

## Impacts of deforestation

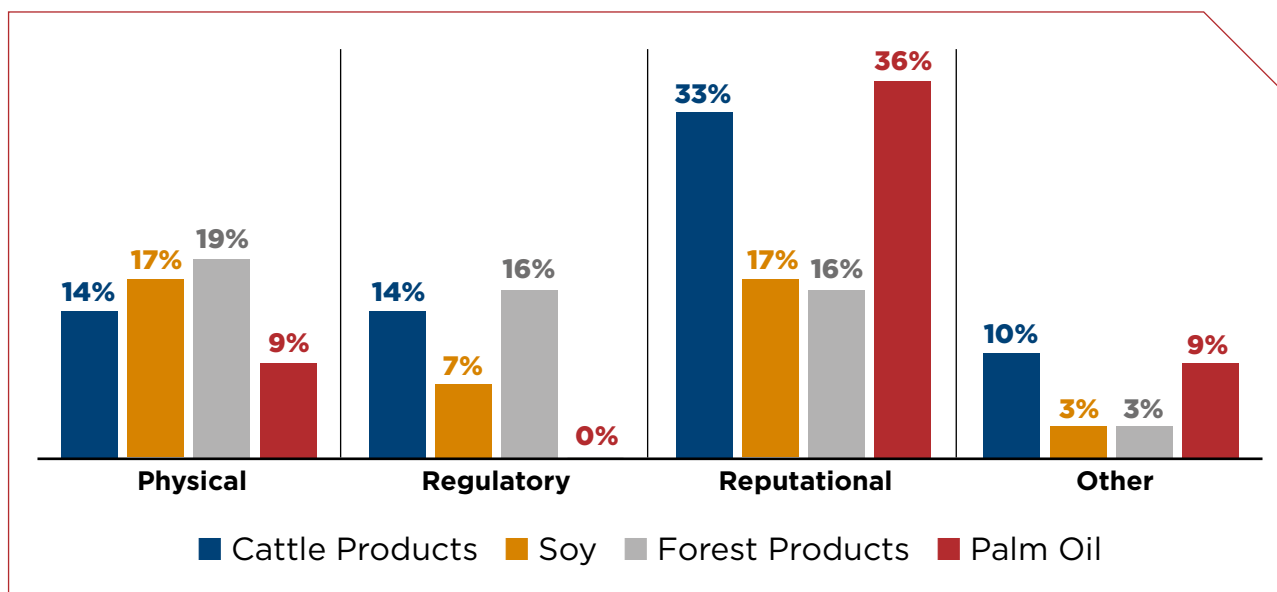
40% of the 70 companies analyzed reported some financial impacts related to deforestation. This percentage reaches 59% when only the 46 companies with physical operations in Brazil are considered. Whereas only 30% of the aggregate sample reported some financial impact related to deforestation, companies with physical operations in Brazil are significantly more exposed to these impacts.

**Chart 4 – Companies that reported financial impacts related to deforestation in the past five years**

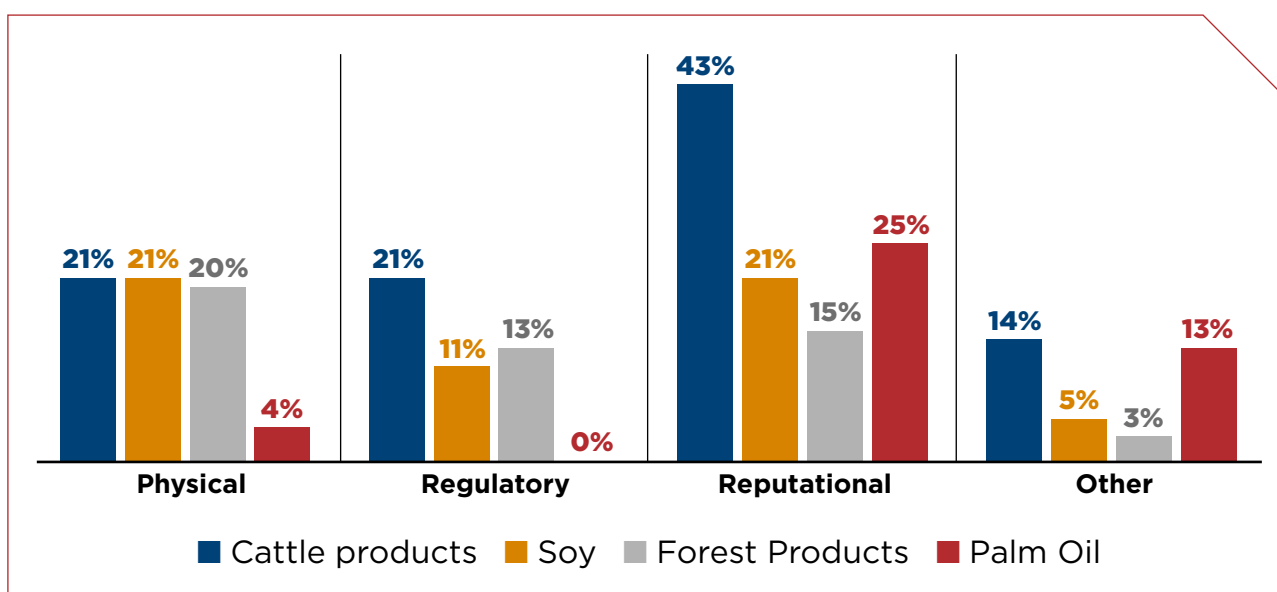


When considering the types of deforestation risks which resulted in some financial impact on both cattle products and palm oil businesses, the most significant was the reputational risk: 33% and 36% of the companies of these sectors, respectively. In the case of soy, physical and reputational risks presented equal importance (17%); and in the case of forest products, physical risks were the most significant (19%).



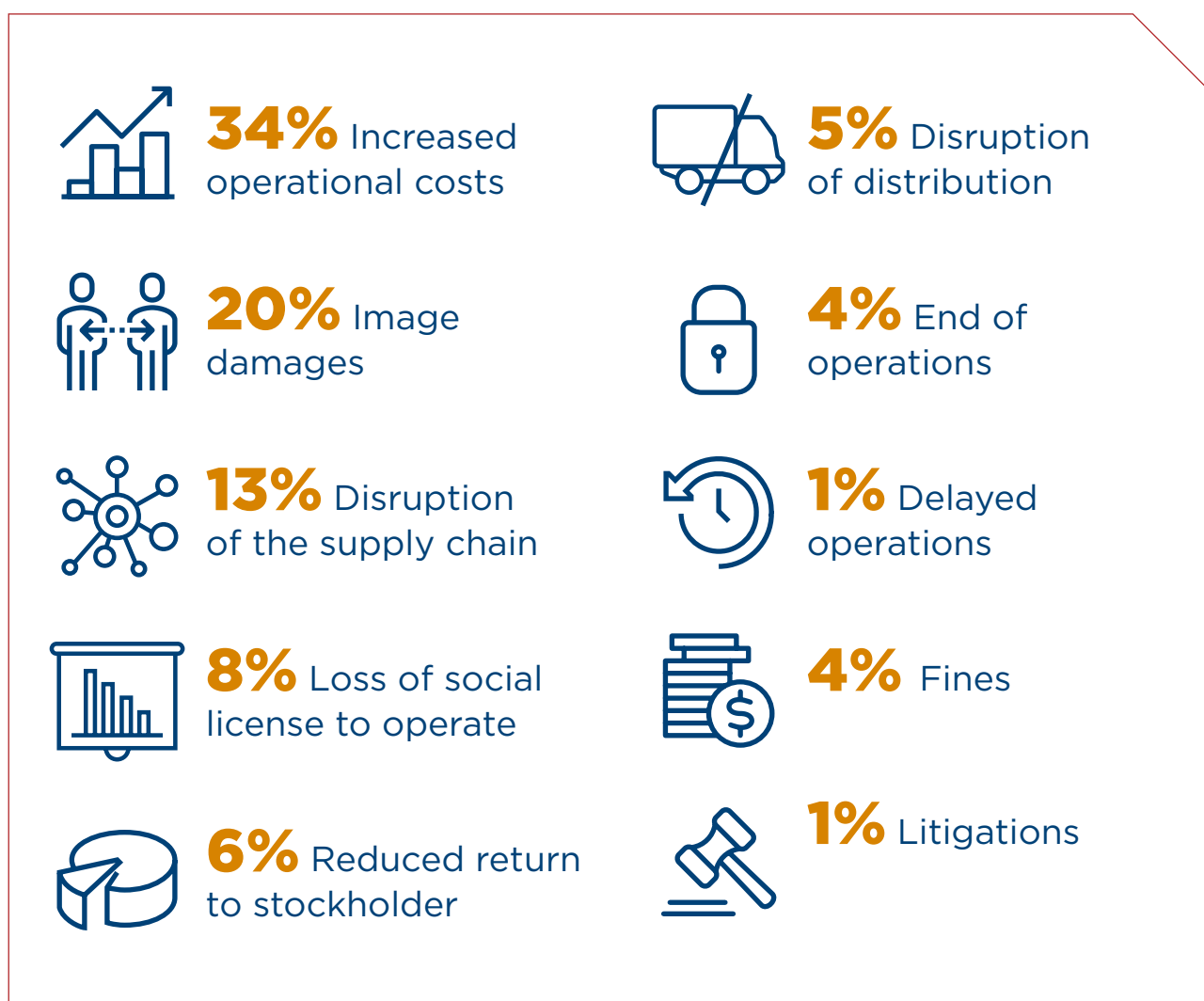
**Chart 5 – Risks leading to financial impacts (sample of 70)**

Contrasting these with the percentages of presented by the sub-sample of companies with physical operations in Brazil, a larger number of companies in the sector of cattle products (43%) have felt reputational impacts, and that regulatory and physical issues have also become important in the sector, although to a lesser proportion. In respect to soy, physical and reputational risks are still significant (21%). The main change occurs in the palm oil sector: as its operations are more modest in Brazil, companies operating in this sector and that have physical operations in Brazil are less exposed to reputational risks.

**Chart 6 – Risks leading to financial impacts (subsample of 46)**

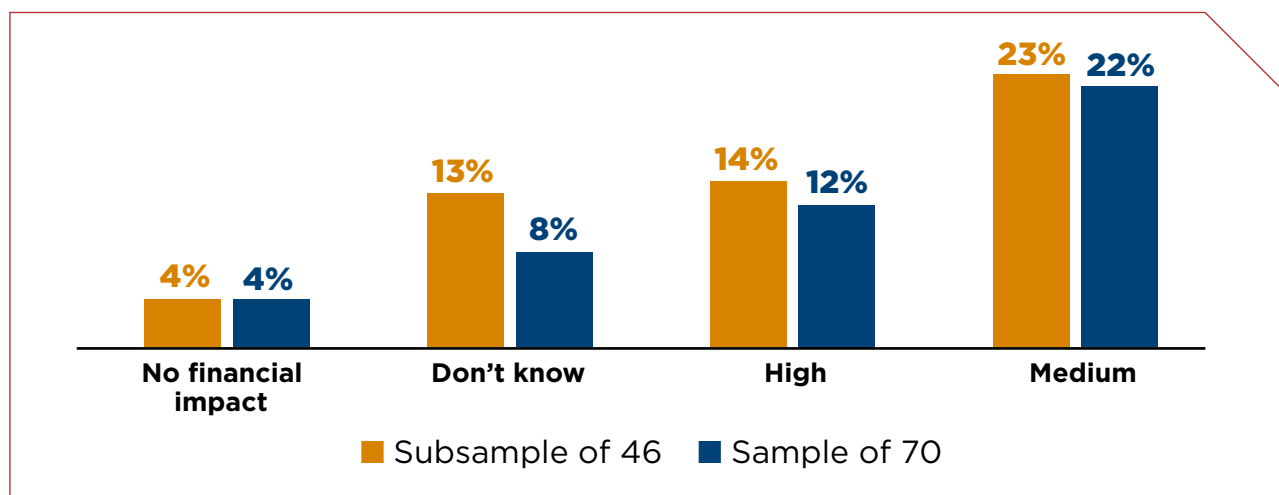
Considering the 46 companies with operations in Brazil (Figure 2), the most recurrent impacts, i.e. the impacts with greater number of reports among the different companies, were: increased operating costs (34% of companies), image damages (20%), and disruption of the supply chain (13%).

**Fig. 2 – Financial impacts related to deforestation as reported by companies with operations in Brazil**



Companies also reported the intensity of the financial impact related to deforestation as compared to their revenue. Considering the answers to the four commodities, 20% of companies reported having already experienced impacts of average intensity.

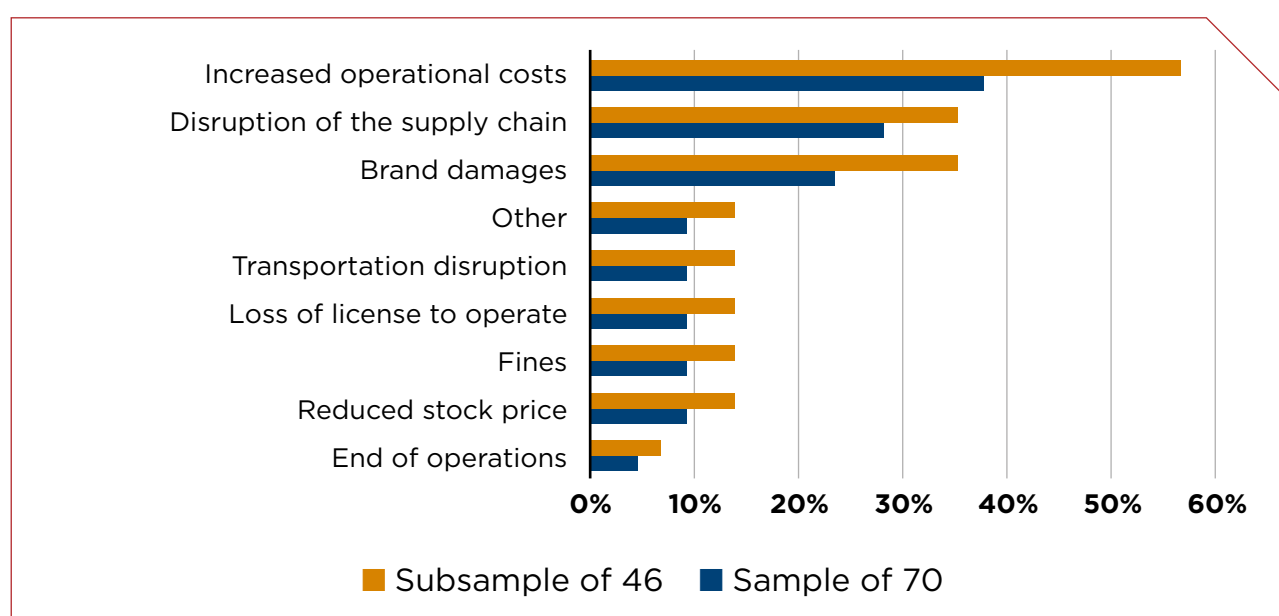
**Chart 7 – The average intensity of financial impacts related to deforestation in the Samples of 46 and 70 companies**



### Cattle products

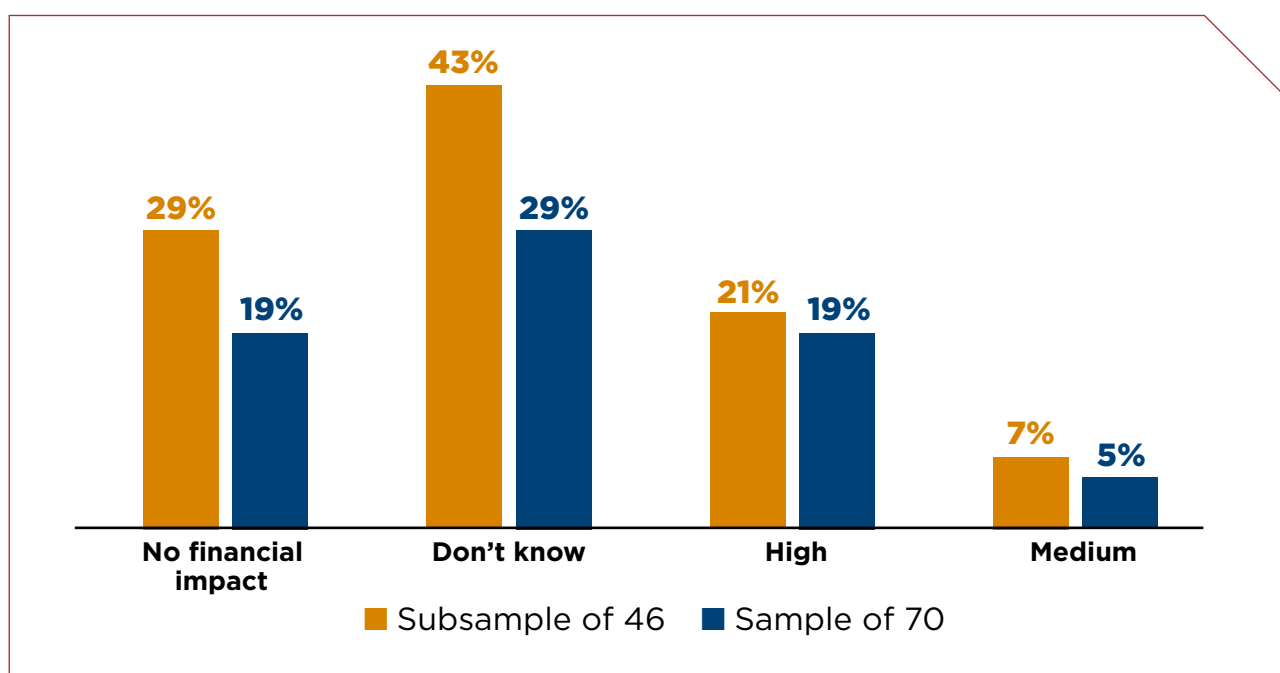
In relation to cattle products, the main impacts cited were the same in both samples: increased operating costs, supply disruption and image damage. Despite the similarity in relation to the main financial impacts its occurrence was significantly higher in the sample made only of companies with operations in Brazil.

**Chart 8 – Financial impacts related to deforestation as reported by companies of the cattle products chain**



Analyzing this chain alone, 20% of companies claim to have experienced some financial impact of high intensity in relation to its revenue.

**Chart 9 – Average intensity of financial impacts related to deforestation in the cattle products chain**



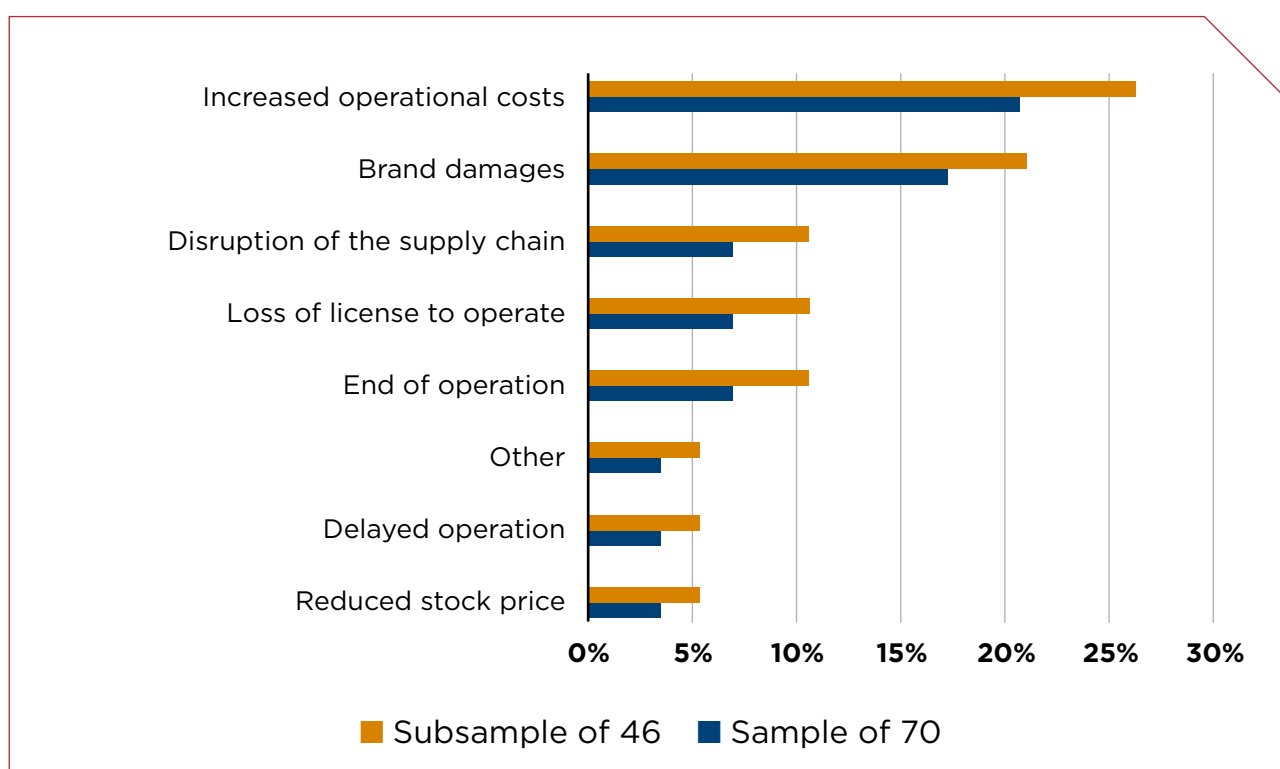
The qualitative analysis of responses identified that most companies in the cattle products sector have cited the influence of non-governmental organizations (NGOs) pressure - as Greenpeace globally and other local NGOs - for deforestation-free supply chains. Organizations like JBS, Marfrig, and Minerva mentioned the 2008 campaign against “Farra do Boi” (a festival involving the torture and killing of bulls and oxen in the state of Santa Catarina) and its consequences. Large manufacturing companies, such as Unilever and Nestlé, also cited international NGO campaigns. Although it seems negligible in quantitative analysis, companies from the first tier of the production chain described serious impacts on supply resulting from extreme drought which is linked to the deforestation of the Amazon and has been affecting precipitation regimes in the southeast of the country<sup>4</sup>.

<sup>4</sup> [http://philip.inpa.gov.br/publ\\_livres/2015/Rios\\_voadores-S%C3%A9rie\\_completa.pdf](http://philip.inpa.gov.br/publ_livres/2015/Rios_voadores-S%C3%A9rie_completa.pdf)

## Soy

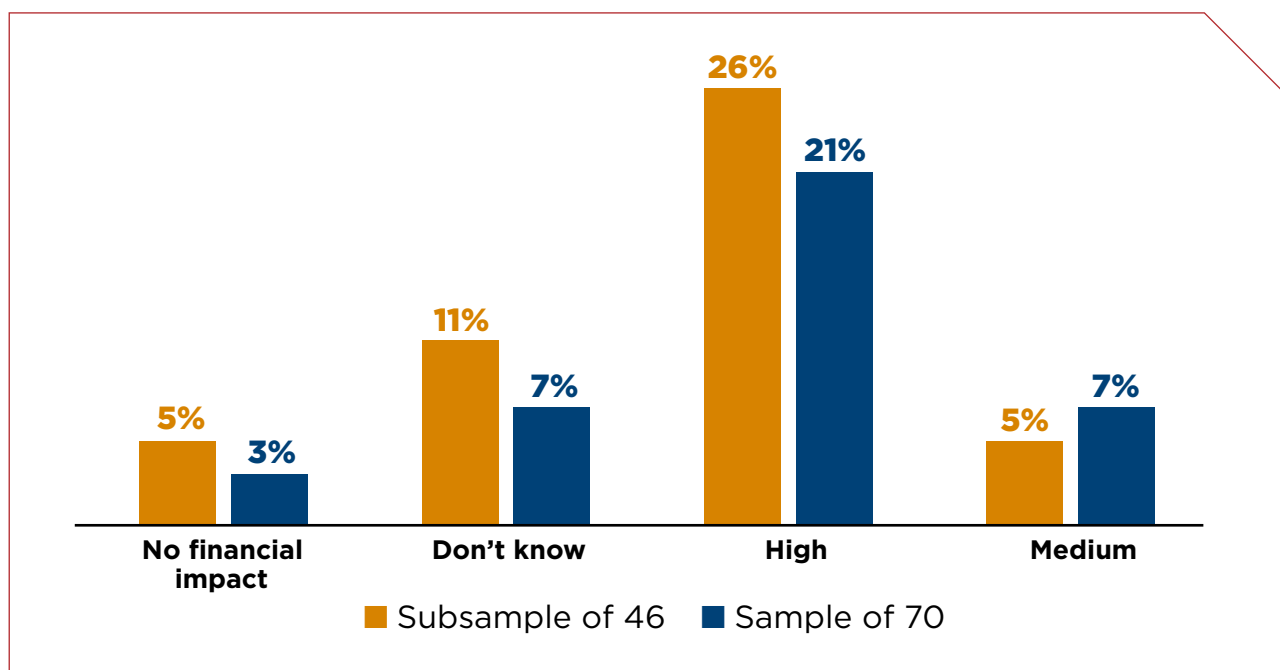
As noted in the case of cattle products, the two samples of the soy chain did not present differences with regard to impacts of higher incidence. The most frequently cited impacts were Increased operating costs and brand damages. In relation to its occurrence, companies with operations in Brazil have again reported having experienced larger impacts.

**Chart 10 – Financial impacts related to deforestation as reported by companies of the soy chain**



Regarding the intensity of the financial impacts of deforestation as compared to the companies' revenues, 26% of respondents with operations in Brazil have reportedly experienced high-intensity impacts.

**Chart 11 – Average intensity of financial impacts related to deforestation in the soy chain**

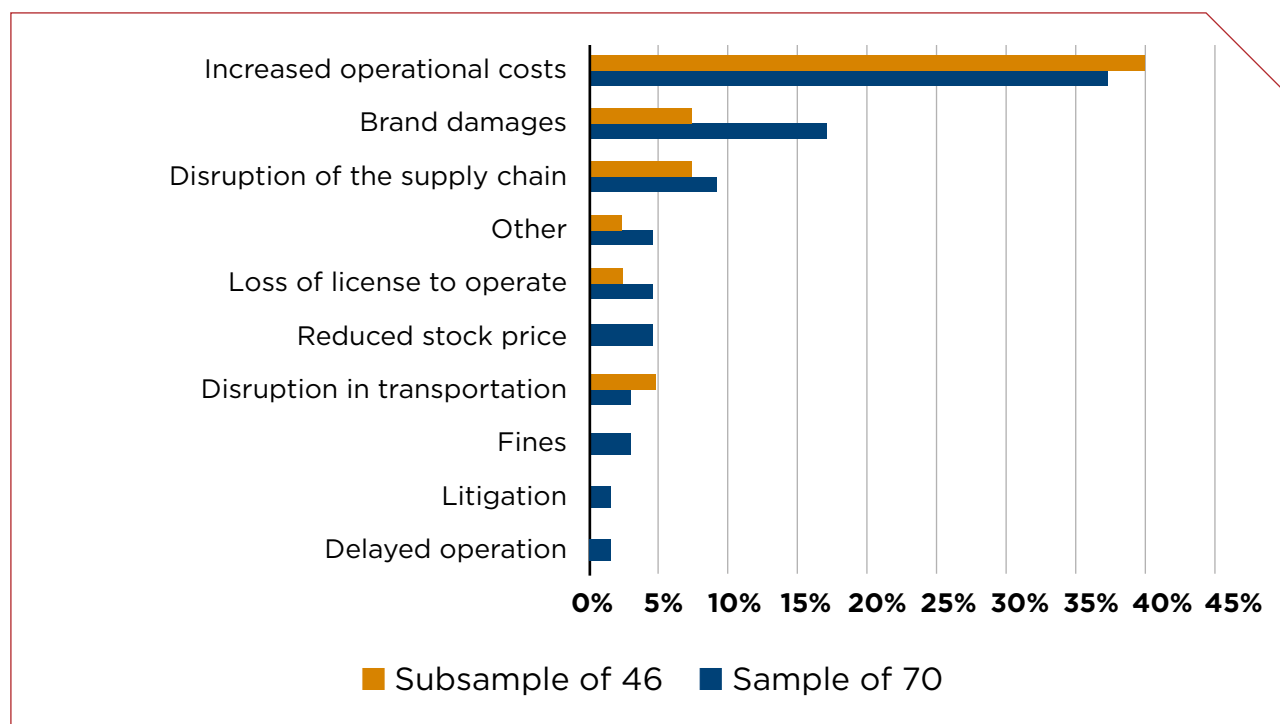


According to the qualification of impacts to companies operating in the soy industry, intermediary customers and final consumers are protagonists in the search for more sustainable products - a trend not observed in the cattle products sector. This aspect was mentioned both by companies; be it by ADM and Cargill, acting as producers, processors, and traders, by JBS, as a food processor and manufacturer, or by Nestlé and Unilever, as final food manufacturer. Additionally, the first tiers of the supply chain also reported the influence of NGO actions, through campaigns, and the effect of extreme weather events such as droughts arising from deforestation.

### Forest Products

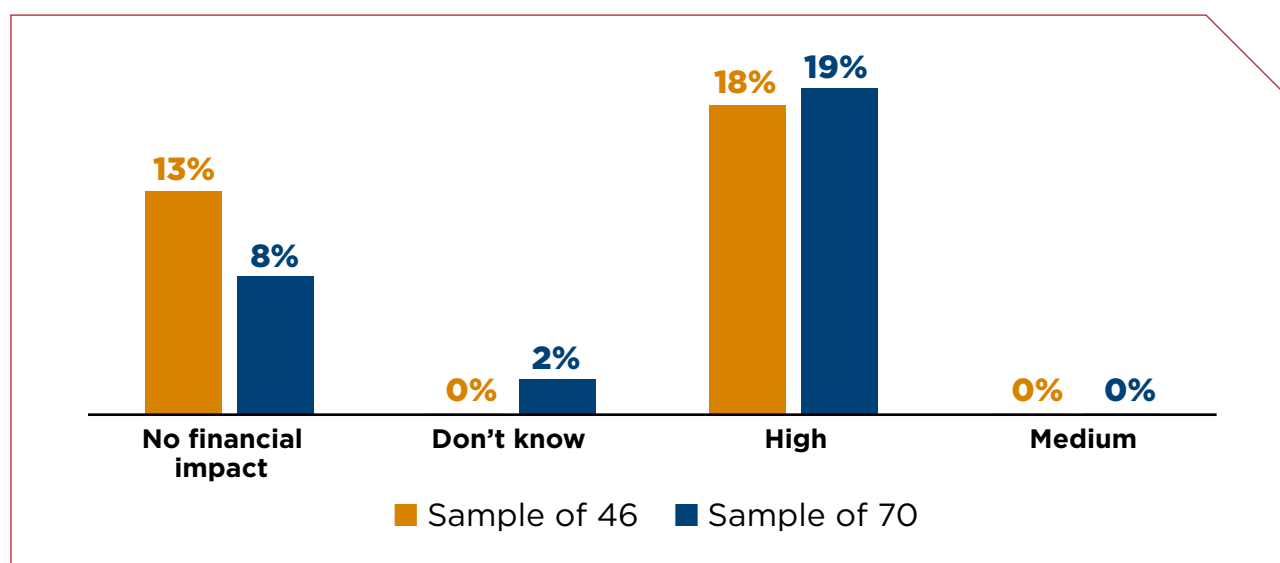
In relation to forest products, the main impact reported on both samples was the increased operating costs. It is interesting to note that impacts resulting from brand damages were more relevant in the sample of 70 companies than in the sample of 46 companies with operations in Brazil. This fact may signal a smaller relevance of this vector to the deforestation in the country. It is worth mentioning that, in the CDP sample, most companies of the forest sector are linked to the production of pulp and paper, and not tropical timber.

**Chart 12 – Financial impacts related to deforestation as reported by the companies of the forest products chain**



As for the intensity of the financial impact arising from deforestation in relation to the company's revenue, 18% of the sector reported having experienced a high-intensity impact.

**Chart 13 – Average intensity of financial impacts related to deforestation in the Forest Product chain**

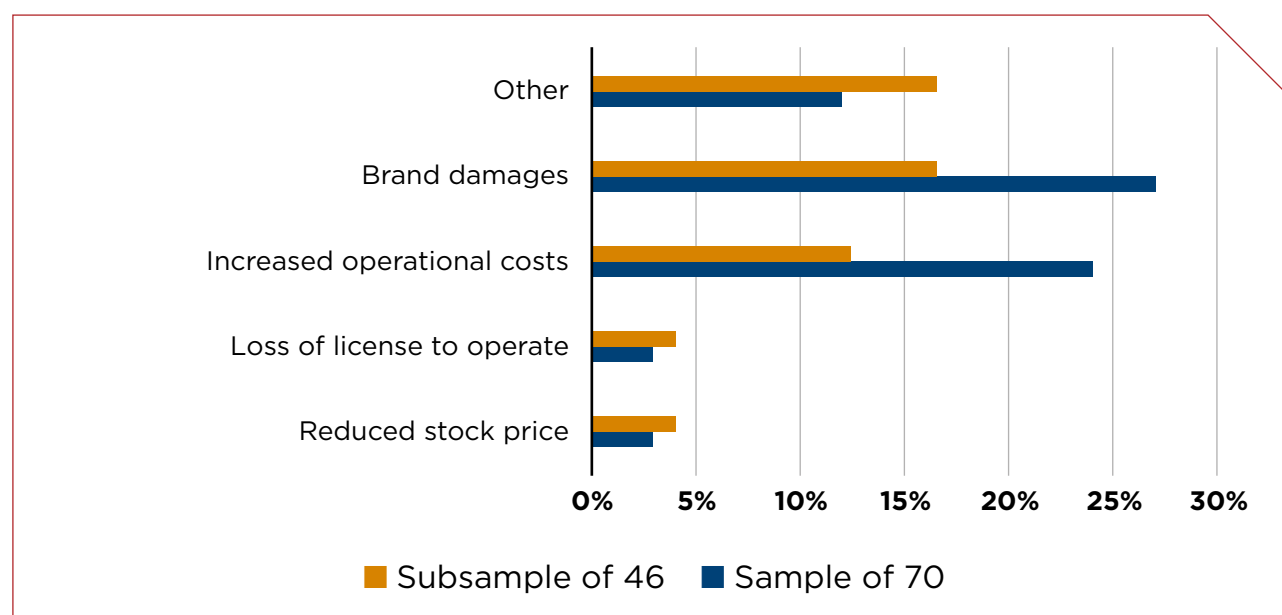


Unlike the observation for other commodities, the detailing of the qualitative responses to forest products indicates the importance of legal and regulatory requirements as a driver of change. Even companies such as Nestlé and Inditex - which reported on NGOs' actions - suggest measures to prevent deforestation related to legislation. Some companies like Tetra Pak cited specific regulations and requirements to some countries, like the U.S. Lacey Act, the EU Timber Regulation, and the Australian Illegal Logging Prohibition Act

## Palm oil

In relation to palm oil, it is interesting to note that among the main impacts mentioned - brand damage and increased operating costs - the highest incidence occurs in the sample of 70 companies. This may be related to the low correlation that the sector has with deforestation in Brazil, and consequently, it is less exposed to risks.

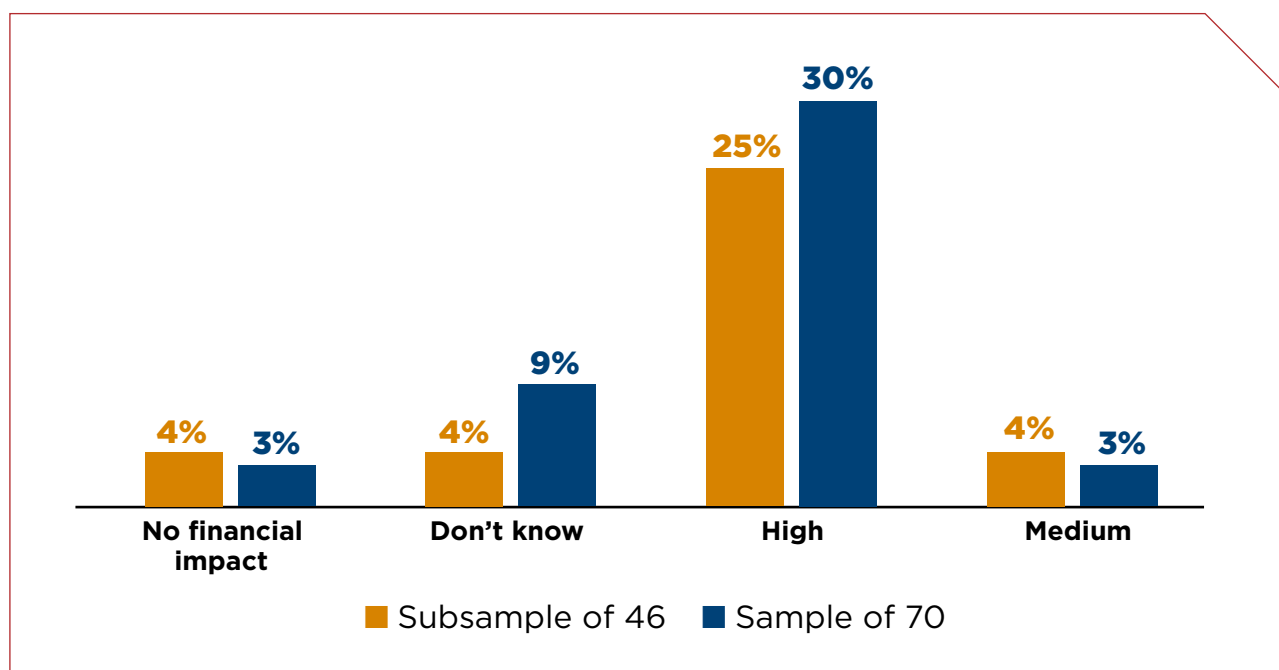
**Chart 14 - Financial impacts related to deforestation as reported by companies in the palm oil chain**



In the production value chain of palm oil, 25% of companies with operations in Brazil reported having experienced high-intensity financial impacts of deforestation in relation to its revenue.



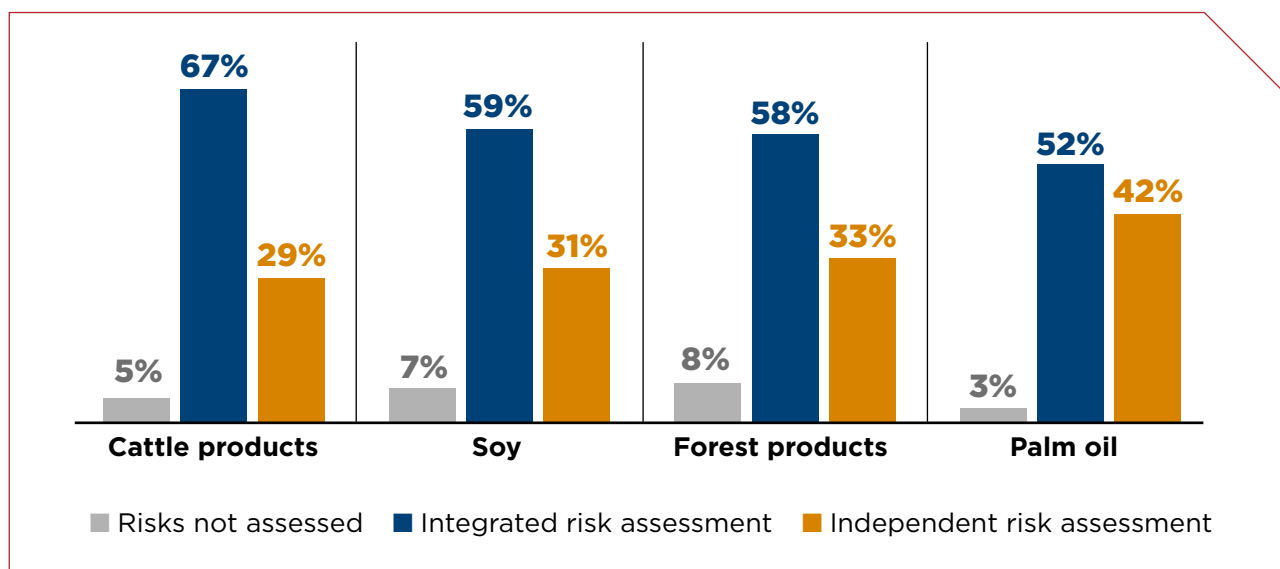
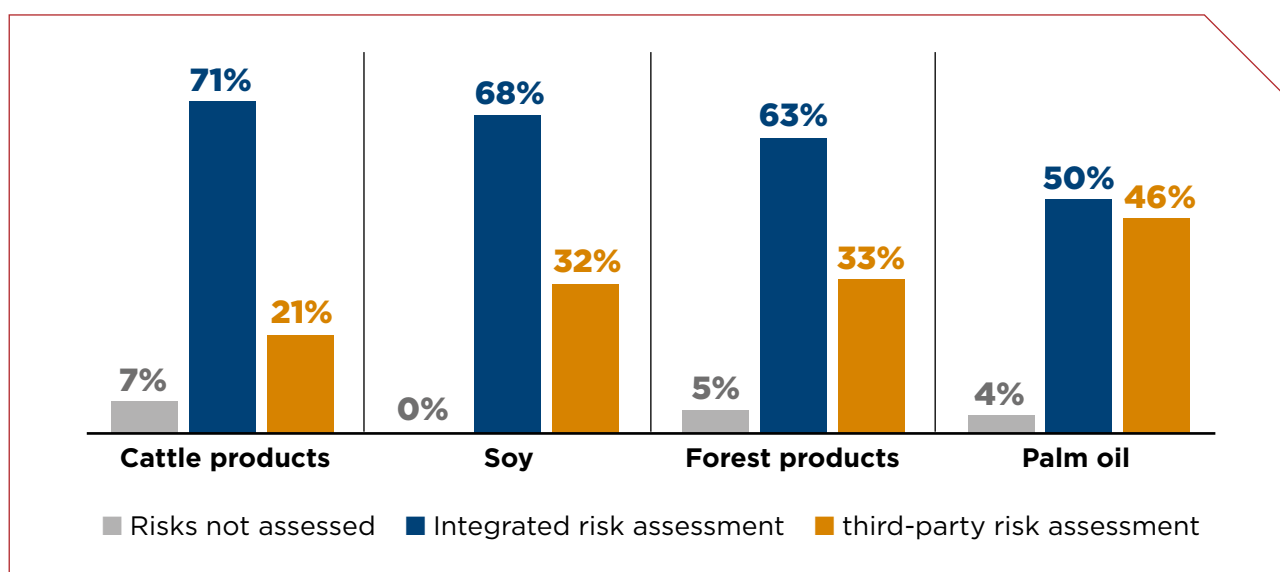
**Chart 15 – Average intensity of financial impacts related to deforestation in the Palm Oil chain**



## Deforestation risks and management opportunities

Most respondents reported having deforestation risk assessment procedure Integrated into a comprehensive, company-wide risk assessment process for all commodities evaluated: When considering only the companies with operations in Brazil, the figures for deforestation risk assessment - be it integrated or not - increase or decrease in proportion to the companies that do not evaluate this risk.

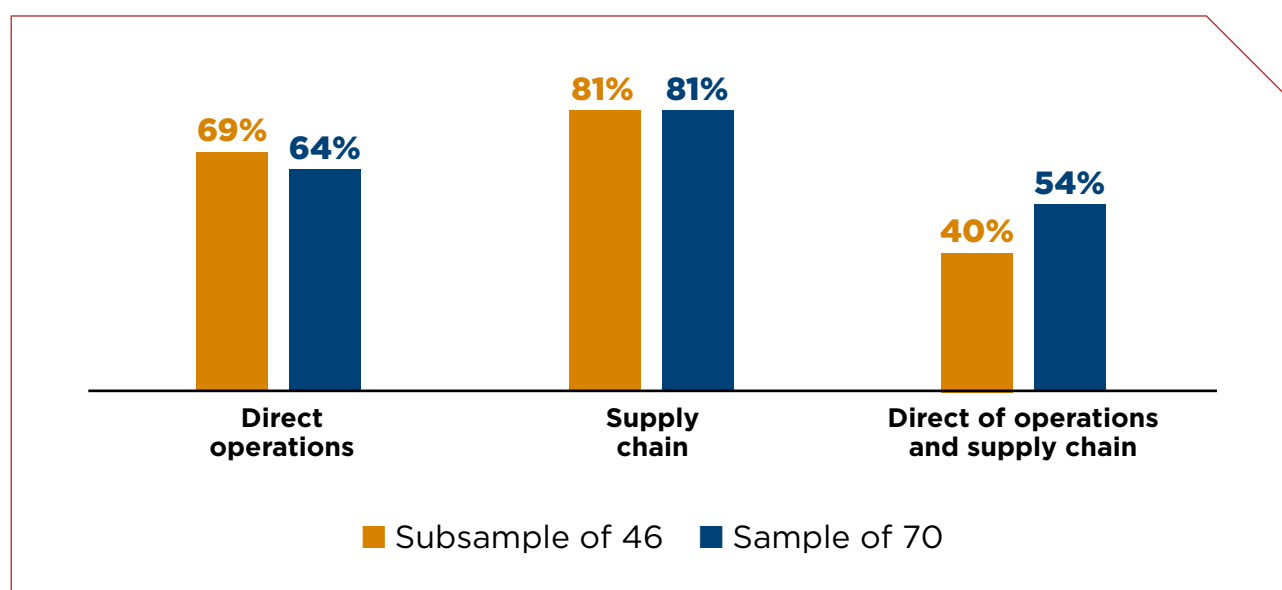
Since the same trend was observed in the impact section, this fact may be associated with a greater exposure to deforestation risks at the national level in relation to the global average.

**Chart 16 – Deforestation risk assessment by sector (sample of 70)****Chart 17 – Deforestation risk assessment by sector (subsample of 46)**

The answers showed that only a few companies do not assess their deforestation risk and that most of them integrate this into a comprehensive, company-wide risk assessment process. In both samples, the independent risk assessment, namely, the existence of a specific process to examine deforestation issues is not a common practice and it only has more significance to the palm oil supply chain.

In addition, about 80% of companies reported that these risk assessment procedures apply to at least one tier of their supply chain. There is little variation in relation to the sub-sample of companies with physical operations in Brazil. Despite the high rates, most companies that include their supply chain in their qualitative evaluation takes into consideration only their direct supplier.

**Chart 18 – Operational coverage of deforestation risk assessment by companies with operations in Brazil**



## Processes for assessing deforestation risks

Among these 70 companies, 58% have a specific committee responsible for risk assessments, 50% assess deforestation risks annually and 71% have implemented a company-wide risk assessment process. Most companies indicated assessment timeframes greater than 6 years (28%) and from 1 to 3 years (27%).

Considering the sub-sample of 46 companies, most companies have a special committee responsible for risk assessments (62%), but deforestation risks are monitored in a lower six-monthly frequency (46%), and in a whole company scale (70%). Most companies indicated assessment timeframes greater than 6 years (34%) and from 1 to 3 years (24%).

The difference between the samples as the frequency of risk assessment monitoring - annually (sample of 70) compared to six-monthly (sample of 46 companies) - may indicate a greater need for promptness in the responses of companies with physical operations in Brazil.

Analyzing the detailed answers to the cattle products sector, companies with a closer relationship to tier 1 agents as JBS, Marfrig and as Minerva, have developed their own deforestation risk management mechanisms in their supply chains. All of them systematically assess the legal aspects of its direct suppliers, such as the list of embargoed areas, areas that overlap with protected areas, the Environmental Record and Animal Transport Permission (GTA, Guia de Transporte Animal)<sup>5</sup>, an official document that identifies the origin - even if a collective one - of the animals, and satellite images of properties for which they have geographic information.

It should be noted that in none of the cases the monitoring is carried out for 100% of suppliers, although the percentage is sometimes very close to it, and they all operate just in the first tier of the supply chain (direct supplier). The geographical polygon of the source animals, i.e. of the direct suppliers is one of the most well-gathered data. However, it has also been reported that there are cases in which the complete polygon of the supplier is not available and that the only possibility is registering an approximate coordinate for their origin.

Marfrig as a highlight reported the use of a proprietary tool called "Request for Information (RFI)", through which it requests information from direct suppliers, including GTAs<sup>6</sup>, which allows the company to track the municipality and establishment from where their direct supplier acquired the animals, i.e. their indirect supplier. The RFI system still requires gathering data from the suppliers of these suppliers. This is a leading initiative, but its response rate is still somewhat limited to 60%.

Soy risk is initially assessed at the corporate level, that is, globally, and as critical regions are identified, specific risk management actions are designed for each of these regions. In these cases, companies reported only their actions related to those geographies, and not for their global operations, for example, Brazil, Paraguay, and Argentina were the critical regions most cited by the sampled companies. A group of companies

<sup>5</sup> <http://www.agricultura.gov.br/assuntos/sanidade-animal-e-vegetal/saude-animal/transito-animal>

<sup>6</sup> <http://www.agricultura.gov.br/assuntos/sanidade-animal-e-vegetal/saude-animal/transito-animal/arquivos-transito-internacional/ManualGTABovinosBubalinos21.0.pdf>

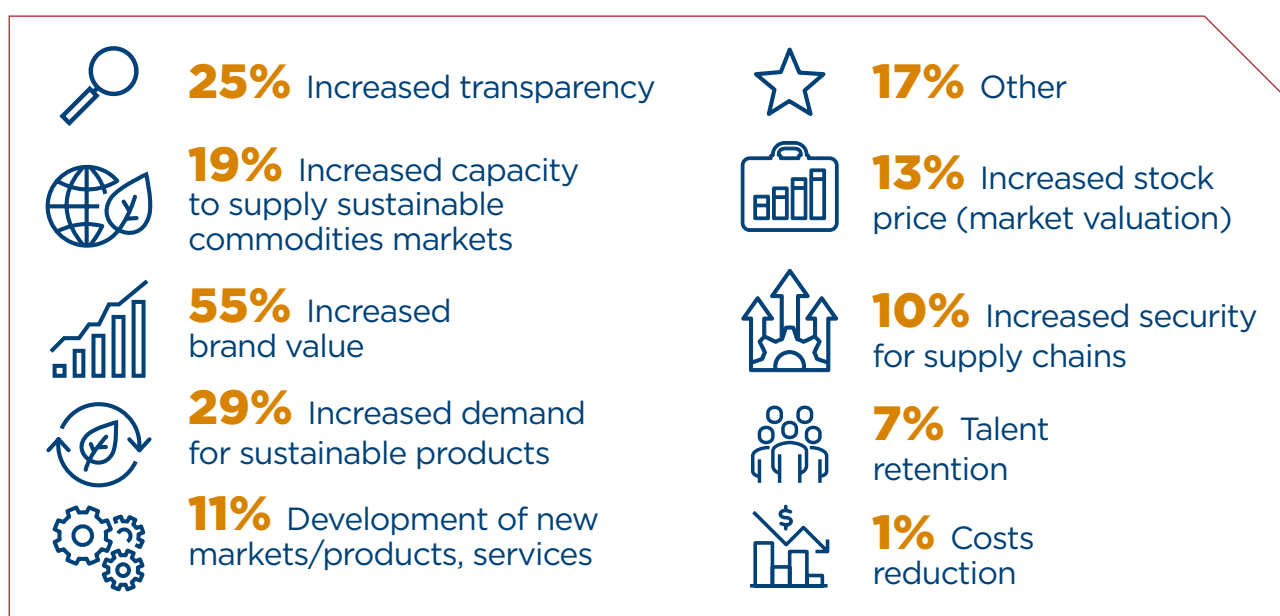
(Carrefour, Cargill, L'Oréal, and Unilever), detailed their risk assessment procedures at least to the level of traceability and legal assistance, as well as other social and environmental issues.

In the case of forest products, relevant companies in the sector, such as Fibria, Kimberly-Clark, Klabin and Tetra Pak use internal procedures for their deforestation risk assessment, but this assessment is somehow linked to forest certification principles, criteria, and standards indicators. This shows the relevance of industry certifications as guiding reference practices.

### Opportunities perceived from the reduction of deforestation

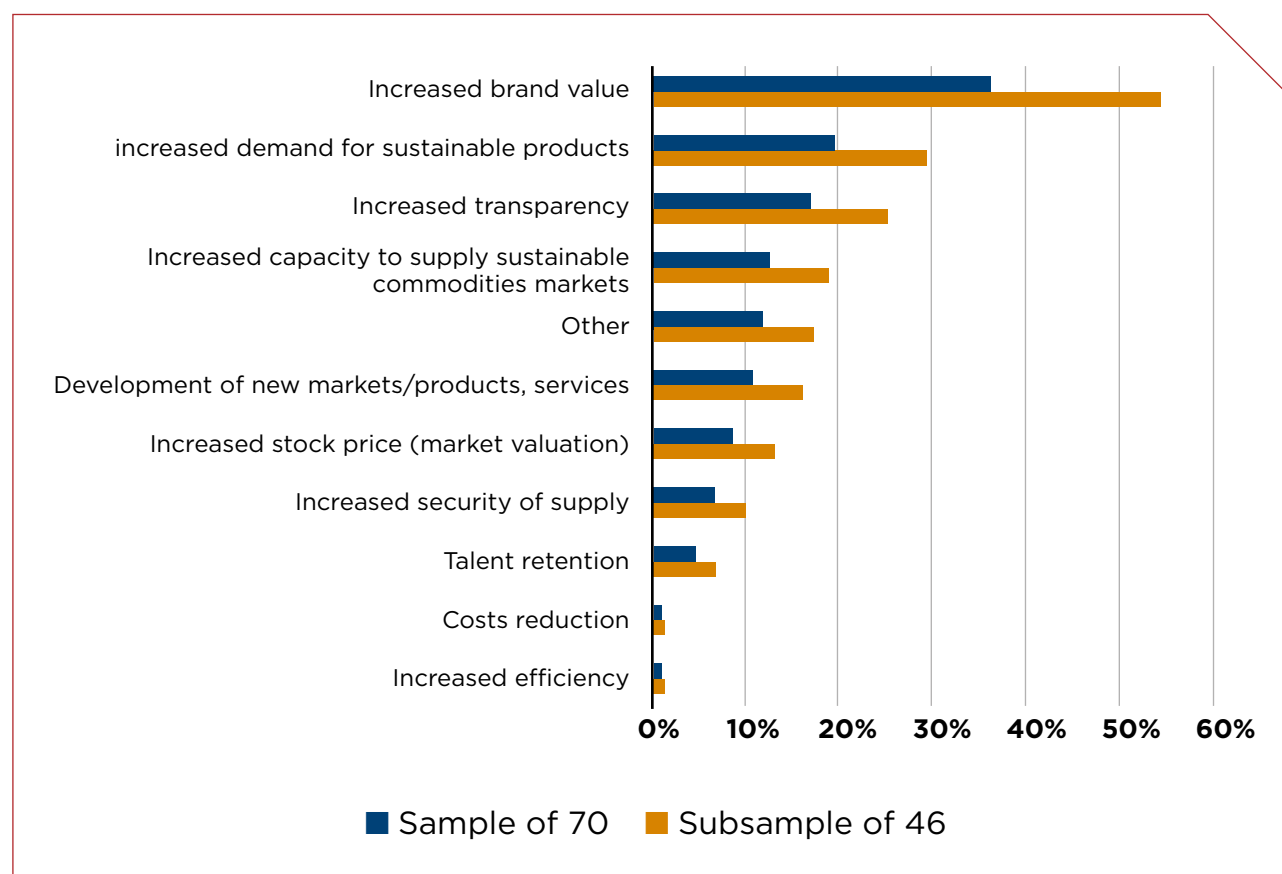
When asked if companies identified any opportunities related to producing, marketing or sourcing these commodities sustainably, more than 80% of companies from all sectors responded affirmatively, with emphasis on forest products (91%) and palm oil (94%). When we consider only companies with operations in Brazil, the identification of opportunities is even more frequent. The figure below expresses the most significant opportunities for companies with operations in Brazil.

**Fig. 3 - Most frequently reported opportunities by companies that reported purchases and/or operations in Brazil involving the four forest-risk commodities**



For all commodities, the most cited opportunity in the sample of 70 companies is the increased brand value: 38% in the case of cattle products, 24% (soy), 44% (Forest Products) and 39% (palm oil). The sub-sample of companies with physical operations in Brazil shows numbers even more relevant, 57% (cattle products), 37% (soy), 70% (forest products) and 54% (palm oil). In the chart below the same trend is noted, so that businesses with physical operations in Brazil, although they are more exposed to risks, they also identify more opportunities from the reduction of deforestation, increased brand value mainly

**Chart 19 – Opportunities identified by companies, resulting from the reduction of deforestation**



## Benchmarks

All benchmarks analyzed reported having experienced some impacts arising from deforestation risks.

**Marfrig** – Experienced two types of impact: reputational and physical. Physical impact was due to extreme weather events, especially droughts, which led to increased operating costs and supply chain disruption; in response, Marfrig diversified its network of suppliers. Greenpeace campaigns caused the reputational impact which generated damages and fines. Strategically, Marfrig aligned with different policies to combat deforestation, increased investment in technologies and created the “Marfrig Club” Program.

**Nestlé** – the only impacts reported by Nestlé are linked to reputational risks created by NGO campaigns and changing consumer behavior. Nestlé’s response was a collaborative approach for developing strategies together with its suppliers, local communities and employees.

**Unilever** – also experienced physical and reputational impacts. Physical impacts were due to changes in temperature, extreme rainfall, droughts and cyclones, and the reputational, due to the demand for improvements in health conditions and for a better product traceability. Its strategy is linked to actions in the Consumer Good Forum, increasing procurement of certified products and engagement with small producers.

**The non-governmental organization Greenpeace monitors the cattle products supply chain since 2007. In 2009, after a long investigation period, it published “Slaughtering the Amazon”, a report showing the relationship between meat processing companies, suppliers involved in deforestation and slavery to products offered in the consumer market. JBS was one of the companies in the report, and this brought negative impacts to JBS’s image and its consumers.**

### JBS

Excerpt from the company’s response to CDP’s 2016 Forests Program

**The increased awareness, campaigns led by NGOs, and the increased transparency related to all commodities led to the implementation of specific programs to manage aspects connected to deforestation, social and environmental issues and human rights.**

### Nestlé

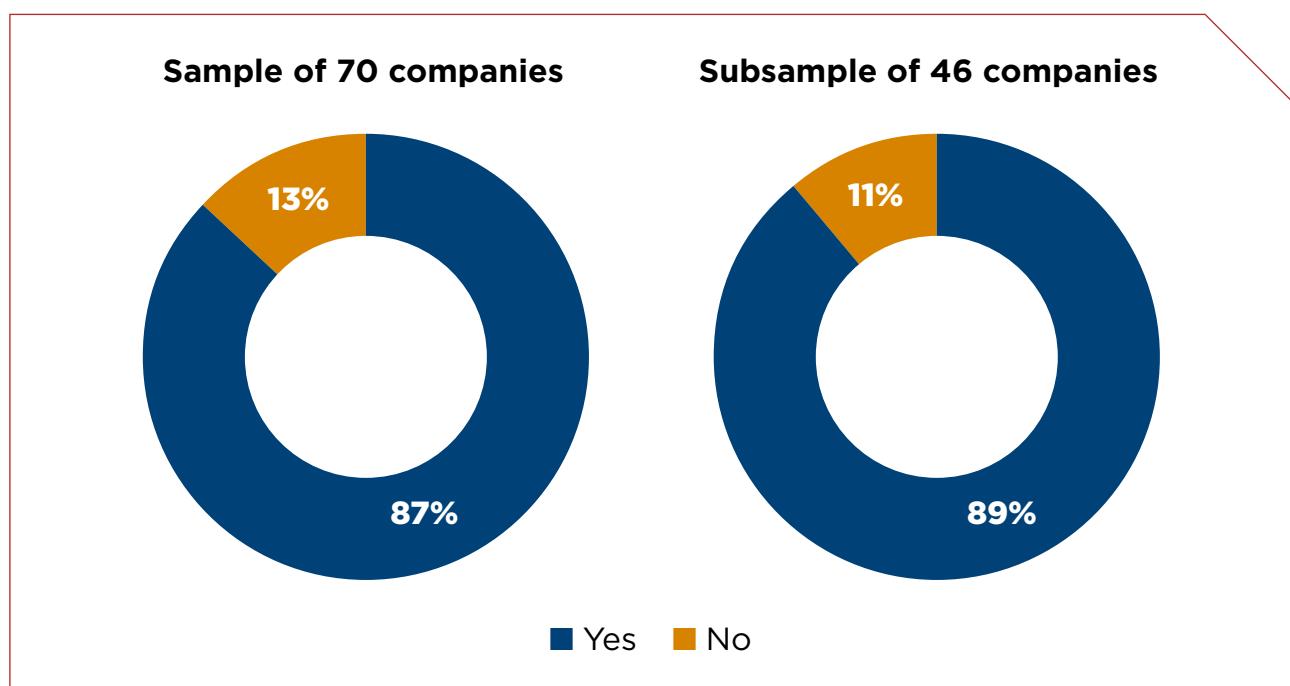
Excerpt from the company’s response to CDP’s 2016 Forests Program

# Strategies

## Policies and commitments to reduce deforestation

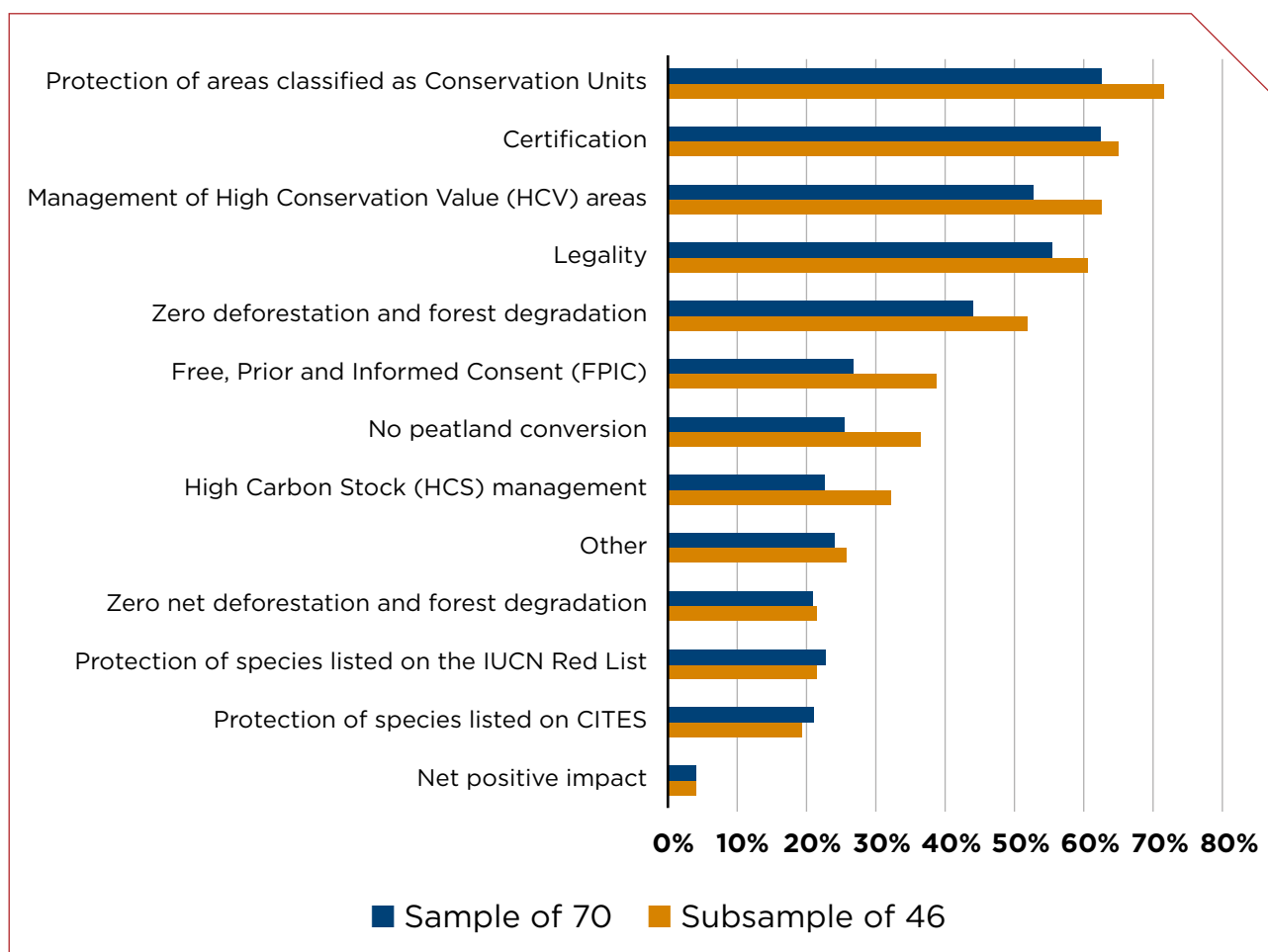
In relation to commitments made to reduce deforestation, there was no difference between the samples. In both samples, more than 85% of companies reported commitments to reduce deforestation.

**Chart 20 – Companies that made commitments to reduce deforestation**



Noting the criteria explicitly contained in those commitments, “zero deforestation” has a higher incidence in the sample of companies with operations in Brazil. In the case of the commitments that include “zero net deforestation”, the two samples showed similar results, with a difference of just one percentage point between them. The most prominent criteria in the sample with operations in Brazil were: Avoidance of land area under conservation (72%), certification (65%), High Conservation Value (HCV) management (63%) and legality (61%). Only 61% of companies mention legality in the sample with operations in Brazil, though the number exceeds that of companies with explicit commitments to zero deforestation (52%) and zero net deforestation (22%).



**Chart 21 – Criteria cited in commitments reported by companies**

Regarding commodities of companies with operations in Brazil, all companies of the cattle products chain have made commitments to reduce deforestation, 95% of soy companies, 80% of forest products companies and 88% of palm oil companies. These figures are slightly larger than those reported in the sample of 70 companies, showing that Brazil's awareness related to this issue is already strong.

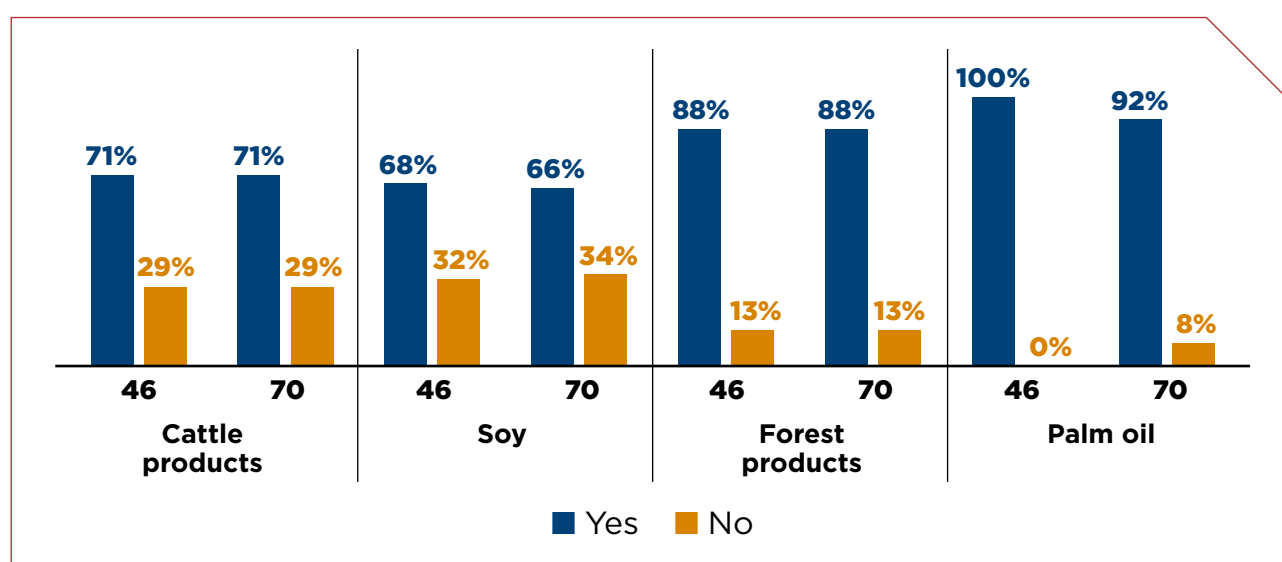
In relation to operational coverage of respondents with operations in Brazil, in 61% of the cases, the commitments apply both to its own operations, and for at least one of the supply chain tiers. In 24% of cases the commitment applies only to the supply chain and in only 2% they include exclusively their own operations. These figures do not differ significantly from the sample of 70 companies.

Assessing the coverage of commitments in relation to their own operations, 76% of companies apply them to 100% of the products, 7% of the companies apply them to 91-99% of the products and the remainder to other proportions. A similar trend is observed in companies with some sort of relationship with Brazil: 77% of the commitments cover 100% of the products, 4% between 91-99%, and the remainder is sprayed among other options.

In addition, 24% of respondents do not define an implementation timeframe for their commitments, 15% had their implementation by 2015 as goal, 30% by 2020, 7% by 2025, 4% by 2030, and the remainder distributed in smaller proportions. An equivalent trend was found in the sample of 70 companies; 31% of companies did not have a specific timeframe for implementing their commitments, 30% by 2020, 13% by 2015, 3% by 2030, and the remainder had it spread among other target years.

Independent of the sample, most companies chose 2020 as their target year. This target year aligns with the target year for commitments and global initiatives to combat climate change and deforestation, as the Consumers Good Forum, Tropical Forest Alliance 2020 and the Paris agreement enters into force in 2020<sup>7</sup>, suggesting the influence of these initiatives as guiding corporate policies.

**Chart 22 – Specific commitments to reduce deforestation by products reported by companies**



<sup>7</sup> <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>  
<http://www.wri.org/faqs-about-how-paris-agreement-enters-force>  
<http://www.observatoriodoclima.eco.br/marco-legal-do-acordo-de-paris/>

In relation to specific commitments by commodities, there is little or no variation among the samples. In relation to cattle products, the most relevant criteria contained in the commitments of companies with operations in Brazil were legality (50%), deforestation and forest degradation (43%) and avoidance of land area under conservation (43%). The criteria in relation to soy: legality (53%), avoidance of land area under conservation (53%) and zero deforestation and degradation (47%). The criteria in relation to forest products: certification (68%), legality (65%) and avoidance of land area under conservation (60%). In the case of palm oil: no peatland conversions, High Conservation Value (HCV) management areas and avoidance of land area under conservation (79%), showing a strong influence of the Roundtable on Sustainable Palm Oil (RSPO) International certification, for which these criteria are conditions.

Most companies also made commitments related to sustainable production patterns that are not bound to third-party certifications. For the sample of 70 companies, 63% of the cattle products chain companies have commitments related to sustainable production patterns, and 82% for the soy chain, 71% for forest products and 64% for palm oil. The only difference to the sample of 46 companies is seen in the cattle products supply chain, which has a higher percentage of companies with commitments related to sustainable production patterns (71%).

In addition to commitments to sustainable production, some companies also implement procurement practices of sustainable, deforestation-free products. The existence of such policies was reported by 74% of the companies purchasing cattle and soy products, and 90% of the companies active in forest products and palm oil.

In detailing their policies, few companies bring new information about their commitments. Some companies, like JBS, Marfrig, Minerva, ADM, Bunge and Cargill, offer historic details of how these commitments originated based on the already mentioned criteria of pressure, as NGOs and consumer pressure, in addition to the major global milestones and agreements, as The New York Forest Declaration (2014), The Consumer Goods Forum and the Tropical Forest Alliance 2020, and regionals, mainly the cattle products Conduct Adjustment Declaration (TAC, Termo de Ajustamento da Conduta TAC) and the Soy Moratorium.

Interestingly, some companies, such as Kimberly-Clark, point out they have already fulfilled part of their commitments, such as to buy only (100%) certified forest products. Other companies, such as L'Oréal, explain the implementation of local laws on their commitments, anti-corruption laws, to lessen the risk that their deforestation control procedures are circumvented, and land issues, to ensure the sustainable use of land and to avoid buying products from squatter areas, i.e., with a greater risk of deforestation. Companies such as Unilever are also committed to reducing their supply chain carbon footprint, adding to this reduction the end of deforestation and the protection of forests with high conservation value (HCV) and high carbon stocks (HCS).

## **Sustainable production certification**

One of the main strategies to guarantee that the products produced or acquired are demonstrably deforestation-free and meet other industry-specific sustainability criteria relies on the use of voluntary certification standards audited by an independent third party. In this model, multi-stakeholder groups are formed, establishing principles, criteria and indicators; and for a product to be certified (thus receiving a certification seal) an independent audit is required to verify the existence of the established indicators. Certification schemes applicable to cattle products, soy, Palm and forest products also have specific criteria to avoid deforestation.

Regarding the use of such certification schemes by the evaluated companies varied greatly depending on the production chain to which they are included.

### **Cattle products**

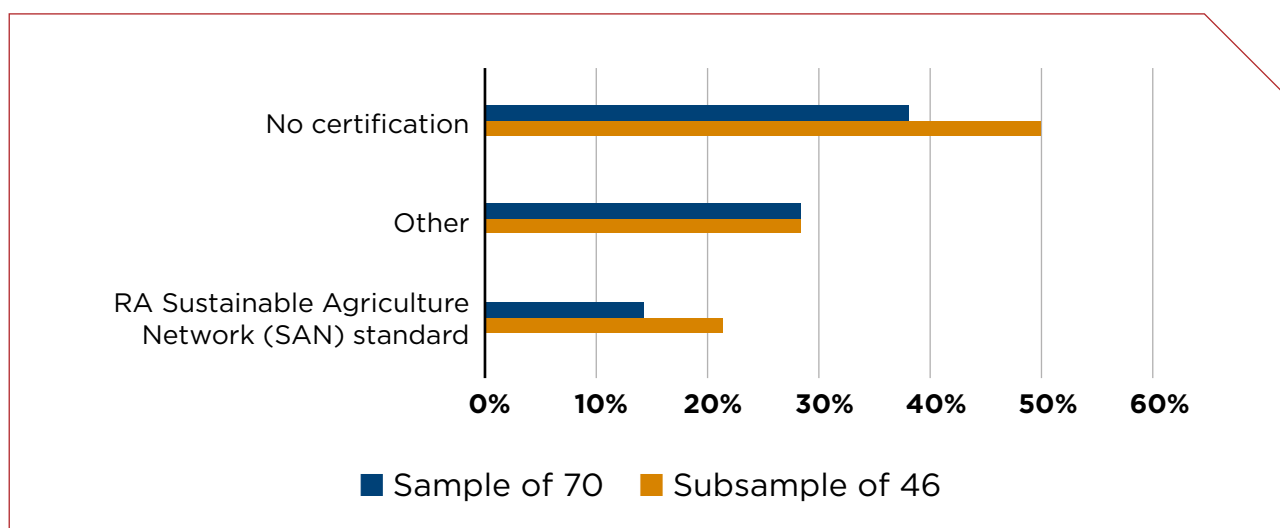
In the case of cattle products, as shown in the graph below, most companies in the two samples do not use any certification scheme as part of their strategy, and that number is greater for companies with operations in Brazil. In both samples, companies that reported the use of any certification indicated the Rainforest Alliance Certified<sup>8</sup> seal.

<sup>8</sup> <http://www.rainforest-alliance.org/articles/rainforest-alliance-certified-cattle>

It is important to note that a significant number of companies choose the option “Other” and, examining the qualification of these answers, these companies report the use of guidelines to a sustainable production, like those certifications, but lacking an independent audit, or the use of proprietary principles and criteria and internal audits.

The low adoption of certification on the cattle products chain is probably associated with the high costs of obtaining and maintaining these certifications, in addition to inherent characteristics of the chain; for example, the tracking difficulties and the predominance of small disunited ranchers, lacking specialized technical assistance and having low productivity and profitability.

**Chart 23 – Companies that reported certification for cattle products**

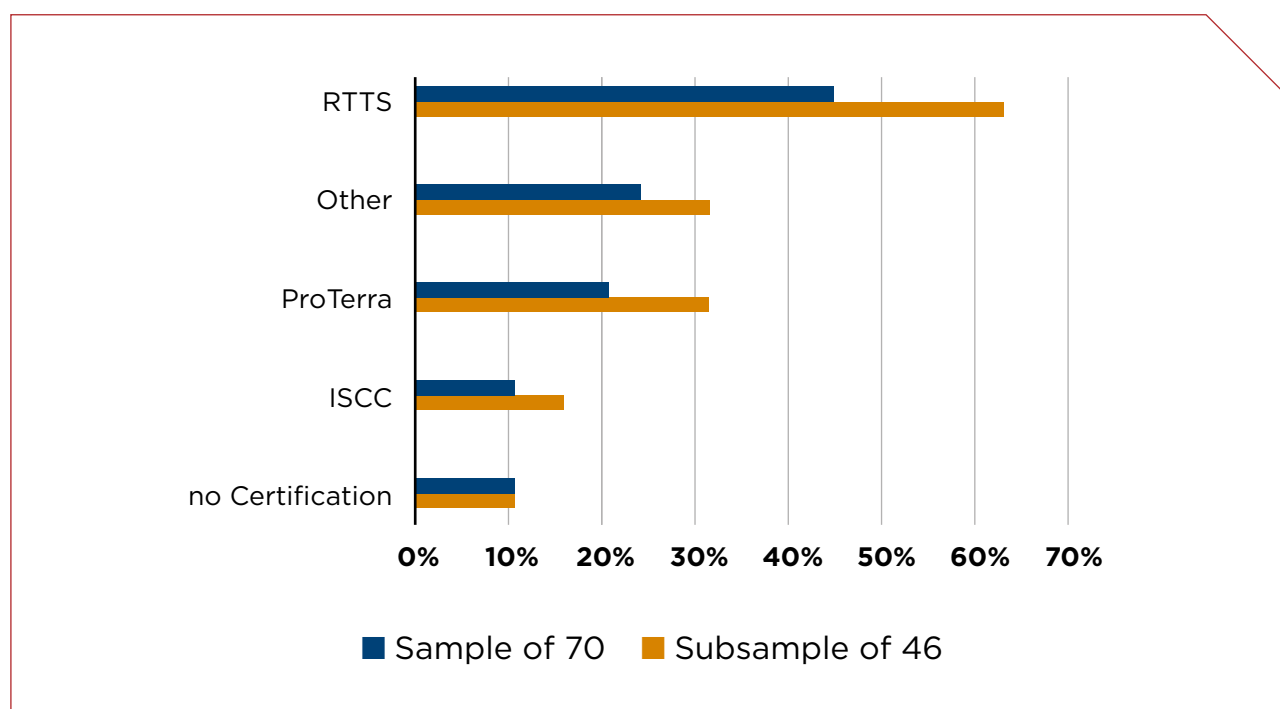


## Soy

In the sample of 70 companies, 45% said they have the Roundtable on Responsible Soy (RTRS)<sup>9</sup> certification, compared to 63% of companies from the sample of companies with operations in Brazil; ProTerra certification<sup>10</sup> got 21% of companies in the sample of 70, and 32% in the sample of 46. Unlike cattle products, certification for soy is a little more present, especially in the case of RTRS. One possible cause is the relevance of exports to the sector and the pressure from international consumers.

<sup>9</sup> <http://www.responsiblesoy.org/?lang=pt>

<sup>10</sup> <http://www.cert-id.com.br/Certification/ProTerra>

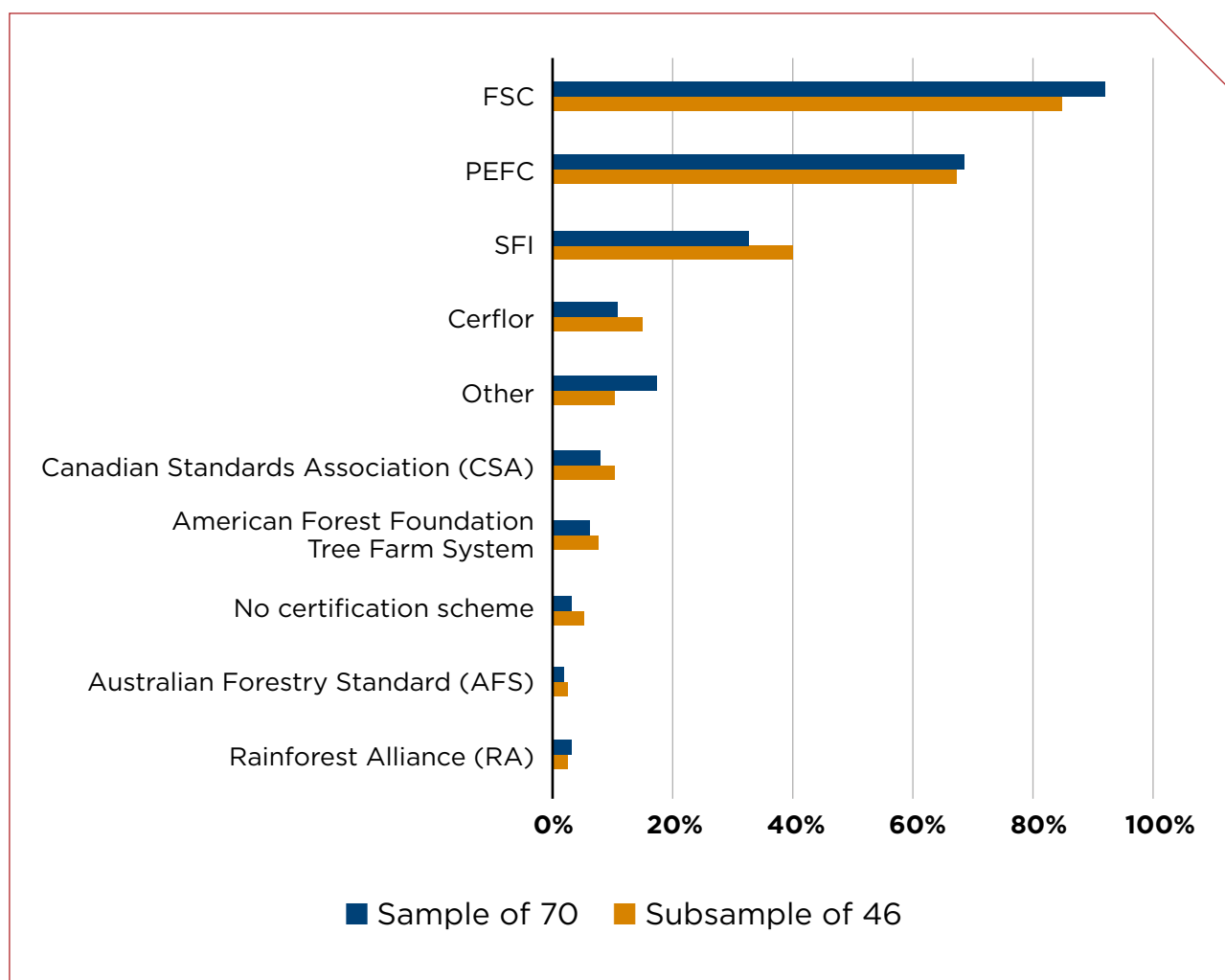
**Chart 24 – Companies that reported certification for soy products**

## Forest Products

In this sector, the main certifications are from the Forest Stewardship Council-FSC<sup>11</sup>, cited by 92% and 85% of the respondents in the samples of 70 and 46 companies, respectively, and the Programme for the Endorsement of Forest Certification-PEFC<sup>12</sup>, cited by 69% and 68% of companies in the samples of 70 and 46 companies, respectively. The small variation among samples follows a trend in the sector, including the other aspects evaluated in this study: the certification for forest products seems to be strongly consolidated in the global and national markets.

<sup>11</sup> <https://br.fsc.org/pt-br>

<sup>12</sup> <https://www.pefc.org/>

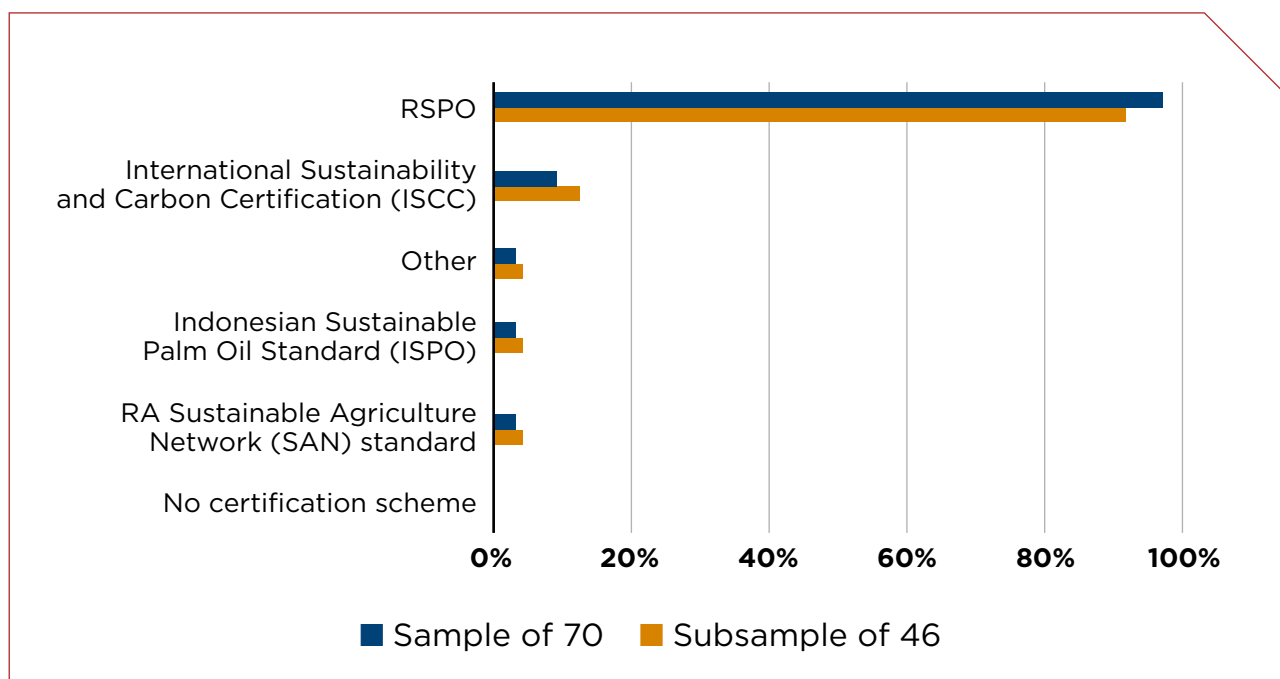
**Chart 25 – Companies that reported certification for forest products**

## Palm oil

the Roundtable on Sustainable Palm Oil - RSPO<sup>13</sup> certification is cited by 97% of the respondents of the sample of companies that have relations with Brazil, and 92% in the sample of companies with operations in Brazil. Other certifications are also mentioned, but they are less relevant. We must infer a strong relationship with certifications in this sector, as well as in the forest sector. In the case of palm oil, however, the certification market is extremely focused on the RSPO initiative.

<sup>13</sup> <http://www.rspo.org/>

**Chart 26 – Companies that reported certification for palm oil products**

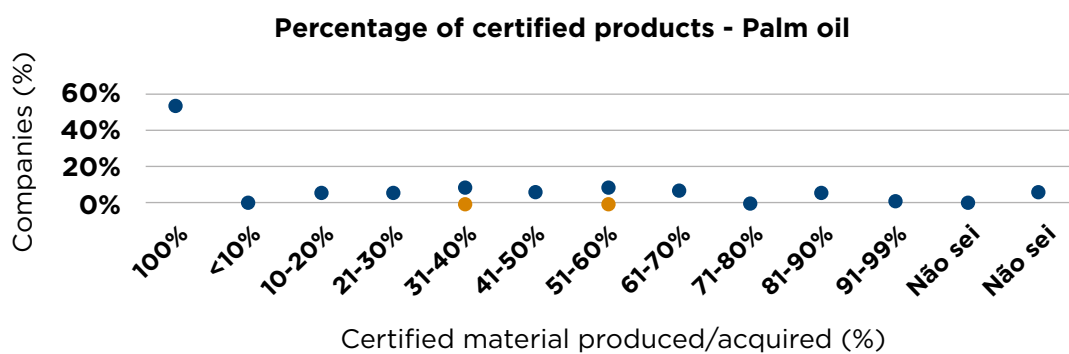
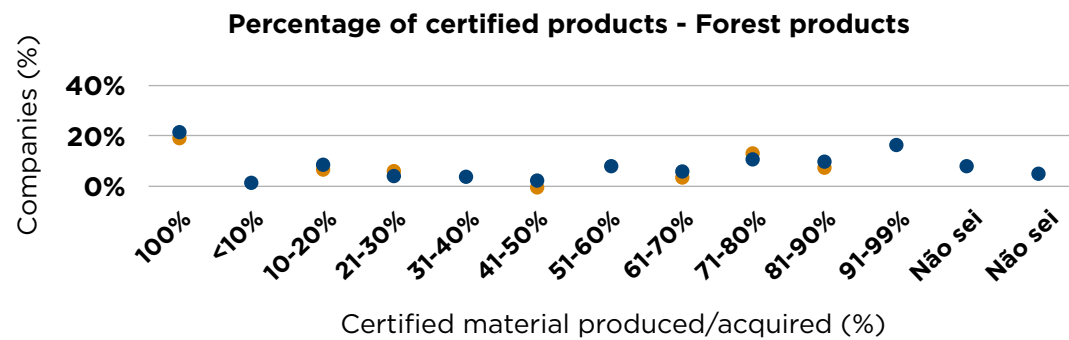
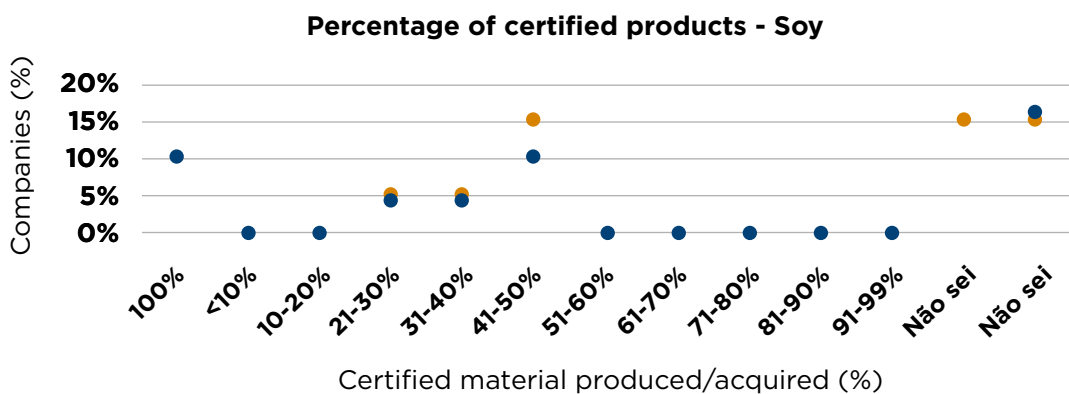
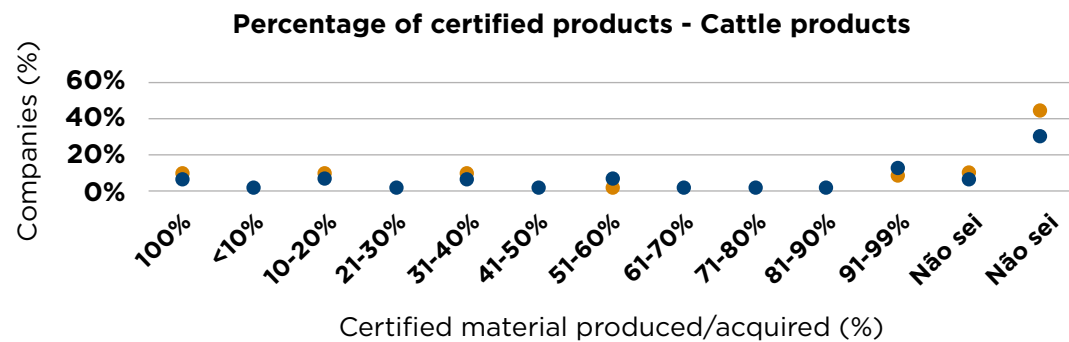


The percentage of certified products in the companies that reported joining some certification scheme varies widely, regardless of the sample evaluated. In the case of cattle products, for example, only 5% indicated that 100% of the cattle products are certified and 15% indicated that this figure is greater than 80%. In relation to soy, 10% reported that 100% of their production is certified. For forest products, a higher percentage of companies (42%) reported that more than 80% of their production is certified. In Palm oil, 52% indicated that 100% of palm products have a certification seal.

When questioned if they have targets for third-party certification both in their direct operations and their value chain, 39% answered “Yes” for cattle products and mentioned international certifications such as the Rainforest Alliance Certified seal. For soy, this index was at 66% (RTRS and other); for forest products, 77% indicated the Forest Stewardship -FSC and 52% the Programme for the Endorsement of Forest Certification PEFC-; for Palm oil, 82% cited the Roundtable on Sustainable Palm Oil -RSPO.

Companies also reported additional indicators of sustainable production to those laid down in third-party certifications. For cattle products, 81% answered that have indicators in place and that they are related to sustainable production (14%), sustainable purchases (14%) and traceability (10%).



**Chart 27 – Percentage distribution of certified products product type**

■ Sample of 46 ■ Sample of 70

In relation to soy, the percentage was 55% and the indicators cited were sustainable procurement (21%), traceability (14%) and sustainable production (10%). For forest products, the index of companies that rely on additional indicators is 66%, and they focused in the areas of sustainable procurement (28%), traceability (20%) and sustainable production (14%). In relation to palm oil, we find the highest percentages, 82% of companies reporting additional indicators for traceability (33%) and sustainable procurement (30%) and sustainable production (9%).

As for the challenge of ensuring a supply of commodities in a sustainable way, most companies reported having identified sources of raw materials to meet their operational needs: cattle products (86%), soy (76%), forest products (92%), palm oil (76%). These numbers vary little when compared to the sample containing only companies with operations in Brazil: cattle products (93%), soy (89%), forest products (93%) and palm oil (79%).

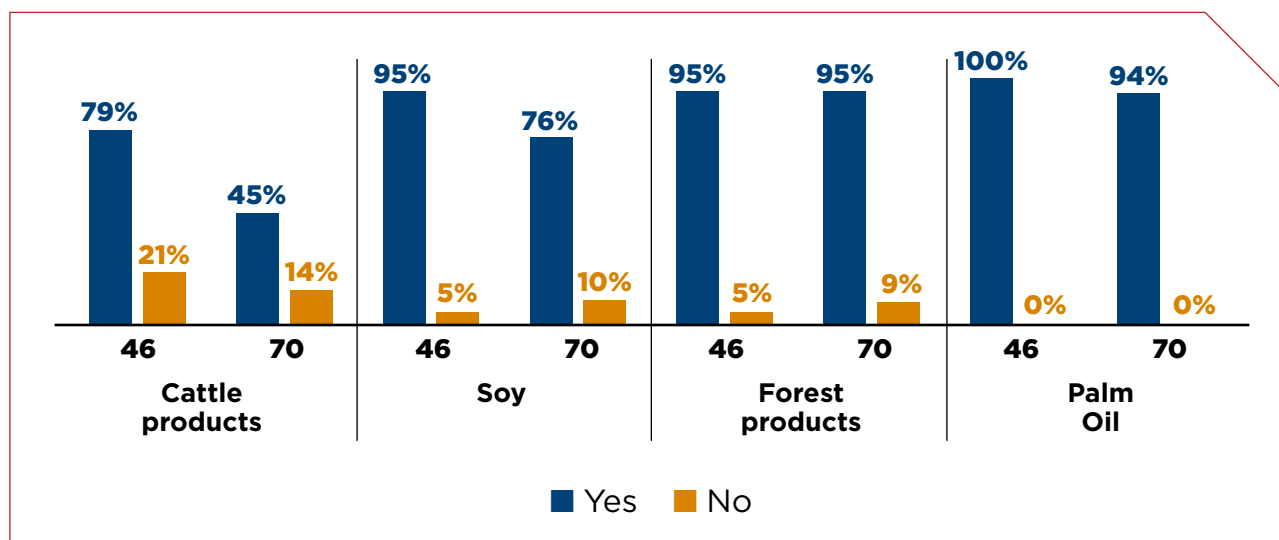
## Engagement initiatives

As for the involvement in multi-stakeholder initiatives related to the production of sustainable commodities, high levels of engagement have been found in the responses for all sectors, except for cattle products sector. Only 45% of the companies in the sample of 70 are involved in some kind of initiative in this sector. The figure increases significantly to 79% when only companies with physical operations in Brazil considering. Probably due to the higher exposure to deforestation risks of the cattle products chain in a national level.

Soy products have a similar trend, although less significant: in the sample of companies with relationship (purchase or sale) with Brazil, 76% of the companies are engaged in some kind of initiative, and that figure increases to 95% when only companies with physical operations in Brazil are analyzed (going 19 percentage points up).

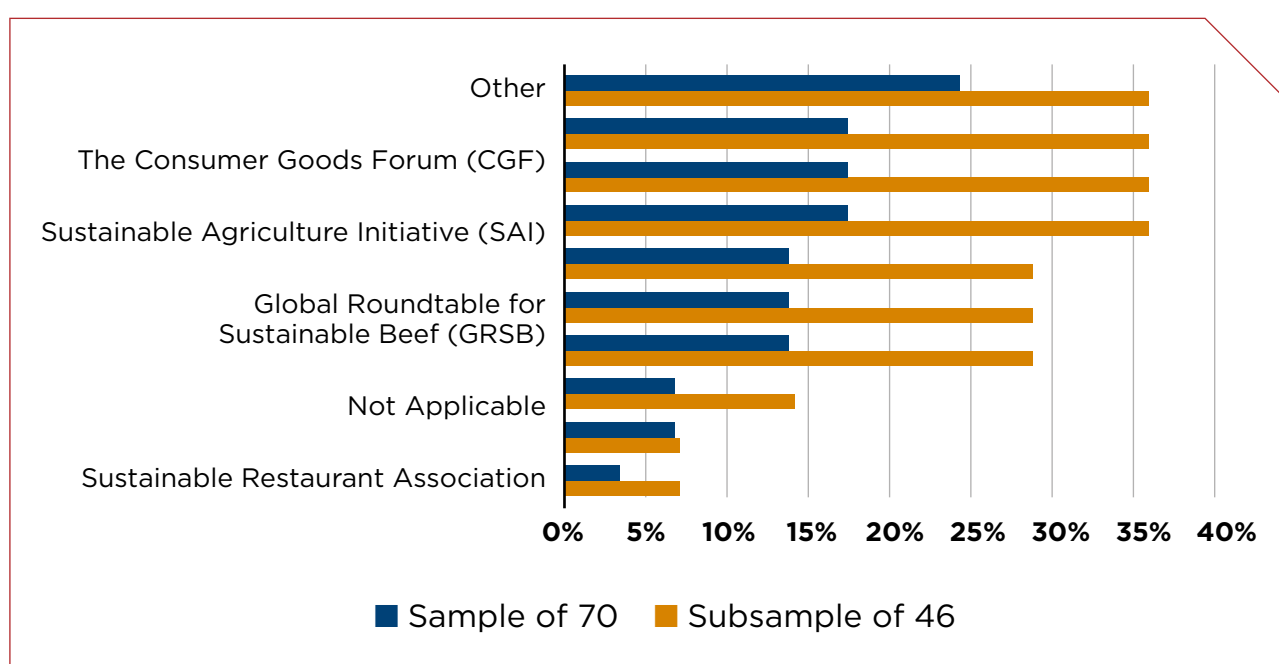
For forest products, there is no variation among the samples, with 95% of companies in both cases engaged in multi-stakeholder initiatives. In the case of palm oil, there is a small variation, going from 94% in the sample of 70 companies to 100% in the sample of companies with operations in Brazil.

**Chart 28 – Companies involved in multi-stakeholder initiatives by product**



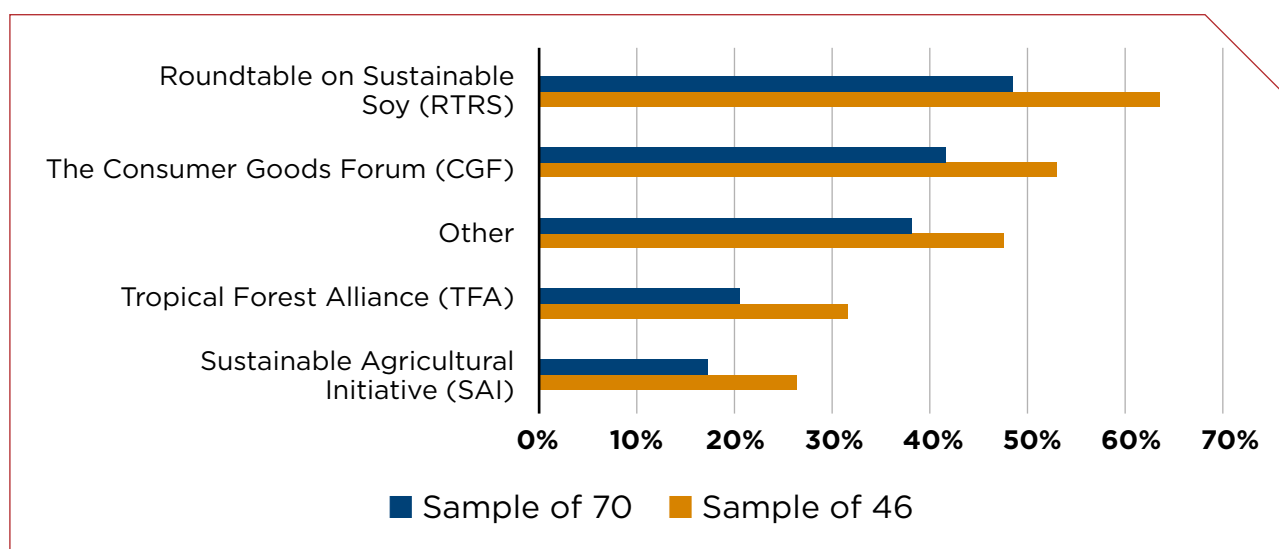
In the case of cattle products, the most noteworthy initiatives are The Working Group on Sustainable Livestock (GTPS), with 36%; the Tropical Forest Alliance (TFA), with 36%, and the Consumer Goods Forum (CGF), with 36%. The chart below shows the greater participation of companies with operations in Brazil on these forums.

**Chart 29 – Companies that reported on cattle products and are engaged in multi-stakeholder initiatives**



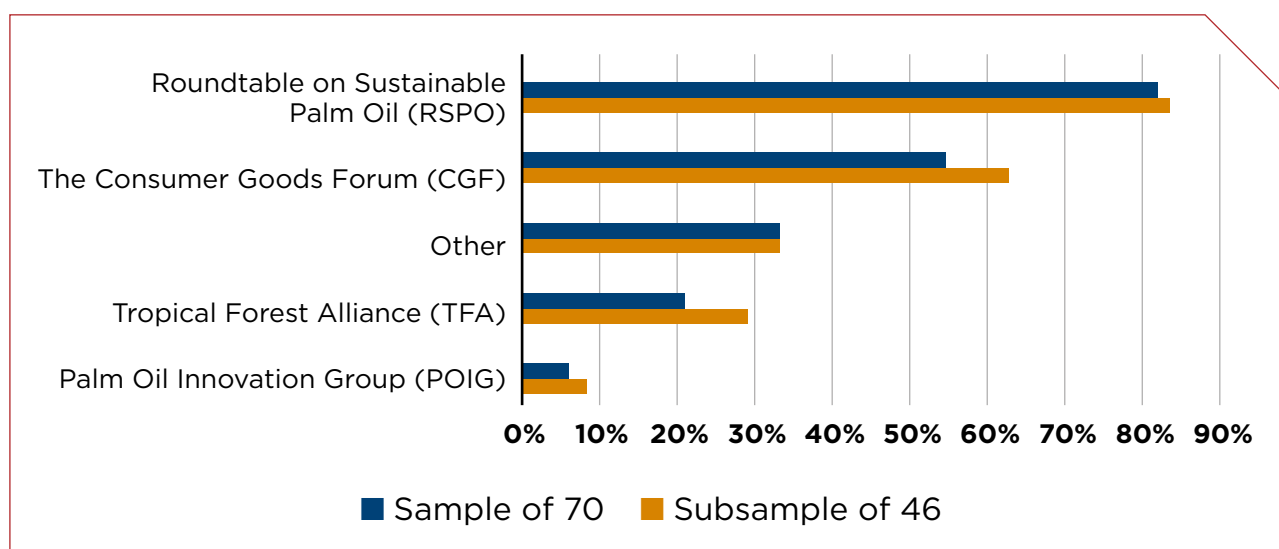
In the case of soy, the main initiatives are The Roundtable on Sustainable Soy – RTRS (63%); the Consumer Good Forum (53%) and the Tropical Forest Alliance (32%). Again, the sample of companies with operation in Brazil shows a greater level of engagement.

**Chart 30 – Companies that reported on soy and are engaged in multi-stakeholder initiatives**



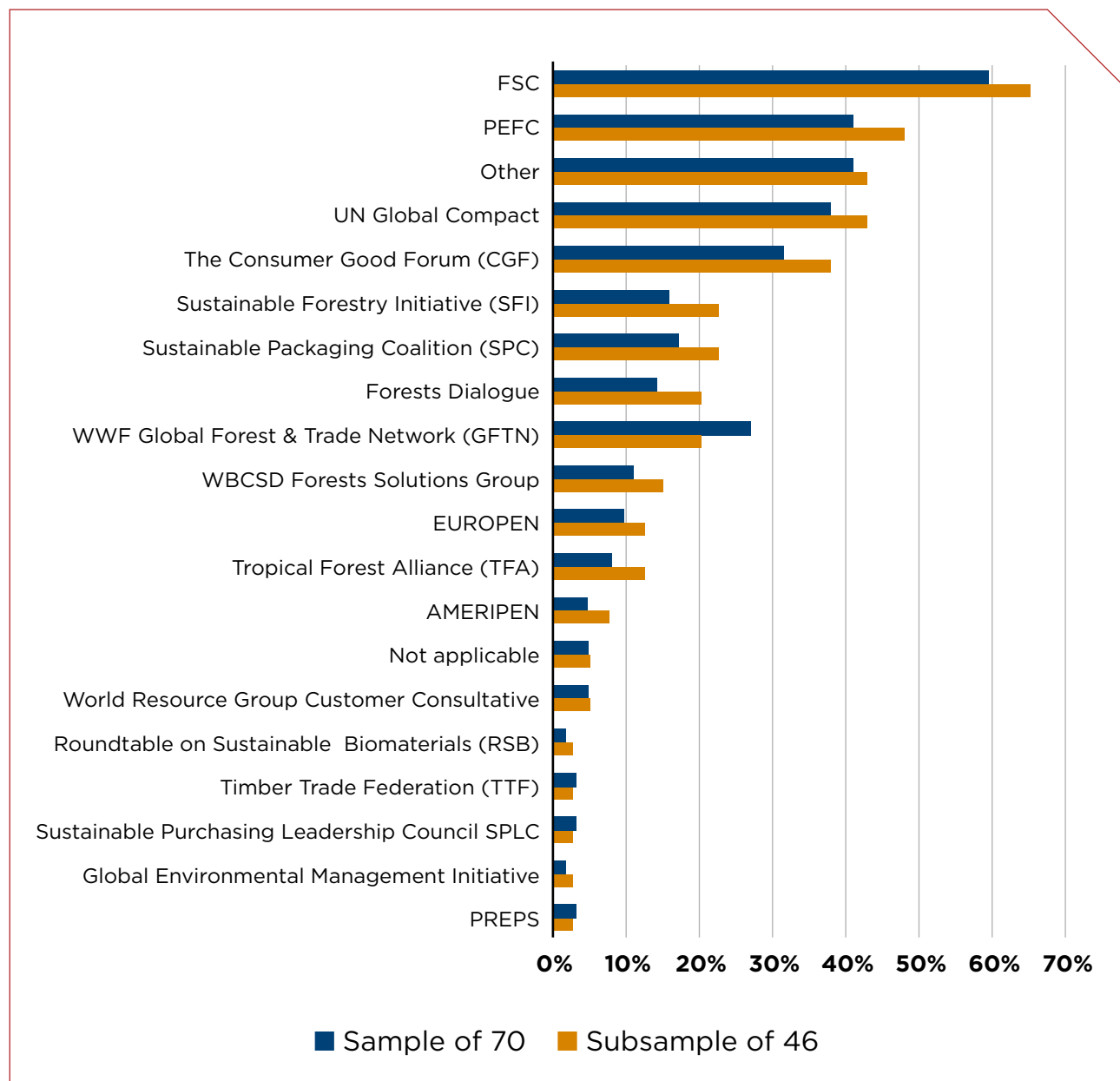
In the case of palm oil, the predominant initiatives are the Roundtable on Sustainable Palm Oil - RSPO, 83% – and the Consumer Goods Forum, 63%.

**Chart 31 – Companies that reported on palm oil and are engaged in multi-stakeholder initiatives**



Forest products: the most quoted initiative is the Forest Stewardship Council - FSC (65%), followed by the Programme for the Endorsement of Forest Certification - PEFC (48%), the UN Global Compact (43%), and the Consumer Good Forum (38%). Samples varied.

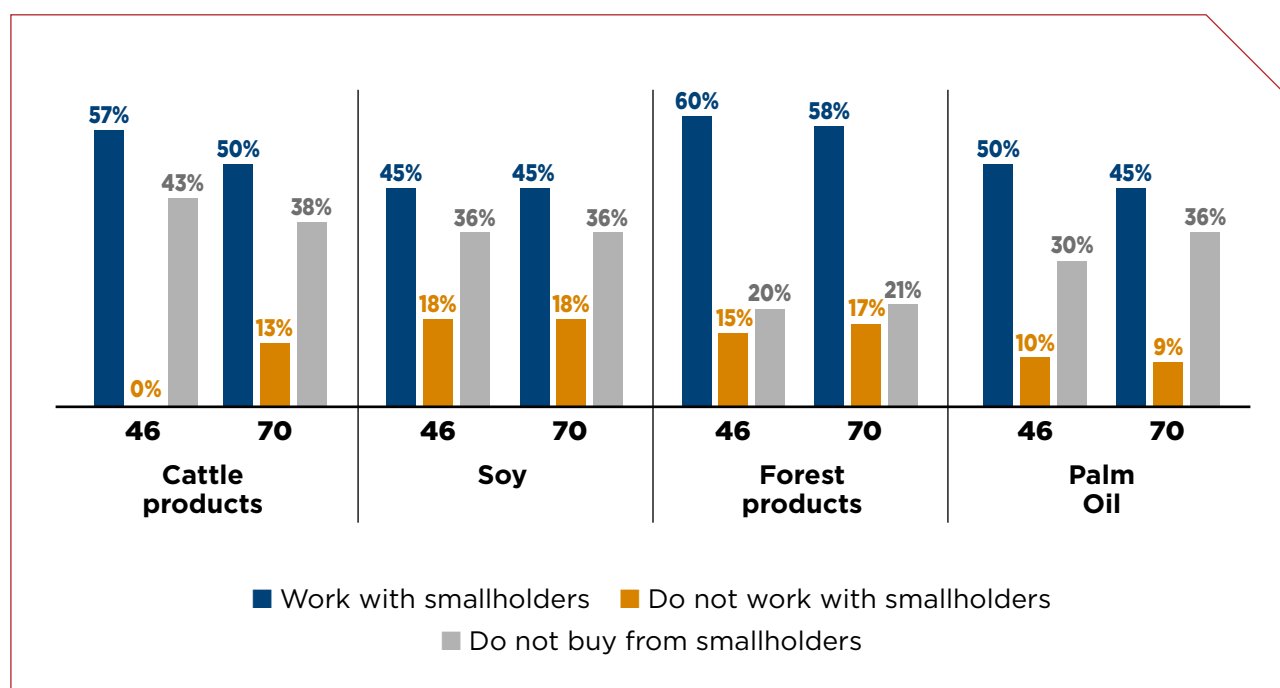
**Chart 32 – Companies that reported on forest products and are engaged in multi-stakeholder initiatives**



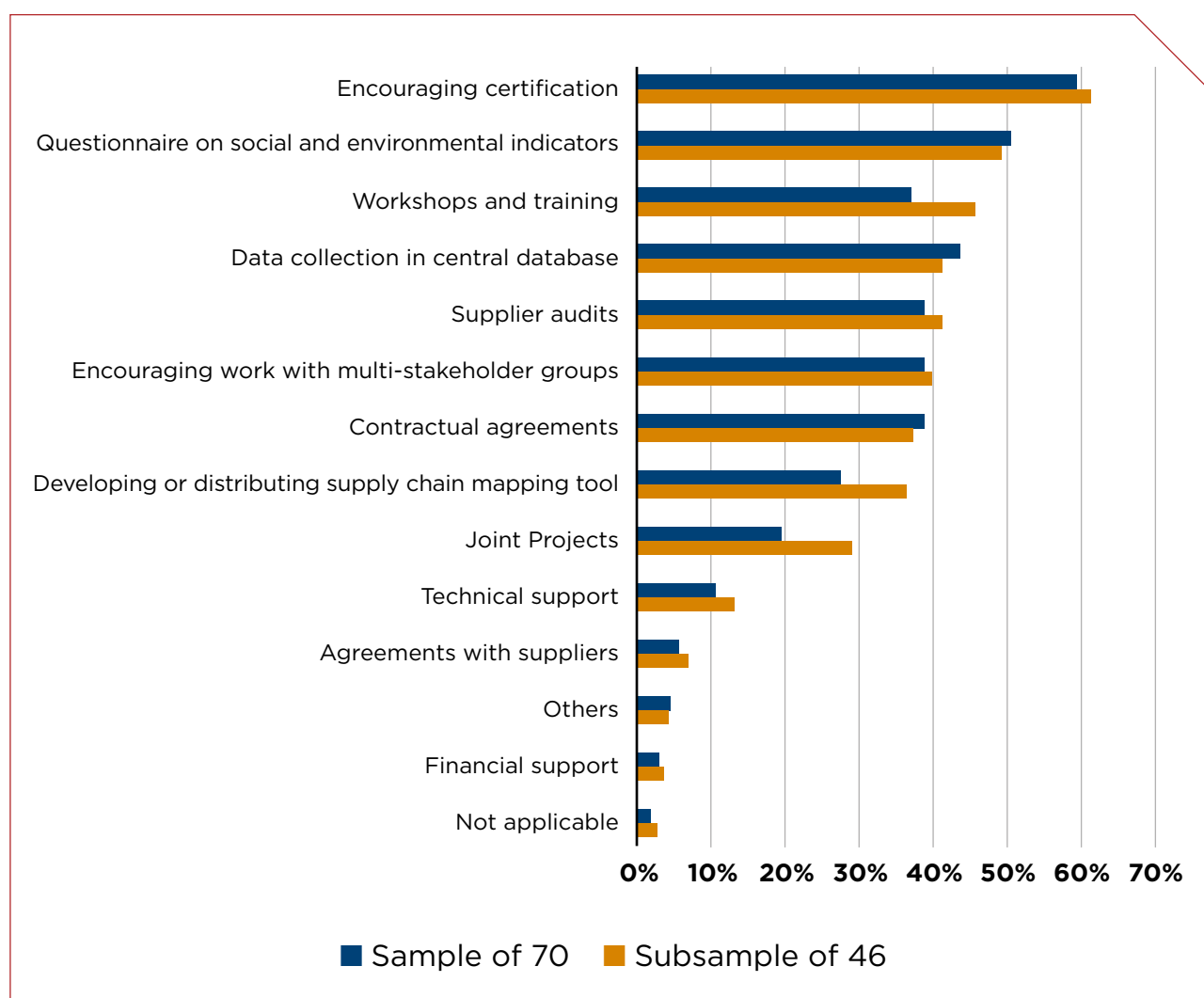
## Initiatives with suppliers and small producers

A significant number of companies pertaining to the first tiers of the production chain - the medium and large producers, processors and traders - indicates that they are working with smallholders to encourage and support sustainable forest management practices. In this sense, 50% of cattle products companies said they have initiatives with smallholders, 45% of soy companies, 58% (forest products) and 45% (palm oil). In other words, on average among these commodities, 50% of companies engage in initiatives with smallholders.

**Chart 33 – Companies that reported on initiatives to engage with smallholders**



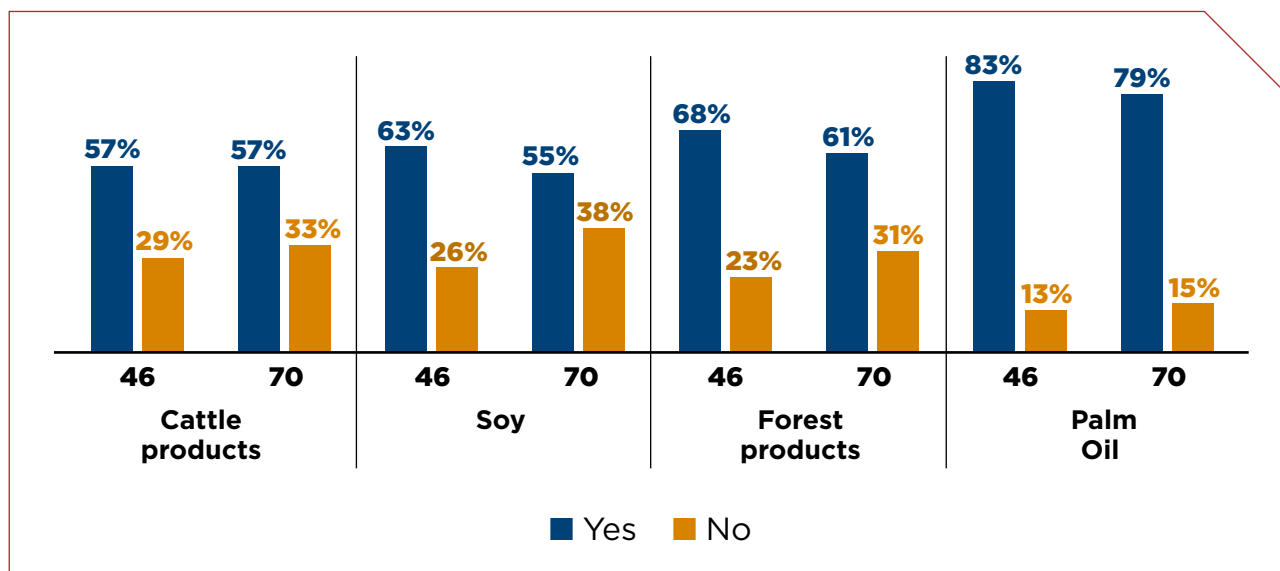
Manufacturing companies and distributors showed an even higher percentage of initiatives to engage with their suppliers: 93% in the two samples on average.

**Chart 34. Supplier engagement actions reported by companies**

The two samples follow the same trend. Considering the companies with operations in Brazil, the most reported were: encouraging certifications (59%), Supplier questionnaires on environmental and social indicators (49%), and workshops and training (45%). These actions are followed by data collection in a central database (41%), suppliers' audits (41%), and encouraging work with multi-stakeholder groups (39%).

57% of cattle products companies responded that they are working beyond the first tier of their supply chain to manage and mitigate deforestation risk. In relation to soy, this percentage was 55%, 61% for forest products; palm oil presented the highest percentage: 79%.

**Chart 35 – Companies that reported engagement beyond the first tier of the supply chain**



The evaluation of qualitative responses from both companies in the sector of cattle products - like JBS and Marfrig - as those working in the supply chain of soy - such as ADM and Cargill - showed that companies, although they know the number of engaged smallholders and suppliers, do not inform the percentage of their representativeness in relation to the universe of suppliers of a given product or the universe of the own company.

In addition, most of the initiatives focus on the Amazonian biome, with few exceptions covering the entire national territory, for example, the “Marfrig Club” and the GTPS in the case of cattle products, and in the case of soy, the Soy Plus program, managed by Above (Brazilian Vegetable Oils Industry Association), and the National Program for the Strengthening of Family Farming (PRONAF) managed by the Ministry of Agriculture, Livestock and Food Supply. As for the latter, it is worth noting that this initiative was mentioned by one respondent, responsible for funding an individual or collective projects for family farming, having green lines of credit with the objective of guaranteeing sustainable production. In relation to forest products and palm oil, most initiatives described by companies involves the support to help smallholders and suppliers get their certifications.



## Benchmarks

**Marfrig** – The first company to sign an agreement with Greenpeace, committing to eliminate the purchasing of cattle linked to deforestation in the Amazon Biome. Marfrig is also a signatory to all agreements and commitments involving deforestation reduction in their productive supply chains in Brazil. It uses geospatial technology to monitor 100% of its direct suppliers and applies a questionnaire requesting information about its indirect suppliers. As for the strategy of engagement, Marfrig Club program is a highlight because it engages direct suppliers to develop best environmental and social practices, offering a bonus to producers.

**Nestlé** – Signed its Commitment on Deforestation and Forest Stewardship in 2011, developing its Responsible Sourcing Guidelines (RSGs) for different commodities to help employees and suppliers implement the commitment; Nestlé also signed the New York Declaration on Forests, and the deforestation reduction commitments of the Consumer Goods Forum. The raw materials considered to have the highest impact on deforestation and forest stewardship, and therefore the priorities for Nestlé to work on, are: pulp & paper, timber, palm oil, and soy. The company identifies possible social and environmental gaps of its suppliers and develops and implements collaborative action plans.

**Unilever** – Unilever runs a sustainable development program called “Unilever Sustainable Living Plan (USLP)”. It applies to all products and to all countries in its portfolio. The plan has 3 major goals, and one of them is to eliminate deforestation in its operations and supply chain. In 2010, Unilever committed to achieving zero net deforestation associated with the four commodities that are major drivers of deforestation by 2020. And for that, they are engaging their employees, suppliers, Governments and non-governmental organizations to develop maps of collaborative pathways. Unilever also conducts engagement with critical suppliers by helping them develop and implement management excellence and best-practice plans.

On September 23, 2014, Cargill endorsed the New York Declaration on Forests. The company pledged to reduce and eventually end deforestation across their entire agricultural supply chain, with the goal of halving it by 2020 and ending it completely by 2030. In 2015, Cargill released a global policy on forests and 5 detailed action plans for priority supply chains: Sustainable Palm Oil (Global); Sustainable Soy in Brazil; Sustainable Soy in Paraguay; Sustainable Corn and Cotton in Zambia; and Sustainable Fibers (Global). Our forest policy provides principles for managing deforestation risk in our supply chain, as well as taking practical steps for implementing actions to eliminate deforestation across the entire supply chain by 2030.

#### **Cargill**

Excerpt from the company's response to CDP's 2016 Forests Program

L'Oréal is committed to working with suppliers to ensure sustainable practices in 1. Full compliance with the laws in the country where it operates, with anti-corruption laws and land tenure. 2. Free prior and informed consent from indigenous people and local communities potentially impacted by new agricultural lands. 3. Conservation and restoration of High Conservation Value and High Carbon Stocks Areas when expanding plantations. 4. Renouncement to peat clearance for new plantations and the adoption of a responsible maintenance system of peatlands in existing plantation.

#### **L'Oréal**

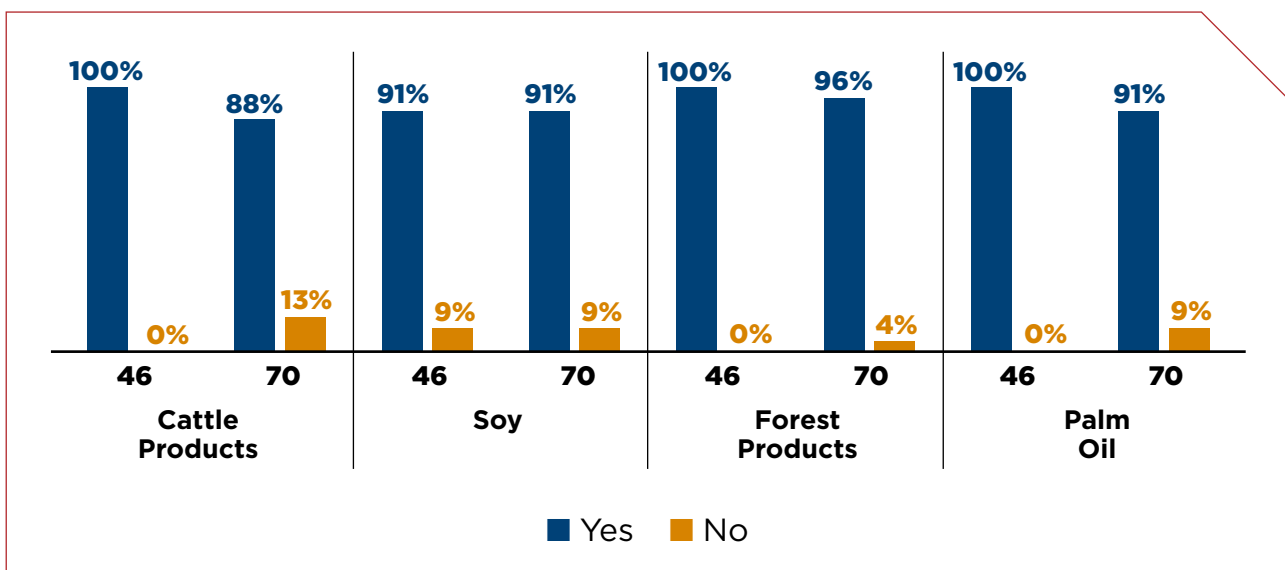
Excerpt from the company's response to CDP's 2016 Forests Program

# Monitoring and traceability

**W**hen asked if they have a system in place to monitor and trace the origin of their raw materials, the majority reported the following: cattle products (88%), soy (91%), forest products (96%) and palm oil (91%). When assessing only the sample of companies with operations in Brazil (chart below), both for cattle products and for forest products and palm oil, all companies informed that they have systems in place to trace the origin of their products.

However, these monitoring and traceability systems do not cover all the products produced and/or consumed. In relation to cattle products, 63% of companies reported that their system covers all products, and for companies with operations in Brazil that figure rises to 71%. In relation to soy, the percentage of companies that have a monitoring system covering 100% of their production is 45% in both samples. In relation to forest products, this number rises to 79% in the larger sample and 85% in the sample of companies with operations in Brazil. Palm oil: 36% of companies indicated a system that covers all products in the sample of 70 companies and 40% in the sample of 46 companies.

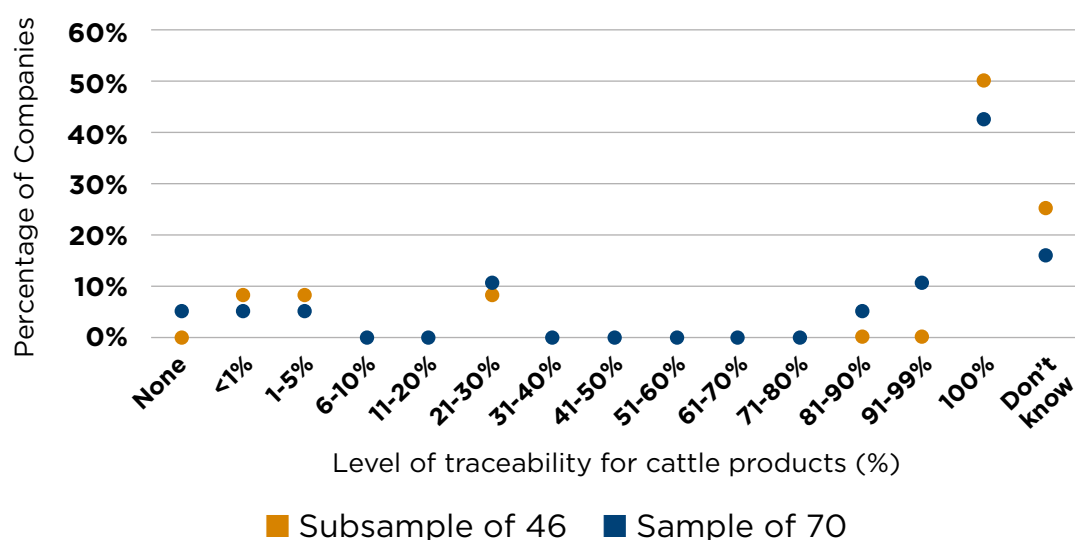
**Chart 36 – Companies that have reported the existence of a tracking system in place to monitor the origin of their products**



## Cattle products

The details of this question reveal that, in the case of cattle products, more than 80% of the operations of 58% of respondents (sample of 70 companies) have some kind of traceability system. The number of companies that track 100% of their operations is higher in the sample that contains only companies with operation in Brazil (50% vs. 42%). Still, there is a considerable amount of companies that do not know how to specify the operational coverage of their tracking system: 16% in the sample of 70 companies and 25% in the sample of 46 companies.

**Chart 37 – Respondents’ level of traceability for cattle products, in percentage of the operation**



Most companies (32%) can trace their product origin to the agricultural property level, at least from their direct supplier, followed by 21%, which can identify only the country of origin of the raw materials, 16% trace the slaughterhouse, 11% trace the area (state and jurisdiction for example) and 5% trace to the tannery. The same trend is observed in companies with operations in Brazil, of which 42% can track up to the rural land, 25% identify only the country of origin, 17% the slaughterhouse and 8% the region.

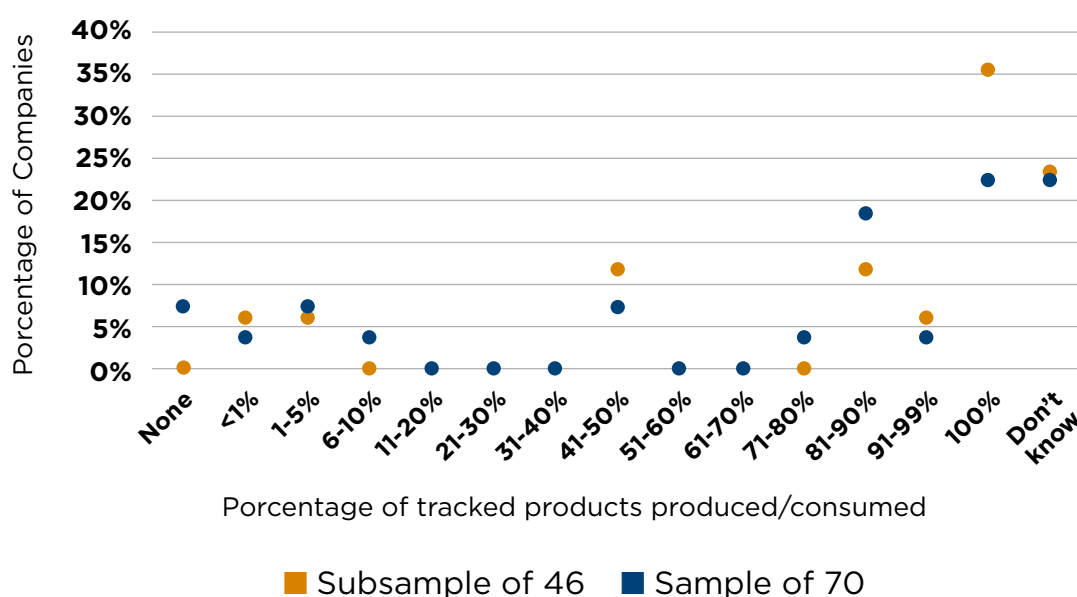
In the qualitative assessment of the answers, all the big cold store companies (JBS, Marfrig, and Minerva) described the existence of robust traceability systems, supported by tools and geo-referenced databanks, as well as external audits. These systems

help ensure the highest levels of compliance with the legislation and their corporate policies. In the case of JBS, it is possible, for example, to estimate even the safety margin of audits that can be reported as they occur. However, none of these companies monitor their indirect suppliers based on primary information, and the adoption of these monitoring systems are only related to the Amazon.

## Soy

In relation to soy, more than 80% of the operations of less than 50% of respondents have some kind of traceability system in place; and an even smaller group of companies monitors and tracks 100% of its operations. In comparison with companies that reported having operations in Brazil, the greatest difference lies in companies that monitor 100% of their operations, which percentage rises from 22% to 35%.

**Chart 38 – Respondents’ level of traceability for soy, in percentage of the operation**



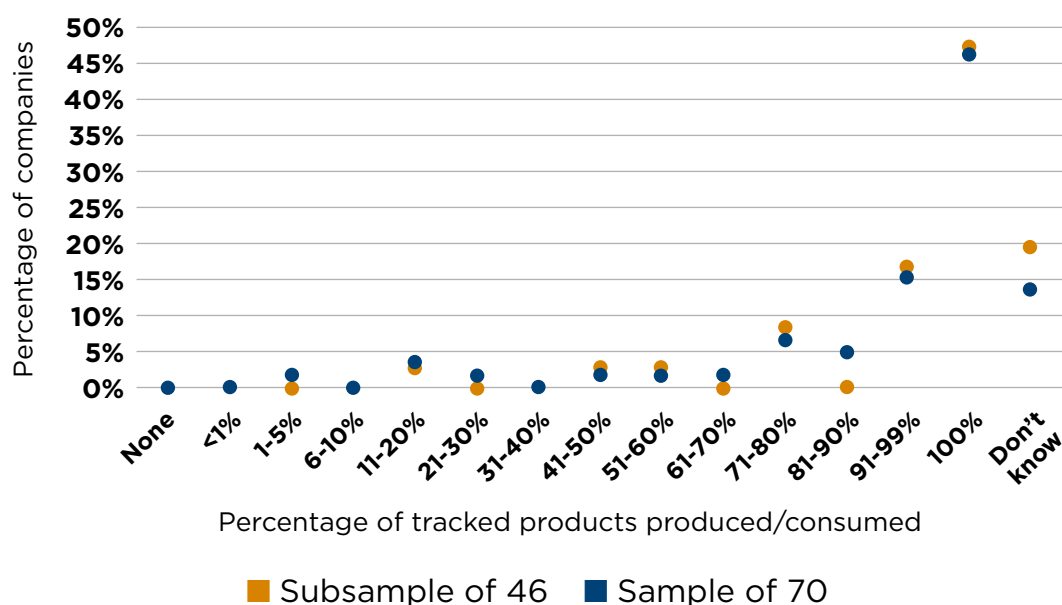
In relation to the level of traceability, most can identify the country of origin of the product (33%), 19% identify the region (states and subnational jurisdiction), 11% the rural land and 7% the processing unit. The numbers change when only the sample of companies with operations in the country are considered: 29% identify the country, 24% know the region, 18% identify the rural land and 12% the processing unit.

All major producers and traders, like ADM, Amaggi, and Cargill, reported working with partner NGOs to track their products, as for example with The Forest Trust (TFT) and the Earth Alliance. Companies of the final stages of the production chain, such as L'Oréal and Unilever, mentioned tools linked to certification schemes, especially the RTRS, to assist them to trace the origin of their products.

## Forest Products

Forest products are the ones that present the highest traceability and monitoring percentages; 66% of the respondents in the sample of 70 companies indicated that more than 80% of their operations are covered, and almost 50% of companies track 100% in both samples. Yet, 14% reported that they do not know how to identify this percentage.

**Chart 39 – Respondents' level of traceability for Forest Products, in percentage of the operation**



In relation to the level of traceability, 34% can identify the country of origin, 19% the forest area, 15% the Forest Management Unit, 14% the processing unit and 14% the region. When evaluating only the sample of companies with operations in Brazil, 33% can identify the country of origin, 17% the forest management unit and processing, and 11% the region (state and sub-national jurisdiction).

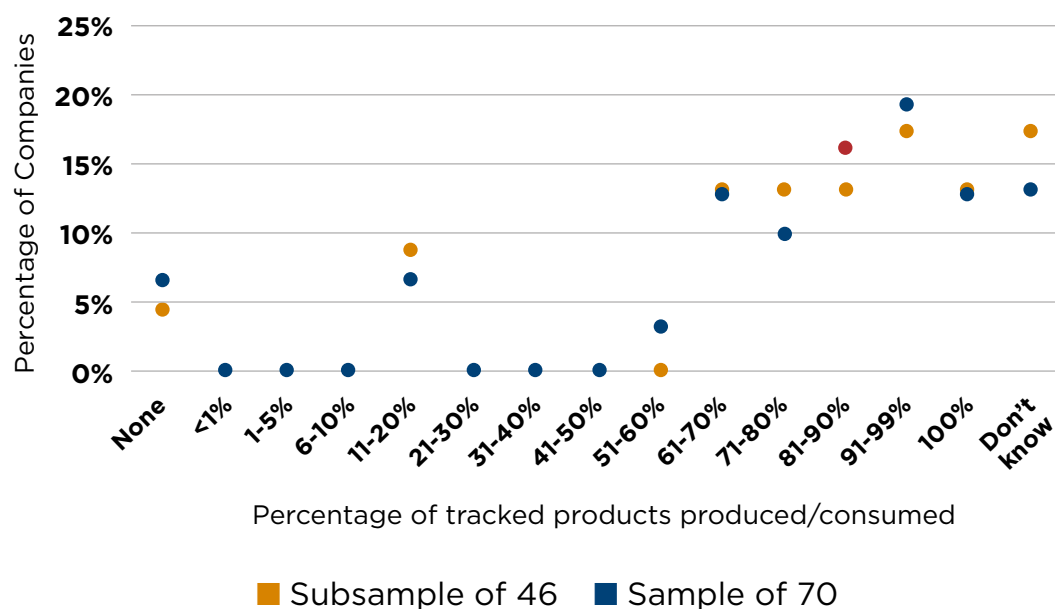
companies of the first links of the chain, as Fibria and Klabin, use systems and procedures recommended by the Chain of Custody Standards (certification), once again showing a strong presence of these initiatives, mainly the FSC as and the CERFLOR/PEFC as guiding of best-practices. Companies belonging to the last links in the chain, as Kimberly-Clark, Tetra Pak, L'Oréal, and Unilever use internal systems and specific software to trace these materials, in which the information provided by the chain-of-custody seals are inserted.

A prominent case is Unilever that besides having an internal system, called Global Traceability System (GTS), through which it reports all consumed volumes, it compares them to the verified information of the chain of custody certification, and at last the source information is compared to the geographic information of the Global Forest Watch (GFW) system to calculate the potential deforestation risk from the company's procurements.

## **Palm oil**

48% of companies reported monitoring and traceability of more than 80% of its operations. 13% indicated that they do not know the coverage of their systems and 23% reported monitoring percentages between 60% and 80%. The sample of companies with operations in Brazil follows more or less the same trend, as illustrated in the following graph.

**Chart 40 – Respondents' level of traceability for palm oil products, in percentage of the operation**



In relation to the level of traceability, 52% reported that they can identify the raw materials processing plant, 32% know the country of origin, 3% the management unit, 3% the plantation, and 3% the region (state and sub-national jurisdictions). For companies with operations in Brazil, 61% can track up to the processing unit, 22% can identify the country, 4% the management unit, 4% the plantations and 4% claim not to be applicable.

As to the qualification of these systems, the industry appears to be a hybrid of the soy and the forest sector: in addition to engage with NGOs for the traceability and monitoring of its suppliers, companies that operate at the first links of the chain implemented certification schemes that include the chain of custody standard; companies pertaining to the last links of the chain use the tools of the Roundtable on Sustainable Palm Oil (RSPO) and International Carbon Certification System (ISCC).



## Benchmarks

**Marfrig** — There is a continuous geospatial monitoring and annually audits by an independent third party for all its Amazon and Marfrig Club suppliers. Additionally, the company is always verifying the IBAMA list of embargoed areas for illegal deforestation and the INCRA database that identifies any land irregularities and evidences of land invasions. In addition, the company requires the Animal Transport Permission (GTA) through which it is possible to get information from indirect suppliers, and it also requires information from its direct and indirect suppliers through a questionnaire.

**Nestlé** – works in partnership with The Forest Trust and the ProForest to map all suppliers to the level of farm or forest. Even if it is restricted to the first links of the chain, the company intends to integrate this tracking system to its direct suppliers, and to collaborate to the development of better traceability of the same system. The company also identifies the percentage of products tracked for each commodity and presents an action plan for achieving 100%.

**Unilever** – the company has traceability systems specific to each commodity. In all cases they track up to the farm or forest area, collecting information of geographic location of all suppliers. For some products this information is shared with partner organizations, as WRI (World Resources Institute), IDH (The Sustainable Trade Initiative) and CORE (Daemeter, Proforest and Rainforest Alliance), for risk assessment and the development of a monitoring plan. In addition, it performs due diligence on each supplier, working with RTRS in relation to soy products, and having some 100% certified product lines. The company also identifies the percentage of products tracked for each commodity and presents an action plan for achieving 100%.

We have defined a specific procedure for all Marfrig Global Foods units in Brazil. This is a clear procedure that aims to raise producer awareness on the company's commitments to ensure that the purchased products did not come from deforested areas. We work directly with our direct suppliers to identify the indirect (second link in the chain) suppliers, using the RFI (Request for Information) tool developed to map and identify the commitment's risks of non-compliance. This tool provides the name, farm, and indirect supplier country to be verified.

**Marfrig**

Excerpt from the company's response to CDP's 2016 Forests Program

Carrefour has developed its Carrefour Quality line of products over the past 20 years. This product line allowed Carrefour a direct relationship with 25,000 producers worldwide (for all types of products). So, we have also integrated cattle products to this approach, to know the origin of these products. This program was developed mainly in Brazil (Carrefour cattle products actions are focused on Brazil since in Europe products are bought regionally). Suppliers of Carrefour Quality Line meat are regularly audited in relation to their methods of production and traceability from the production system up to stores and consumers.

**Carrefour**

Excerpt from the company's response to CDP's 2016 Forests Program

# Conclusions and recommendations

**B**elow, we highlight some points that may be important to the deforestation risk assessment of banks in its operations:

- ▲ Most respondent companies adopt a deforestation risk assessment and/or traceability system. It is recommended that financial institutions consider these aspects in their analysis.
- ▲ However, a case-by-case assessment is still required, since these mechanisms of deforestation risk assessment and traceability systems vary widely according to the supply chain, the company link in the supply chain, the size of the Organization and the maturing state of its sustainability practices.
- ▲ Cattle products and soy supply chains should be considered critical when assessing deforestation risks because the reputational impacts of these are the most reported.
- ▲ Since most commitments and initiatives apply only to the Amazon, leaving a large gap of risk compared to other biomes, such as the Cerrado, which also features high rates of deforestation, the risk assessment, and monitoring system should consider the entire national territory.
- ▲ For forest and palm oil products in Brazil, sustainability certification should be heavily considered since it is already a common practice.
- ▲ In the case of soy and cattle products supply chains, certification represents a niche market and could be considered as an additional criterion as it is an indicator of risk reduction.
- ▲ Since there is no company that engages with all its suppliers, a greater engagement of companies with their direct suppliers should be encouraged.
- ▲ The assessment of business commitments scope and coverage is relevant because, in most cases, although there is a policy for reducing deforestation, only a certain percentage of products produced and/or consumed are tracked.
- ▲ Finally, studies have shown that deforestation risks, albeit in a non-uniform way, is already handled by the supply chains of soy, cattle and forest products. The Banks attention to the issue would stimulate advances in their mitigation, with positive reflections on the quality of the credit portfolio of financial institutions.

# Annex I

## Scoring Methodology

**S**coring at CDP is mission-driven, focusing on CDP's principles and values for a sustainable economy, and highlighting the business case to do this. Scoring provides a roadmap to companies to achieve best practice and by developing the scoring methodology over time, we can drive changes in company behavior to improve environmental performance. The scoring methodologies have been designed to incentivize actions that are applicable to a certain extent to all companies, in all sectors and in all geographies.

CDP methodologies are public and undergo an annual review process; to learn more about the methodologies and materials please go to <https://www.cdp.net/en/guidance/guidance-for-companies>; please see the introductory material available [here](#) to understand the details of our scoring methodology.

For this analysis criteria, CDP used the scoring methodology of its Forest Program (available [here](#)); to perform the analyses it is necessary to understand the criteria for CDP Points Allocation, the Scoring Structure, the A-list criteria and the methodology itself applied to the research.

### Points allocation

Responding companies will be assessed across four consecutive levels which represent the steps a company moves through as it progresses towards environmental stewardship. The levels are:

- ▲ **Disclosure;**
- ▲ **Awareness;**
- ▲ **Management;**
- ▲ **Leadership.**

At the end of the scoring, the number of points a company has been awarded per level is divided by the maximum number that could have been awarded. The fraction is then converted to a percentage by multiplying by 100 and rounded to the nearest whole number.

A minimum score of 80%, and/or the presence of a minimum number of indicators on one level will be required to be assessed on the next level. If the minimum score threshold is not achieved, the company will not be scored on the next level (see below for figures).

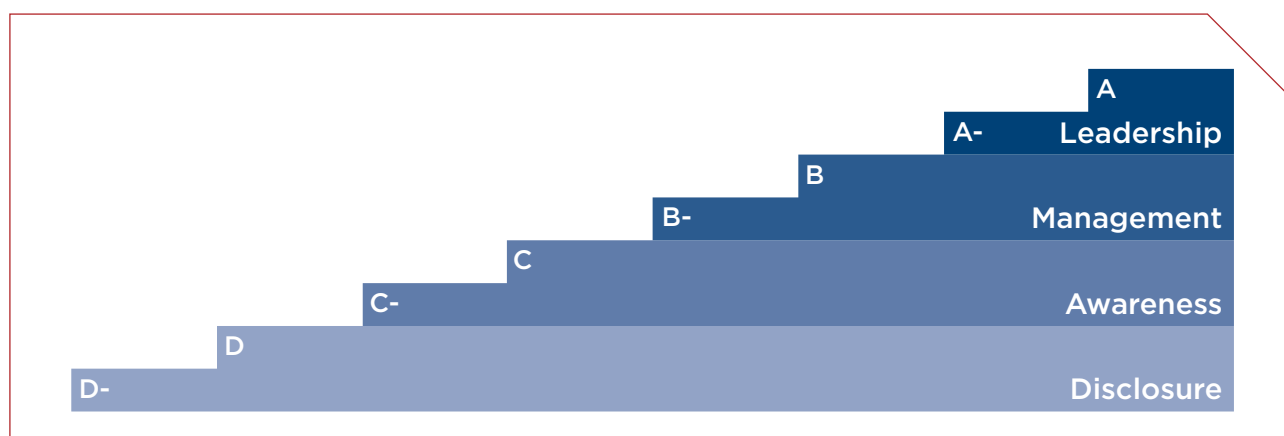
**Fig. 1 – Level of completeness required at each level to be assessed at the next level**

<b>Disclosure</b>	0 - 44%	D-
	45 - 79%	D
<b>Awareness</b>	0 - 44%	C-
	45 - 79%	C
<b>Management</b>	0-44%	B-
	45 - 79%	B
<b>Leadership</b>	0 - 79%	A-
	80 - 100%	A

Not all companies requested to respond to CDP do so. Companies who are requested to disclose their data and fail to do so, or fail to provide sufficient information will receive an F, which signifies their failure to provide sufficient information to CDP to be evaluated for Climate Change. An F does not indicate a failure in environmental stewardship.

The final letter grade is awarded based on the score obtained in the highest achieved level. For example, Company XYZ achieved 88% in Disclosure level, 82% in Awareness and 65% in Management will receive a B. If a company obtains less than 44% in its highest achieved level, its letter score will have a minus. For example, Company 123 achieved 81% in Disclosure level and 42% in Awareness level resulting in a C-. However, a company must achieve over 80% in Leadership to be eligible for an A and thus be part of the A-List, which represents the highest scoring companies.

**Fig. 2 – Scoring routes towards leadership in terms of score**



Results will be communicated to responders with their current level, indicating which areas of environmental stewardship they are performing well in, and which actions to target for improvement.

Questions may include criteria for scoring across more than one level. All the questions are scored for the disclosure level. Some of the questions have no awareness, management or leadership level scoring associated with them.

CDP scoring does not yet make any assessment of the impacts of a company's disclosed environmental management or environmental risk mitigation activities. The CDP score is based solely on activities and positions disclosed in the CDP response, which are necessarily limited in nature.

It, therefore, does not consider the range of other company actions not mentioned in the response, and score users are asked to be mindful that actions not mentioned in the response may be environmentally positive or negative. Since environmental issues can be extremely specific to environmental, geographical, social and business contexts in which they occur, assessing the impact and developing comparable measures of impact will only be attempted in future versions of the methodologies, likely alongside sector-specific methodology development, as part of a new CDP initiative called [Reimagine Disclosure](#).



## Disclosure Level Scoring

---

Every question in the questionnaires is scored for disclosure. In general, the number of points allocated to each question depends on both the amount of data requested and its relative importance to data users. Where the information is of particularly high importance, questions have more than one point attached to a single piece of information. Questions which allow text responses are usually scored according to how many of the required data points are supplied – all required data points are set out in the scoring methodologies.



## Awareness Level Scoring

---

The awareness score measures the comprehensiveness of a company's evaluation of how environmental issues intersect with its business. Companies' evaluations should include the impacts of business activities on the environment, and how these activities affect people and ecosystems, as well as impacts the environment may have on business activities. This will influence the degree of business risk that a particular company faces.

The awareness score does not indicate that a company has taken any actions to address environmental issues beyond initial screenings or assessments. Action to address issues is measured in the next level of scoring - Management.

To progress to the Management level, a company must have scored over a threshold percentage of the available awareness points, showing that they have assessed a broad range of environmental issues and demonstrated a basic level of awareness of how these issues intersect with its business.



## Management Level Scoring

---

Management points are awarded for answers that provide evidence of actions associated with good environmental management, as determined by CDP and its partner organizations. Answers representing more advanced environmental stewardship have more points associated with them.

After assessing how its business impacts the environment and how the environment impacts its business, a company can decide which actions to take to reduce negative impacts. Efforts can be made to mitigate risk, advance environmental accounting in at-risk sites, make risk assessments more robust and comprehensive, implement an environmental policy and integrate environmental issues into business strategy.

The management score rewards action in all these areas. Since environmental issues can be context-specific as well as often being specific to a particular company's business operations, it is all but impossible to recommend a particular course of action as universally correct to all companies, especially in the forests and water programs. Management scoring, therefore, relies on companies' disclosure of processes and procedures more than judging the appropriateness or effectiveness of particular actions undertaken.





## Leadership Level Scoring

To earn leadership status, the company response must score leadership points as detailed in the methodology. These actions represent best practice as formulated by organizations working with CDP to advance environmental stewardship (e.g. CEO water mandate, CERES, WWF) and in many cases, have already been reported to CDP by companies leading in environmental policy and practice.

To reach leadership status in the forests program, a company must again score highly at all other levels, as well as disclose actions that mark them as leaders. They must report on all relevant operations, supply chains, and commodities, making no significant exclusions, have undertaken a comprehensive and thorough risk assessment of all operations and supply chains and have committed to zero deforestation in all operations and supply chains by - at least - 2020.



## A-List

To acknowledge companies' positive and effective actions to mitigate risks due to climate change, water issues and deforestation, CDP recognizes organizations awarded a high leadership score via inclusion in the A List of their respective program. For a company to achieve A-List status, companies must ensure several items are included in their response, as well as pass several checks carried out by CDP after the submission of the response.

# Annex II

## Companies' Score

Name of company	Cattle products	Palm	Soy	Forest Products
Agropalma				
Ahlstrom Corporation				C
Ajinomoto		A-	B	B
ADM		B	B	B-
Associated British Foods		C	C	C
Avon		C		C-
Boots UK	B-	B	B-	B
Brambles				B
Bunge		B	C	
Cargill		A-	C	
Carrefour	C	B	B	B
Colgate Palmolive Company	B	B	B	B
Crest Nicholson				A-
Danone		B	B	B
Domtar Corporation				C
DS Smith				A-
Empresas CMPC				
Fibria				A-
General Mills		A-		C
Grupo André Maggi	B		B	B
Grupo Bimbo, S.A.B. de C.V.		C		
Grupo Herdez				
Herman Miller				B
Home Retail Group				C
Inditex	A-			A
International Paper Company				
Itochu Corporation		C		C
Sainsbury	B	A-	B	B
JBS	A-		A-	A-
Jerónimo Martins SGPS S/A	B	A-	B	B
Johnson & Johnson				
Kellogg Company		A-		B

Name of company	Cattle products	Palm	Soy	Forest Products
Kimberly-Clark Corporation				A-
Kimberly-Clark de México S.A.B. de C.V.				A-
Klabin				A-
Lojas Renner	C-			C-
L'Oréal		A	A-	A
Marfrig Global Foods	A-	D	B	B
Mars	C	C	C	C
Marubeni Corporation	B	B	B	B
McDonald's Corporation	C	B	B	B
Minerva Foods	B			
Mondi				A
Multi-Color NACPG			D	B-
N Brown Group				A-
Natura Cosméticos		B		B
Nestlé	A-	A-	A-	A-
Nippon Paper Industries Co., Ltd.				B
Oji Holdings Corporation				B-
Orkla ASA		C	C	C
PepsiCo		B-		B-
Reckitt Benckiser	A-	A-	A-	A-
Saint-Gobain				B
Sappi				A-
Sekisui Chemical				B
Shiseido		B	B	B
Skanska AB				C
SLC Agrícola			C	
Smurfit Kappa Group				B
Sofidel				A-
SWM				B
Tesco	D	C	C	C
Tetra Pak				A
Toyo Seikan Group Holdings, Ltd.				C
Travis Perkins	C			B
Unilever	A	A	A	A
Wesfarmers	C	C	D	C
WestRock Company				B
Williams-Sonoma				B
Woolworths Holdings	C	A-	B	C

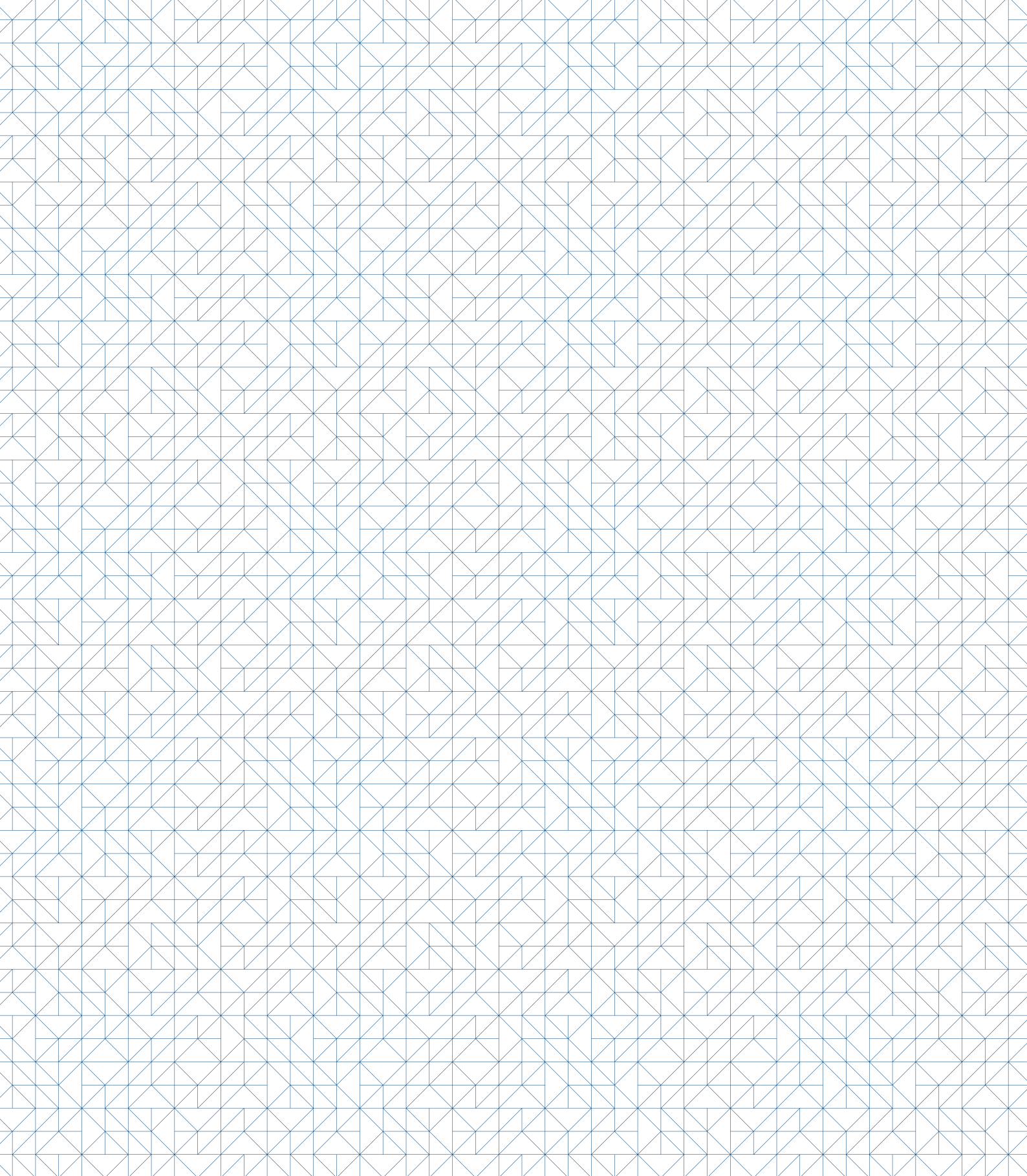
# Annex III

## Questions Assessed

Code	Question	Stratification	Quantitative Analysis	Qualitative Analysis
<b>F0.2</b>	Please select the stages of the value chain which best represent your organization's area of operation pertaining to forest risk commodities. If your organization is diversified or vertically integrated, please select all that apply	Link	Yes	Yes
<b>F0.6</b>	Please confirm which commodities you will be disclosing on.	Product	Yes	Yes
<b>F1.1</b>	How does your organization use your selected commodities? Please provide details on the form and source of the commodities you use or produce	Product	Yes	No
<b>F1.2</b>	Please indicate the percentage of your organization's revenue that was dependent on each of your selected forest risk commodities in the reporting year	Product	Yes	No
<b>F1.3</b>	Has your organization experienced impacts related to forest risk commodities that have generated a substantive change in your business operations, revenue or expenditure in the past 5 years?	Organization	Yes	No
<b>F1.3a</b>	Please identify the impacts related to forest risk commodities that have generated a substantive change in your business operations, revenue or expenditure in the past five years.	Product	Yes	Yes
<b>F2.1</b>	Please select the option that best describes your procedures with regard to assessing deforestation risks and opportunities.	Product	Yes	Yes
<b>F2.1a</b>	Please provide further details on your risk assessment procedures with regard to deforestation risks and opportunities	Product	Yes	No
<b>F4.1</b>	Have you identified any opportunities related to producing, marketing or sourcing these commodities sustainably that have the potential to benefit your organization?	Product	Yes	No

Code	Question	Stratification	Quantitative Analysis	Qualitative Analysis
<b>F4.1a</b>	Please describe the opportunities related to producing, marketing or sourcing these commodities sustainably, and your organization's strategy to capitalize on them	Product	Yes	No
<b>F5.2</b>	Does your organization collect production and/or consumption data for your selected commodities?	Product	Yes	No
<b>F5.2a</b>	Please disclose your production and/or consumption data	Product	Yes	No
<b>F6.1</b>	Do you have a system in place to track and monitor the origin of raw materials for your selected commodities?	Stage (PPT)	Yes	No
<b>F6.1a</b>	Please describe the system you have in place to track and monitor the origin of raw materials for your selected commodities	Stage (PPT)	Yes	Yes
<b>F6.3</b>	Please provide details on the level of traceability your organization has for your selected commodities.	Stage (MR)	Yes	Yes
<b>F6.3a</b>	Please describe your organization's approach to establishing traceability	Stage (MR)	No	Yes
<b>F8.1</b>	Do you have a company policy that recognizes the role of deforestation in climate change mitigation, and that establishes clear targets and guidance for action?	Organization	Yes	No
<b>F8.2</b>	Has your organization made a commitment to reduce or remove deforestation and forest degradation from your direct operations and/or supply chain?	Organization	Yes	No
<b>F8.2a</b>	Please identify which of the following criteria are specifically stated in your organization's commitment to reduce or remove deforestation and forest degradation from your direct operations and/or supply chain?	Organization	Yes	Yes
<b>F8.4</b>	Do you have commodity specific sustainability policies?	Product	Yes	No
<b>F9.1</b>	Do you have any environmental standards to produce raw materials for your selected commodities, other than third-party certification schemes?	Stage (PPT)	Yes	No

Code	Question	Stratification	Quantitative Analysis	Qualitative Analysis
<b>F9.2</b>	Does your organization enforce any procurement standards that impact your sourcing of forest risk commodities?	Stage (MR)	Yes	No
<b>F9.3</b>	Are you involved in any multi-partnership or stakeholder initiatives relating to the sustainability of these commodities? Please describe your role.	Product	Yes	No
<b>F9.4</b>	Do you specify any third-party certification schemes for your selected commodities? Please indicate the percentage of total production and/or consumption currently certified	Product	Yes	No
<b>F9.5</b>	Do you have any quantified targets for third-party certified materials in your direct operations and/or supply chain?	Product	Yes	No
<b>F9.6</b>	Do you have any quantified targets for sustainable production and/or procurement, other than third-party certification?	Product	Yes	No
<b>F10.1</b>	Have you identified sufficient sources of sustainable materials to meet your operational needs? Please explain what you are doing to ensure security/continuity of supply	Product	Yes	No
<b>F10.2</b>	Are you working with smallholders to encourage and support sustainable forest management practices?	Stage (PPT)	Yes	Yes
<b>F10.3</b>	Are you working with your direct suppliers to support and improve their capacity to supply sustainable materials?	Stage (MR)	Yes	Yes
<b>F9.4</b>	Are you working beyond the first tier of your supply chain to manage and mitigate risk?	Product	Yes	Yes
<b>F9.1</b>	Please describe any key barriers or challenges to achieving deforestation-free direct operations and supply chains	Organization	No	Yes



Prepared for:

