



Company Selection methodology 2022

How are the 350 companies in the Forest 500 identified?

About the Forest 500:

Forest 500, a Global Canopy project, identifies and ranks the most influential companies and financial institutions in the race towards a deforestation-free global economy.

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About Global Canopy:

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INTRODUCTION

A limited number of companies globally report on the total volumes of forest risk commodities they produce, process, use or retail, while even fewer report on exact quantities from specific forest countries. As a result, a truly objective ranking of companies and their potential impacts on tropical forests through their direct involvement in forest risk commodity supply chains is not possible using a universal methodology. Therefore, in order to identify which companies to include in the Forest 500, it was necessary to develop a methodology measuring relative risk of exposure to forest risk commodity supply chains. This combined quantitative and qualitative research; analysing trade patterns, product types and overall commodity supply chains from the countries where they originate to those where they are consumed. This methodology was first used in 2014, and has been updated every two years to reflect newly available data and information.

Specifically, it has been possible to identify which companies play the most important roles along forest risk commodity supply chains using a combination of market research data, customs data from ships' manifests, information on the major uses of forest risk commodities, and market share data for specific product segments and companies.

Market concentration in particular is an indicator of power within supply chains. Therefore, only companies occupying a relatively large market share within their respective areas of operations have been included in the Forest 500. Measures of market share have been prioritised over attempts to ensure equal representation of different supply chain stages to ensure the inclusion of true supply chain powerbrokers. Furthermore, the identification of supply chain bottlenecks provides strategic focus to supply chain stages where targeted action can achieve transformational change with regards to sustainability.

It is worth highlighting that the highly complex nature of supply chains, whereby many different actors are involved in transforming commodities and products or providing services along the value chain, has made it necessary to simplify supply chains into distinct segments. The absence of coherent reporting and the lack of definitive data in large sections of these supply chains and the jurisdictions in which they operate has resulted undoubtedly in an incomplete list, where additional relevant actors may exist but could not be identified, or cases where the data has not allowed for a clear distinction of players.

The 2022 selection of companies comes following two years of the COVID-19 pandemic, which impacted global trade flows and supply chains - including those of forest-risk commodities. This will have impacted the companies which have been selected to be in the Forest 500 in 2022.

SUPPLY CHAIN SEGMENTS

Forest risk commodity supply chains are complex. Some actors cover multiple stages within specific supply chains and similarly act across the supply chains of several different forest risk commodities. For example, international grain traders are involved not only in trading soya or palm oil, but in many instances also operate as initial processors of oilseeds, food ingredient producers and even manufacturers of consumer products.

Different forest risk commodity supply chains diverge and converge at different stages. For example, soy and palm oil are produced by a large number of farmers and plantation owners but are then traded internationally by just a handful of companies before diverging once more to a much larger number of processing companies, who then sell ingredients to an even larger number of food and feed product manufacturers. These manufacturers in turn usually sell their products to a smaller number of major retailers who offer a variety of products containing palm or soya products.

To identify companies active at various stages of the supply chain, five major company types corresponding to different supply chain segments were identified: (1) producers, (2) processors, (3) traders (importers/exporters), (4) manufacturers, and (5) retailers. Yet, many companies transcend these categories and are therefore represented in more than one segment. These companies are only listed once in the Forest 500 even if they have significant stakes in more than one forest risk commodity, but they are assessed for each forest-risk commodity they are associated with.

PRODUCERS

Producers operate at the first step of the supply chain and are defined as companies that cultivate raw materials, such as soybeans, timber, or oil palm. The 39 key producing countries identified in our 2022 country selection methodology, provided a focus for the identification of producers, for full details please see the country selection methodology [here](#). Producers are classified as ‘upstream’ companies in the Forest 500 assessment [methodologies](#).

PROCESSORS

Processors are defined as companies that convert raw materials into products of added value before they are manufactured into finished consumer and industrial products. For example, slaughterhouses process cattle into beef; soy crushers produce soy oil and soy meal; while soy refineries may further refine soy oil to make ingredients for food products. With a general tendency towards increased processing and value addition within tropical forest countries, commodity processing is an important step in the supply chains of forest risk commodities. Having said that, processing also often occurs within importing countries, such as is the case in the cattle and soy industries, where live cattle or whole soybeans are exported, and multiple processing stages occur before commodities are used in final products. Particularly in the cases of timber and paper products, there may be more than ten stages and companies involved before a final product is manufactured. Processors are commodity-specific and have been identified using a number of sources, including industry reports and customs data. Trade data has been considered in order to prioritise the inclusion of processors located in key importing countries, although processing can occur at multiple supply chains stages and follow complicated trade paths, making it difficult to map all stages and make sure all additional processors are included. Processors are classified as ‘upstream’ companies in the Forest 500 assessment [methodologies](#).

TRADERS/IMPORTERS

These supply chain actors do not transform or add value to commodities but are involved in the physical handling, such as the shipment and storage, of products. Examples include agricultural commodity traders and timber importers. For some commodities, a small number of traders handle a disproportionate volume of the commodity and create a bottleneck. For example, for soy, just 22 traders handle almost 70% of soy

produced globally¹. Traders are classified as ‘downstream’ companies in the Forest 500 assessment [methodologies](#).

MANUFACTURERS

Manufacturers are defined as companies creating final products as sold to retailers, industrial users, or consumers. The focus in the manufacturing sector has been on identifying the companies holding the largest market shares in the production of goods that are most relevant to forest risk commodities, with the largest manufacturers able to influence production by adopting policies that rule out the use of commodities from deforested land. In order to incorporate current forest risk commodity trade patterns and the inclusion of the most relevant industries, the major uses of each forest risk commodity has been analysed and priority has been given to manufacturers operating in relevant industries within the key trading jurisdictions. Manufacturers are classified as ‘downstream’ companies in the Forest 500 assessment [methodologies](#).

RETAILERS

Retail is the final supply chain stage linking finished manufactured products to consumers. Retailers sell products to consumers or industrial users via a large number of channels, including supermarket and convenience stores; speciality stores, for example, footwear stores and ‘Do-It-Yourself’ (DIY) stores; and via online retail sites. Market share research has been used to identify the most important retailers worldwide and in specific consumer jurisdictions. Retailers are classified as ‘downstream’ companies in the Forest 500 assessment [methodologies](#).

SOURCES

A number of data sources have been used to prioritise specific markets for further research in order to identify the most relevant companies. It is important to note that due to a lack of available data, each supply chain segment has been researched using a combination of the sources below.

PRODUCTION STATISTICS

The first step in compiling the private sector representatives to include in the Forest 500 was to identify the key companies responsible for the production of forest risk commodities (growers, ranchers, etc.). Unfortunately, with few exceptions, there is limited data available when it comes to information on concessions, for example a lack of consistent data on areas held and managed by logging companies. Moreover, for some producers, such as soy growers or cattle ranchers, there is low market concentration due to the high number of operators involved. In these cases, actors at later supply chain stages represent the major powerbrokers.

When identifying production data on companies, research was focused on the countries that were previously identified as key producing countries in our 2022 country selection methodology. For full details please see the country selection methodology [here](#).

COMMODITY MOVEMENTS AND TRADE DATA

Understanding the patterns of commodity movements is critical for the selection of the Forest 500. For example, since the majority of Brazilian beef is consumed domestically, the domestic market and the actors in the domestic processing and retail industry need to be prioritised over international actors. On the other hand, it is important to recognise that individual companies with very large market shares in countries with relatively low imports may be more significant than those with smaller market shares in countries with higher imports. Where possible these have been identified and included in the Forest 500.

¹<https://supplychains.trase.earth>

When looking at downstream companies, companies with high market shares in countries identified as key trading partners with the key producing countries were prioritised. For full details on how we selected key trading countries or regions for each commodity, please see the country selection methodology [here](#).

Many different companies can be involved in the shipment of a single commodity, including, for example, producers, exporters, traders, freight forwarders, shipping companies, and overseas importers. For some countries, customs data (from shipping manifests) is available and can provide information on specific supply chain actors. The quality and detail of this data, where available, varies between countries. However, where possible, it has been used to identify key players in commodity supply chains.

[Trase](#) uses customs data to provide consistent information on exporters and importers for a growing number of forest-risk commodities and countries and was used to select traders wherever possible. There were many new Trase datasets launched between 2019 and 2022, which have been included in the 2022 company selection data.

MARKET RESEARCH DATA

After the main producer and trading countries for each commodity had been selected and the appropriate industry sectors identified, market research data was used to identify the key actors within manufacturing and retailing supply chain segments. For example, since one of the key uses of palm oil is its application in the manufacture of confectionery and baking products, data from market research was used to identify the major companies within these industries. Similarly, as China is a significant importer of leather from forest countries and footwear is a key industry of leather processing in the country, major Chinese footwear manufacturers identified according to market research have been included. Market shares of specific companies and the general diversity of the market in each segment have been considered when choosing companies for the Forest 500.

ADDITIONAL SOURCES

The importance of individual companies to each of the forest risk commodities and specifically to their risk of driving deforestation has been assessed using the above sources and supplemented with information from industry and trade magazines, scientific literature, NGO reports and media articles.

PALM OIL

PRODUCERS

Compared to the soy and beef industries, there is a much higher concentration of players in the production of oil palm. A relatively small number of large producers, defined as plantation owners, in addition to tens of thousands of smallholders, make up a large share of total oil palm production in both Indonesia and Malaysia. An analysis of members of the Roundtable on Sustainable Palm Oil (RSPO) based on Annual Communication of Progress (ACOP) reports submitted by each member has been used to identify the major oil palm growers in Indonesia and Malaysia. However, since not all companies are RSPO members or detail specific figures in their ACOP reports, additional research has been carried out to identify key oil palm plantation companies, including analysing SPOTT data which discloses subsidiaries of key producers and processors.

PROCESSORS

For the purpose of this research, the processing sector refers to the transformation of crude palm oil (CPO) to refined palm oil (RPO), as well as the manufacturing of ingredients for various industries. The first step in processing palm oil is the milling of fresh fruit bunches (FFBs) in palm oil mills to obtain CPO. However, there are a large number of mills in operation, and most of these are linked to specific plantations and are commonly owned by larger companies also operating plantation estates. It is therefore the same companies that often mill FFBs from surrounding plantations and from smallholders. In the whole of Malaysia there are over 450 mills compared to around just 51 refineries². Due to the large number of mills and the overlap with producers and additional processors, palm oil mills for CPO have not been assessed separately in this study. Especially since all large plantation holders (and mill operators) have been included in the section on oil palm producers.

In light of this, the focus in identifying the major players in the palm oil processing industry is on palm oil refiners and oleochemical producers. Various sources have been used to identify the main processors (refiners) of palm oil in forest and importing countries, with many refiners of palm oil in importing countries also operating as manufacturers of consumer products, such as cooking oil and margarines. In addition to these, the world's largest food ingredient producers have also been included, with these actors also being of relevance to several other forest risk commodity supply chains.

TRADERS/IMPORTERS

Responsible for moving products from suppliers to buyers internationally, commodity traders play a unique role in forest risk commodity supply chains. However, with increasing private sector concentration, the largest of these companies are not just active in the physical trade of agricultural commodities, but also operate in other capacities; as input suppliers, landowners, cattle and poultry producers, food processors, financiers and investors, transportation providers, and grain elevator operators³. Moreover, traders can also be involved in commodity processing and in the manufacture of consumer goods. As such it is not possible to use a strict definition for the companies in this supply chain segment.

Data from RSPO, Trase and the palm oil directory⁴ were amalgamated to provide a picture of the largest traders of palm oil from the key countries. These were ranked by volumes that could be assigned to them.

² Ghulam Kadir, A., 2020. Oil Palm Economic Performance In Malaysia And R&D Progress In 2019. Journal Of Oil Palm Research

³ Murphy, S. et al. 2012. Cereal Secrets - The world's largest grain traders and global agriculture. Oxfam Research Reports. August 2012. [Online] Available from: <https://www.oxfam.org/en/research/cereal-secrets-worlds-largest-grain-traders-and-global-agriculture> [Originally accessed March 2014]

⁴ <https://palmoildirectory.com/>

MANUFACTURERS

As two of the most important oil seeds traded globally, there is significant overlap in the uses of palm oil and soy in food products. Both palm oil and soy bean oil are used as cooking oils, especially in some of the key exporting countries. Their derivatives are also important for food products, used as emulsifiers, and as ingredients in confectionery and baking products, spreads, ice creams, and snacks. It has been argued that around up to half of all packaged food in supermarkets contains palm oil and soy products⁵, with most companies manufacturing products containing palm oil also using significant amounts of soy and vice versa. The majority of palm oil produced globally is used in food products while a large percentage of soy is also used in animal feed.

A variety of sources have been used to identify key companies involved in the manufacturing sector. This includes market share data for various food production industries and other sources on market leaders, such as from industry magazines and other literature. Market share data was used globally, and looking at the key countries or regions that were identified as key importers of palm oil in our country research (see above).

Palm oil is also a significant ingredient in the cosmetics and detergent industries. The key players in the personal and home care industries have therefore been included in the Forest 500. In addition, as palm oil and soy are major biofuel ingredients in some regions, a small number of biofuel producers have also been identified. Although both commodities are also used as ingredients in industrial products, they are to a much lesser extent and no clear market concentration of specific companies has been determined.

Available data (such as on specific quantities of palm oil used in each industry) do not allow for a purely statistical approach to choosing the companies with the largest power within each sector. Therefore, manufacturers have been chosen according to a number of criteria using market research data. Product categories known to often contain palm oil have been identified. A breakdown of these sectors can be seen in Table 1.

Table 1. Information on market share and 2021 total retail value has been obtained for the following industry sectors.

RELEVANT INDUSTRY SECTORS	
PACKAGED FOOD	Sauces, dressings and condiments
Baby Food	Soup
Baked Goods	Spreads
Butter and spreads	Sweet and savoury snacks
Cheese	BEAUTY and PERSONAL CARE
Chocolate	Skin care
Confectionery	Sun care
Dairy, including yoghurt	Hair care
Dairy alternatives, including yoghurt	Cosmetics
Dried processed food	Bath and shower
Frozen processed food	HOME CARE
Ice cream and frozen desserts	Dishwashing
Oils and fats	Laundry care
Processed meat, and alternatives to meat	Surface care
Rice, pasta and noodles	Toilet care
Ready meals	BIOFUELS

⁵ RSPO. 2008. Promoting the growth and use of sustainable palm oil. Fact sheets. Roundtable on Sustainable Palm Oil.

The top manufacturers of packaged food, personal care, home care and biofuels were selected.

RETAILERS

Forest risk commodities are commonly found in finished consumer food products, such as those sold in supermarkets. Retailers therefore have significant leverage over forest risk commodity supply chains, especially in cases where they sell their own private label product lines and subsequently are directly involved in manufacturing.

Due to supply chain complexities, a lack of reporting, and the fact that most retailers sell products manufactured by other companies, it is not possible to calculate exactly how much of each commodity each retailer sells globally. However, It has been argued that the majority of palm oil produced is used in food products and that around half of packaged supermarket food contains soy and/or palm oil. In countries where supermarkets dominate food retail channels, such as in most European and North American countries, market concentration is much greater than in countries where organised retail channels are still emerging and where most food is sold by small independent stores, such as in India. This variation in market concentration and fragmentation has been taken into account in shortlisting retailers for inclusion in the Forest 500.

As retailers have little control over the supply chains of some of the largest food manufacturers globally whose products they stock, retailers have been prioritised if they have significant sales of their own branded products. In these cases, they have been presumed to control production and have the ability to influence the ingredients used, through their contracts with product manufacturers.

Other highly relevant types of retailers include quick serve restaurants, which use significant amounts of forest risk commodities; such as palm oil, soy, and beef in food products, and paper in packaging. The largest relevant chains have been included, once again, with an emphasis on those chains operating in the main producing and importing countries. As in all other cases, retailers have only been listed once in the Forest 500 even when they prove to be significant players in the supply chains of multiple forest risk commodities, but they are assessed for all relevant commodities.

SOY

PRODUCERS

Soy farming in producing countries is diverse and farm sizes vary greatly. Even though a large proportion of soy production comes from numerous individual farmers with relatively small land banks, a handful of companies operate large areas. The largest companies with soy production in South America were included in the Forest 500.

PROCESSORS

Processors in the soy industry include soybean crushers - producing soy oil and soy meal – as well as edible oil refiners and ingredient manufacturers, independent of whether they are located in either the main forest or importing countries. In some cases, crushing facilities also have their own refineries attached. Sources for the identification of these players include lists of crushing facilities in forest and importing countries as well as refiners of soybean oil.

Soy processing in forest countries is dominated by the same companies that also control the trade of these commodities (see *Traders/importers* below). However, there are a number of other players involved. These have been identified for the Brazilian and Argentinian industries, with research showing that in Brazil alone there are 87 soybean crushing facilities operated by around 50 companies⁶.

Unprocessed soy beans are also exported from forest countries to a number of trade partner jurisdictions, most notably to China where a number of companies have been shortlisted for the Forest 500 based on their share of the total Chinese soybean crushing capacity.

TRADERS/IMPORTERS

Trase data was used to identify the largest exporters of soy from Brazil, Paraguay, Bolivia and Argentina. In addition, specific commodity traders from processing countries (most notably from China) have also been included due to their increasingly important role in the sector.

MANUFACTURERS

Given the overlap in many of the products most relevant to the supply chains of palm oil and soy, research to identify the key manufacturers in the soy industry follows that described in the previous section for palm oil. In addition to the industries detailed above, as soymeal and soy cake are also used for animal feed, the largest animal feed manufacturers in key importing jurisdictions, such as in the EU, China, Mexico and the USA have been added to the shortlisted companies due their high potential exposure to forest risk commodities. The world's largest poultry companies; the sector being a major user of soy in animal feed, have also been included (note: dairy and beef companies have also been included for this reason but are covered through research into the processed food sector, described above, and into the beef commodity supply chain, described below).

RETAILERS

Retailers included for the soy commodity supply chain are the same as those that have been described above in the methodology for palm oil.

⁶ Murphy, S. et al. 2012. Cereal Secrets - The world's largest grain traders and global agriculture. Oxfam Research Reports. August 2012. [Online] Available from: <https://www.oxfam.org/en/research/cereal-secrets-worlds-largest-grain-traders-and-global-agriculture> [Originally accessed March 2014]

BEEF AND LEATHER

PRODUCERS

The cattle rearing industry in tropical forest countries is less organised than the soy industry. An important factor to recognise is that in the Amazon, ranchers historically have been on the cutting edge of forest conversion while soy has tended to be a post-frontier crop that follows after initial land conversion for ranching, and other drivers of land use change. Cattle ranching operations in the Amazon are also extremely diverse with regards to size, productivity and organisation, with a significant number existing in the informal sector⁷. Cattle supply chains are complex and vary greatly over time. Due to a lack of organisation in the sector and an associated lack of power by single players in global supply chains, no individual cattle ranchers have been included in the Forest 500.

PROCESSORS

In the context of this research, slaughterhouses (some of which also have tanning facilities for leather) comprise the initial step in cattle processing. Over the last ten years there has been increasing consolidation in the beef processing sector with three companies, namely JBS, Marfrig and Minerva rapidly expanding. As a result, although the cattle sector continues to have more complicated and fragmented supply chains compared to the soy industry, complexity has decreased in recent years. Together, these three companies dominate beef production in Brazil⁹. JBS and Marfrig also have considerable production capacities in other countries, including other producer countries in South America, such as Uruguay and Argentina¹⁰.

As is the case with soy, most beef processing companies also act as exporters. However, as some live cattle are also exported from the Amazon, the dominant slaughterhouses and meat processing companies in importing countries have also been included.

Leather is a co-product of the beef industry and represents approximately 5-15% of the total cattle market value¹¹. Tanneries represent the key processors in the leather industry and are included in the Forest 500. Both local tanneries in forest countries and tanneries and leather processing facilities in key importing countries have been accounted for. The industry can be highly dispersed. Brazil, for example, which accounts for the highest proportion of production, contains around 800 tanneries. Having said this, there are a number of major industry players, which are largely the same as those operating in beef production¹². To identify the major leather producers (tanneries), customs data and data from market research reports and public sources. Since many slaughterhouses have tanneries attached, there is significant overlap between leather and beef processors in the key producer countries.

TRADERS/IMPORTERS

Numerous datasets including Trase data was used to identify the largest traders of beef and leather from South American countries where data was available and prioritised based on trade to the key trading countries identified in our country selection.

⁷ Barreto, P. et al. 2005. Cattle Ranching and Challenges for Environmental Conservation in the Amazon. Imazon: Para, Brazil.

⁸ Francelino-Gonçalves-Dias, S.L. & Mendonça, P. 2011. Deforestation and Slave Labour in the Amazon: contesting the sustainability of the cattle industry, y Paper presented at 7th International Critical Management Studies (CMS) Conference Naples, Italy, July 11-13 2011.

⁹ Cleary, D. 2013. Beef and Soy Industries in Brazil: Sustainable Approaches, Proven Results. The Nature Conservancy.

¹⁰ Slob, B., Rijk, G. and Piotrowski, M., 2020. JBS, Marfrig, and Minerva: Material Financial Risk from Deforestation in Beef Supply Chains

¹¹ International Council of Tanners. 2014. Introduction to Leather. [Online] Available from: <http://www.leathercouncil.org/introtoleather.htm> [Accessed March 2014]

¹² Independencia. 2010. The Leather Industry. [Online] Available from: http://ir.independencia.com.br/independencia/web/conteudo_en.asp?idioma=1&conta=44&tipo=20877 [Accessed March 2014]

MANUFACTURERS

Major beef and leather product manufacturers and manufacturers of ready meals, frozen and dried processed food not already identified in the previous commodity sections or in the beef/leather processing section have been identified and included. These have been identified using industry data, market research data and customs data, where available.

Within the beef supply chain, many importers of beef sourced from Amazonian cattle also act as processors and manufacturers. However, it is important to point out that the beef supply chain differs from soy and palm oil insofar that beef is often used as a final product in itself rather than as an ingredient. Due to this and the fact that there is a lack of concentration in the market, fewer players have been identified in this supply chain segment for beef compared to for the other commodities.

The most significant amounts of leather are used in the production of footwear (around 53%¹³), as well as in the manufacture of bags, suitcases and leather accessories and in the upholstery of furniture, including seating and other products for the automobile industry¹⁴. For example, in Brazil 71% of leather is used for footwear, followed by the luggage, handbags and saddler industry with a 6% share and the automotive industry with a 4% share¹⁵. However, as mentioned above, the market is often highly fragmented. In China, for example, the four largest companies in the production of luggage were estimated to account collectively for less than 2% of total industry revenue in 2013¹⁶.

To shortlist companies for the Forest 500, market shares for footwear (both brand owners and actual manufacturers), for bag and luggage, apparel, and automotive seat manufacturers as well as the largest automotive manufacturers in leather producing forest countries and leather importing countries have been analysed.

RETAILERS

As is the case in the soy and palm oil supply chains, organised retail channels play an important role in the sale of beef products to consumers. The retail of leather products, such as footwear, bags and accessories often occurs at specialist stores or department stores and the largest of these stores globally as well as in the most relevant countries have been included.

¹³ De Marchi, Valentina, and Eleonora Di Maria. "Environmental upgrading and suppliers' agency in the leather global value chain." *Sustainability* 11, no. 23 (2019): 6530.s.

¹⁴ Euromonitor, a market research provider. 2022. [Online] Available from: <http://www.euromonitor.com/> [Accessed March 2022]

¹⁵ FAO. 2013. *World Statistical Compendium for raw hides and skins, leather and leather footwear 1993-2012*. Trade and Markets Division, Food and Agriculture Organization of the United Nations.

¹⁶ IBIS. 2014. *IBISWorld Industry Report 1923*. [Online] Available from: <http://www.ibisworld.com/> [Accessed March 2014]

TIMBER, PULP AND PAPER

The supply chains of tropical timber and timber products generally comprise more operators and are more complex than those of the other forest risk commodities¹⁷. The industry is highly fragmented and often dominated by a large number of small and medium enterprises with relatively minor market shares, making it difficult to identify the true powerbrokers.

Furthermore, tropical timber forms only a small share of the global timber market overall, with many of the major forest and forestry product companies based in, and sourcing raw materials from, non-tropical regions¹⁸. Although many of the companies involved in the manufacture and retail of timber products are likely to source timber and timber products from non-tropical regions only, the major players acting towards the consumer end of the supply chain are nonetheless exposed to the risk of using timber products linked to deforestation in tropical regions and have therefore been identified and included.

It is also important to note that a high proportion of timber extraction in tropical regions is illegal; with it estimated that illegal logging constitutes up to 90% of tropical deforestation in some countries, and is worth around US\$150 billion globally¹⁹. A significant amount of timber on the global market is therefore unlikely to be captured in production data. However, further down the supply chain once timber of illegal and legal origin may have been mixed, the same actors are exposed to the risk of sourcing both legal and illegal timber and are captured in supply chain assessments.

Although the timber industry is highly fragmented, the pulp and paper sector is more consolidated. This is evidenced by the fact that many of the companies in a ranking of the top 100 forestry, paper and packaging companies globally are paper and packaging companies, rather than companies involved in the production of other timber products²⁰.

PRODUCERS

Within each of the countries identified as important for timber/paper in the country selection, the major forestry companies have been identified. Up to date and accurate information on forestry companies and their respective areas under concessions is often not available. However, where possible, the largest forestry companies in terms of area under management have been identified and included. Although research has attempted to be as objective as possible, figures have been supported by further research. Whether companies also have operations in different supply chain segments or in several tropical forest countries, making them more likely to represent major powerbrokers has also been taken into account.

For the pulp and paper industry, the majority of tropical deforestation driven by conversion of natural forest to monoculture plantations for pulp and paper production is occurring in Indonesia²¹. Therefore this is the focal jurisdiction for identifying the most important producers in this sector and is the largest producer of pulp and paper in the tropical forest zone. In contrast to the fragmentation apparent in the tropical timber industry, the pulp and paper sector is far more concentrated.

¹⁷ Guan, W. 2010. Developments in distribution channels – a case study of a timber product distribution channel. Linköping Studies in Science and Technology, Thesis No. 1458. LiU-TEK-LIC 2010:29.

¹⁸ Mehta, A., 2020. Move to set science-based targets for timber sector as threat to northern forests grows | Reuters Events | Sustainable Business. [online] Reutersevents.com. Available at: <<https://www.reutersevents.com/sustainability/move-set-science-based-targets-timber-sector-threat-northern-forests-grows>> [Accessed 7 June 2022].

¹⁹ Interpol.int. 2022. Forestry crime: targeting the most lucrative of environmental crimes. [online] Available at: <<https://www.interpol.int/en/News-and-Events/News/2020/Forestry-crime-targeting-the-most-lucrative-of-environmental-crimes>> [Accessed 7 June 2022]

²⁰ PricewaterhouseCoopers. 2016. Global Forest, Paper and Packaging Industry Survey. 2016 edition – survey of 2015 results. PricewaterhouseCoopers. London, UK.

²¹ Rautner, M. et al. 2013. The Little Book of Big Drivers of Deforestation. Global Canopy Programme. Oxford, UK.

PROCESSORS

For the purpose of this research, processors refer to companies involved in the conversion of raw timber products, such as logs, into materials, such as tropical sawnwood, veneer, paper and pulp products, used in the manufacturing of final goods.

Tropical forest countries are increasingly taking measures to boost downstream processing and value addition within country²². Many forestry companies in tropical forest jurisdictions are therefore increasingly integrated in the supply chain, with many involved in processing as well as harvesting logs. Where applicable the largest processing enterprises have been identified.

With regards to the pulp and paper sector, processing companies include those operating pulp and paper mills. There is often significant vertical integration in the paper supply chain, with many processors also active at the producer level. The largest processors in the pulp and paper supply chain are therefore captured with the inclusion of the largest integrated paper companies.

TRADERS/IMPORTERS

There is limited information available on the largest traders of tropical timber globally. However, many timber product companies import and export their products around the world and have either headquarters or distribution offices outside of the tropical forest countries in which they operate. Trade flow data for Indonesia is available, which helps map the export of timber from this high volume production country to the rest of the world. The largest integrated timber companies therefore often have trading operations and are captured within assessments of the other supply chain segments. For example, several of the largest logging companies in West Africa are headquartered in Europe and China and are therefore directly engaged in exporting products to these regions.

MANUFACTURERS

For the purpose of this research, manufacturing is classified as the operations prior to retailing, during which processed products are made into finished products. For example, for tropical timber, this may include plywood manufacturers, furniture manufacturers, building material providers and the construction industry. For pulp and paper, this may include tissue manufacturers, paper manufacturers, book, magazine and newspaper publishers, and the packaging industry, which is the main end user of paper and paperboard²³.

As with assessments of the other supply chain segments, research into the context in each country has informed the focus for further research. For example, Brazil, accounts for 50% of the Latin American wood product exports, with Indonesia, Malaysia and Papua New Guinea making up two thirds of Asian exports²⁴. The tropical timber industries in these countries have therefore been assessed to gauge the level of fragmentation and the importance of including individual companies. The timber products industries in these countries are relatively fragmented and therefore only enterprises with significant operations throughout the supply chain have been included. Market data on furniture manufacturers is only available for brand-owning companies. This has therefore been supplemented with further research to identify significant manufacturers and exporters of furniture products made from tropical hardwoods.

Due to the high level of fragmentation in the industry, the largest companies globally involved in the manufacture of products at risk of involving tropical timber or pulp and paper from tropical forest jurisdictions have been included.

²² ITTO. 2002. Tropical timber products: Development of further processing in ITTO producer countries, Geneva: ITC/ITTO

²³ U.S. & Foreign Commercial Service and U.S. Department of State. 1999. Indonesia – Pulp and Paper – ISA981101. USDOC, International Trade Administration.

²⁴ Henders, S., Persson, U.M. and Kastner, T. (2015) 'Trading forests: land-use change and carbon emissions embodied in production and exports of forest-risk commodities', *Environmental research letters*, 10(12), p. 125012–. doi:10.1088/1748-9326/10/12/125012.

RETAILERS

The main retailers assessed are furniture and home improvement/DIY retailers for tropical timber, and office supply retailers for pulp and paper. Due to the fragmentation in the industry, these are the largest retailers of products at risk of including tropical timber or pulp and paper from tropical forest regions globally. Manufacturers and retailers in other industries, including those which are identified as powerbrokers for other commodities, are also assessed for their exposure to paper packaging. For some companies, their exposure to paper packaging is high enough that they are considered a powerbroker for paper packaging.

MERGERS AND ACQUISITIONS

Between 2022 and 2024, a small number of the companies present in the original Forest 500 selection will merge or be acquired. In order to annually include 350 companies, reselection is undertaken each year to replace companies that no longer exist as independent entities. Powerbrokers are again identified by: (1) their risk of being linked to tropical deforestation through their involvement in, or potential exposure to, forest risk commodity supply chains; and (2) their influence within the political economy of tropical deforestation, for example through their influential positions in affecting supply chain sustainability, agricultural development or tropical forest conservation.

COMPANIES SELECTED IN 2022

Company	Headquarter country	Powerbroker commodities
AAK AB	Sweden	Palm oil
Aceitera General Deheza SA	Argentina	Soy
Adecoagro S.A.	Argentina	Soy
Adidas Group	United States	Leather, Pulp & Paper
Adient	United States	Leather
Aditya Birla Group	India	Pulp & Paper
AEON Co. Ltd.	Japan	Beef, Palm oil, Pulp & Paper, Soy
AFA (Agric. Federados Args.)	Argentina	Soy
AFG BRASIL SA	Brazil	Soy
Agrifirm	Netherlands	Palm oil, Soy
Ahold Delhaize	Netherlands	Beef, Palm oil, Pulp & Paper, Soy
Ajinomoto Co Inc	Tokyo	Beef
Aldi group (North)	Germany	Beef, Palm oil, Pulp & Paper, Soy
Alicorp	Peru	Soy
Allanasons Pvt Ltd.	India	Beef
Amaggi	Brazil	Soy
Amazon.com	United States	Beef, Leather, Palm oil, Pulp & Paper, Soy, Timber
Ameropa Ltd.	Switzerland	Palm oil
AmorePacific Corp	South Korea	Palm oil, Pulp & Paper
Amul	India	Palm oil, Pulp & Paper, Soy
Angelini Group	Chile	Timber
Aokang Group Co. Ltd.	China	Leather, Pulp & Paper

Company	Headquarter country	Powerbroker commodities
Archer Daniels Midland Co.	United States	Soy
Arcor SAIC	Argentina	Palm oil, Pulp & Paper, Soy
Arla Foods Amba	Denmark	Palm oil, Pulp & Paper, Soy
Arre Beef S.A.	Argentina	Beef
Ashley Furniture Industries Inc.	United States	Leather, Pulp & Paper, Timber
Asics Corp.	Japan	Leather, Pulp & Paper
Associated British Foods Plc	United Kingdom	Leather, Pulp & Paper, Soy
Association Familiale Mulliez (AFM)	France	Beef, Palm oil, Pulp & Paper, Soy
Barry Callebaut AG	Switzerland	Palm oil
BASF SE	Germany	Palm oil
BATA Ltd	Italy	Leather, Pulp & Paper
Behshahr Industrial Development Corp.	Iran	Palm oil, Pulp & Paper, Soy
Beidahuang Group	China	Soy
Belle International Holdings Ltd.	China	Leather, Pulp & Paper
Bertelsmann SE & Co. KGaA	Germany	Pulp & Paper
Best Group	Indonesia	Palm oil
Bestseller A/S	Denmark	Leather, Pulp & Paper
BF Logistics	Brazil	Leather
Bhartiya International Ltd	India	Leather
BioMar	Denmark	Palm oil, Soy
Bio-Pappel	Mexico	Pulp & Paper
Blondeau Group	France	Timber
Boparan Holdings	United Kingdom	Pulp & Paper, Soy
BRF Brasil Foods S.A.	Brazil	Beef, Palm oil, Pulp & Paper, Soy

Company	Headquarter country	Powerbroker commodities
Bricapar S.A.	Paraguay	Timber
Bright Food (Group) Co. Ltd.	China	Palm oil, Pulp & Paper, Soy
Bunge Ltd	Paraguay	Soy
Calbee Inc.	Japan	Palm oil, Pulp & Paper, Soy
Camera Agroalimentos S.A.	Brazil	Soy
Campbell Soup Co	United States	Palm oil, Pulp & Paper, Soy
Capri Holdings	United States	Leather, Pulp & Paper
Caramuru Alimentos	Brazil	Pulp & Paper, Soy
Cargill Inc	Indonesia	Palm oil, Soy
Carrefour Group	France	Beef, Palm oil, Pulp & Paper, Soy
Casino Guichard Perrachon S.A.	France	Beef, Palm oil, Pulp & Paper, Soy
CATTER MEAT SA	Argentina	Beef
Cencoprod Ltda	Paraguay	Leather
Cencosud	Chile	Beef, Palm oil, Pulp & Paper, Soy
Charoen Pokphand Group	Thailand	Palm oil, Soy
China Mengniu Dairy Co. Ltd.	Hong Kong	Palm oil, Pulp & Paper, Soy
China Resources Company Limited	China	Beef, Palm oil, Pulp & Paper, Soy
China State Construction Engineering Corp.	China	Timber
C.I.V. Superunie B.A.	Netherlands	Beef, Palm oil, Pulp & Paper, Soy, Timber
CJ Cheiljedang Corporation	South Korea	Palm oil, Soy
C & J Clark International Ltd.	United Kingdom	Leather, Pulp & Paper
CK Hutchison Holdings	Hong Kong	Palm oil, Pulp & Paper
Clariant	Switzerland	Palm oil
Clorox Co, The	United States	Palm oil, Pulp & Paper

Company	Headquarter country	Powerbroker commodities
Coamo Agroindustrial Coop.	Brazil	Soy
COFCO	China	Palm oil, Soy
Colgate-Palmolive Co.	United States	Palm oil, Pulp & Paper
Compañía Bernal S.A.	Argentina	Beef
Compañía Industrial Aceitera Coto Cincuenta y Cuatro S.A	Costa Rica	Palm oil
COMPAÑIA PARAGUAYA DE GRANOS S.A.	Paraguay	Soy
ConAgra Brands Inc	United States	Palm oil, Pulp & Paper, Soy
COOP FREIGHT LOGISTICS LTD	Taiwan	Leather
Corporación De Abastecimiento Y Servicios Agrícolas S.A. (CASA)	Venezuela	Beef
Corpovex - Corporacion Venezolana De Com. Exterior	Venezuela	Beef
Costco Wholesale Corporation	United States	Beef, Palm oil, Pulp & Paper, Soy
Coty Inc	United States	Palm oil, Pulp & Paper
Cresud S.A.	Argentina	Soy
CUTRALE TRADING BRASIL LTDA	Brazil	Soy
Cyrela Brazil Realty	Brazil	Timber
Dai Nippon Printing	Japan	Pulp & Paper
Daio Paper Corporation	Japan	Pulp & Paper
Daiwa House Group	Japan	Timber
Dalian Huafeng Furniture Co. Ltd.	China	Pulp & Paper, Timber
Danish Agro	Denmark	Palm oil, Soy
Danone, Groupe	France	Palm oil, Pulp & Paper, Soy
Danzer Group	Austria	Timber
Darmex Agro	Indonesia	Palm oil

Company	Headquarter country	Powerbroker commodities
De Heus	Netherlands	Palm oil, Soy
Deichmann Group	Germany	Leather, Pulp & Paper
Dekel Agri-Vision PLC	Cote d'Ivoire	Palm oil
DENDE DO TAUA S/A - DENTAUA	Brazil	Palm oil
Directa Line	Brazil	Leather
DLG Denmark	Denmark	Palm oil, Soy
Doctor's Associates Inc.	United States	Beef, Palm oil, Pulp & Paper, Soy
Domino's Pizza Inc	United States	Beef, Palm oil, Pulp & Paper, Soy
Donto	Argentina	Leather
East Hope Group	China	Palm oil, Soy
Ebro Foods	Spain	Palm oil, Pulp & Paper, Soy
Eight Capital Inc.	Singapore	Palm oil
Emami Ltd.	India	Soy
Essity	Sweden	Pulp & Paper
EURO AMERICA	Brazil	Leather
Evershining Ingredient	Thailand	Soy
FAPCEN	Brazil	Soy
Fast Retailing	Japan	Leather, Pulp & Paper
Felda Global Ventures Holdings Bhd.	Malaysia	Palm oil
Ferrero Group	Italy	Palm oil, Pulp & Paper, Soy
Fleury Michon, Groupe	France	Beef, Pulp & Paper
Fonterra Cooperative Group Ltd	New Zealand	Soy
ForFarmers B.V.	Netherlands	Palm oil, Soy
Frialto	Brazil	Beef

Company	Headquarter country	Powerbroker commodities
F.R.I.A.R. S.A.	Argentina	Beef
Frigorifico Concepcion S.A.	Paraguay	Beef
Frigorifico Gorina S.A.	Argentina	Beef
Fuga Couros S/A	Brazil	Leather
Gap Inc.	United States	Leather, Pulp & Paper
General Mills Inc.	United States	Palm oil, Pulp & Paper, Soy
Genting Bhd.	Malaysia/Indonesia	Palm oil
GlaxoSmithKline Plc	United States	Palm oil, Pulp & Paper
Godrej Group	India	Palm oil
Gold Best Holdings	British Virgin Islands	Palm oil, Pulp & Paper
Granja Tres Arroyos S.A.	Argentina	Soy
Granol	Brazil	Soy
Groupe Avril	France	Palm oil, Soy
Groupe Blattner Elwyn	Democratic Republic of the Congo (Eastern, Equateur and Bandundu)	Timber
Groupe Lactalis	France	Palm oil, Pulp & Paper, Soy
Groupe Savencia S.A.	France	Palm oil, Pulp & Paper, Soy
Grupo Bimbo SAB de CV	Mexico	Palm oil, Pulp & Paper, Soy
Grupo Bom Retiro	Brazil	Leather
Grupo Jari	Brazil	Timber
Grupo Ligna	#N/A	Pulp & Paper, Timber
Grupo Nueva	Panama	Pulp & Paper, Timber
GRUPO PILAR S A	Brazil	Soy
Grupo SLC	Brazil	Soy

Company	Headquarter country	Powerbroker commodities
Grupo Viz	Mexico	Beef
Gruppo Mastrotto Spa	Italy	Leather
Gruppo Veronesi	Italy	Soy
Guangdong Wens Foodstuff Group Co., Ltd	China	Palm oil, Soy
Guangzhou Highest Industrial Co. Ltd.	China	Timber
Guangzhou Liby Enterprise Group Co Ltd	China	Palm oil, Pulp & Paper
Haid Group	China	Palm oil, Soy
Hain Celestial Group, Inc.	United States	Palm oil, Pulp & Paper, Soy
Hamlet Protein	Denmark	Soy
Haoyue Group	China	Beef
Harita Group	Indonesia	Palm oil
Hayel Saeed Anam Group	UAE	Palm oil
Hengan International	Hong Kong	Pulp & Paper
Henkel AG & Co KGaA	Germany	Palm oil, Pulp & Paper
Hershey Co.	United States	Palm oil, Pulp & Paper, Soy
H & M Hennes & Mauritz AB	Sweden	Leather, Pulp & Paper
HOFER KG dba ALDI SOUTH Group	Germany	Beef, Palm oil, Pulp & Paper, Soy
Hormel Foods Corp.	United States	Beef, Palm oil, Pulp & Paper, Soy
H. Schmidt Holding GmbH	Austria	Leather
Htoo Group	Myanmar	Palm oil
IFF	United States	Palm oil, Soy
IFFCO	United Arab Emirates	Palm oil
IKEA	Sweden	Leather, Pulp & Paper, Timber
Imcopa Food Ingredients	Brazil	Soy

Company	Headquarter country	Powerbroker commodities
Inditex S.A.	Spain	Leather, Pulp & Paper
Industrias Frigorificos Recreo SAIC	Argentina	Beef
Inner Mongolia Yili Industrial Group Co. Ltd.	China	Palm oil, Pulp & Paper, Soy
Inspire Brands	United States	Palm oil, Pulp & Paper, Soy
International Paper	Global	Pulp & Paper
Intersnack Group GmbH & Co KG	Germany	Beef, Palm oil, Pulp & Paper, Soy
IOI Corporation Bhd.	Malaysia	Palm oil
Irmãos Gonçalves Comercio e Industria Ltda	Brazil	Beef
JA Group	Japan	Palm oil, Soy
Japfa Ltd	Indonesia	Palm oil, Soy
JB INVESTIMENTOS	Brazil	Beef
JBS	Brazil	Beef, Leather, Soy
JM Smucker	United States	Palm oil, Pulp & Paper, Soy
Johnson & Johnson	United States	Palm oil, Pulp & Paper
J Sainsbury's PLC	United Kingdom	Beef, Palm oil, Pulp & Paper, Timber
Kai Bo Foods Supermarket	Hong Kong	Beef
Kao Corp.	Japan	Palm oil, Pulp & Paper
Kellogg Co.	United States	Beef, Palm oil, Pulp & Paper, Soy
Kencana Agri Ltd	Singapore	Palm oil
Kering S.A.	France	Leather, Pulp & Paper
Kewpie Corp.	Japan	Palm oil, Soy
Kikkoman Corp.	Japan	Beef, Pulp & Paper, Soy
Kimberly-Clark Group	United States	Pulp & Paper
Kingfisher	United Kingdom	Leather, Pulp & Paper, Timber

Company	Headquarter country	Powerbroker commodities
Koninklijke DSM N.V.	Netherlands	Palm oil, Soy
Koninklijke FrieslandCampina N.V.	Netherlands	Palm oil, Pulp & Paper, Soy
Korindo Group PT	South East Asia	Pulp & Paper
Kraft Heinz Co.	United States	Beef, Palm oil, Pulp & Paper, Soy
Kuala Lumpur Kepong Bhd.	Malaysia/Indonesia	Palm oil
Land O'Lakes Inc.	United States	Palm oil, Pulp & Paper, Soy
Lear Corp.	United States	Leather
Le Gouessant	France	Soy
Lindt & Sprungli AG	Switzerland	Palm oil, Pulp & Paper, Soy
Li Ning Company Ltd.	China	Leather, Pulp & Paper
L'Oréal Groupe	France	Palm oil, Pulp & Paper
Lotte Co. Ltd.	Japan	Beef, Palm oil, Pulp & Paper, Soy
Louis Dreyfus Company	Netherlands	Palm oil, Soy
Lowe's Companies, Inc.	United States	Leather, Pulp & Paper, Timber
LVMH Moët Hennessy Louis Vuitton S.A.	France	Leather, Palm oil, Pulp & Paper
Makin Group	Indonesia	Palm oil
Marfrig Global Foods	Brazil	Beef
Mars Inc	United States	Beef, Palm oil, Pulp & Paper, Soy
Marubeni Corp.	Japan	Soy
MAR.VI SPED SRL	Italy	Leather
Matte Group	Chile	Pulp & Paper
Maxingvest AG	Germany	Palm oil, Pulp & Paper
McDonald's Corporation	United States	Beef, Palm oil, Pulp & Paper, Soy
Meiji Holdings Co. Ltd.	Japan	Palm oil, Pulp & Paper, Soy

Company	Headquarter country	Powerbroker commodities
Mercúrio Alimentos S/A	Paraguay	Beef, Palm oil, Soy
Metro AG	Germany	Beef, Palm oil, Pulp & Paper, Soy
Mewah International Inc.	Singapore	Palm oil
Minerva S.A.	Brazil	Beef, Leather
Mitsubishi Corp.	Japan	Soy
Mitsui & Co. Ltd	Japan	Soy
Mizkan Holdings	Japan	Beef, Palm oil, Pulp & Paper, Soy
Mondelez International Inc	United States	Palm oil, Pulp & Paper, Soy
Mondi Group	Global	Pulp & Paper
MRV Engenharia e Participacoes S.A.	Brazil	Timber
Musim Mas	Indonesia	Palm oil
Natura&Co	Brazil	Palm oil, Pulp & Paper
Natuzzi	Italy	Leather, Pulp & Paper, Timber
Neste Corp.	Finland	Palm oil, Soy
Nestlé S.A.	Switzerland	Palm oil, Pulp & Paper, Soy
New Balance Athletic Shoe Inc.	United States	Leather, Pulp & Paper
New Hope Group	China	Palm oil, Soy
Nice Group	China	Palm oil, Pulp & Paper
Nike Inc.	United States	Leather, Pulp & Paper
Nine Dragons Paper Holdings	Hong Kong	Pulp & Paper
Nippon Paper Industries Co. Ltd.	Japan	Pulp & Paper
Nisshin OilliO Group Ltd.	Japan	Palm oil
Nitori Holdings Co. Ltd.	Tokyo	Leather, Pulp & Paper, Timber
Nomad Foods Ltd	United Kingdom	Beef, Palm oil, Pulp & Paper, Soy

Company	Headquarter country	Powerbroker commodities
NordSud Timber	Liechtenstein	Timber
Oetker-Gruppe	Germany	Beef, Palm oil, Pulp & Paper, Soy
Offal Exp S.A.	Argentina	Beef
Oji Holdings Corp	Australia, Brazil, China, Indonesia, Japan, New Zealand and Vietnam.	Pulp & Paper
Olam International	Singapore	Soy, Timber
Orkla Group	Norway	Palm oil, Pulp & Paper, Soy
Parker-Migliorini International	Switzerland	Beef
Patanjali Ayurved	India	Pulp & Paper, Soy
Pentland Group	United States	Leather, Pulp & Paper
PepsiCo Inc	United States	Palm oil, Pulp & Paper, Soy
Perez Companc Family Group	Argentina	Soy
Perkebunan Nusantara	Indonesia	Palm oil
Permata Hijau Group	Indonesia	Palm oil
Pertamina Persero PT	Indonesia	Palm oil
Perum Perhutani	Indonesia	Timber
PHW Group	Germany	Palm oil, Soy
Plukon Food Group	Netherlands	Pulp & Paper, Soy
Pou chen	Taiwan	Leather, Pulp & Paper
Prada SpA	Italy	Leather, Pulp & Paper
Precious Woods Holding AG	Switzerland	Timber
Procter & Gamble Co, The	United States	Palm oil, Pulp & Paper
PT Astra International TBK	Indonesia	Palm oil
PT Rajawali Corp.	Indonesia	Palm oil

Company	Headquarter country	Powerbroker commodities
Reckitt Benckiser Group PLC	United Kingdom	Palm oil, Pulp & Paper
RELX Group	United Kingdom	Pulp & Paper
Restaurant Brands International Inc	United States	Beef, Palm oil, Pulp & Paper, Soy
REWE Group	Germany	Beef, Palm oil, Pulp & Paper, Soy
Rezervnaja Prodoovol'stvennaja Kompanija TD ZAO	Russia	Beef
Rimbunan Hijau Group	Papua New Guinea, Malaysia (Sarawak), Indonesia, Russia, British Guyana, Equatorial Guinea, Gabon, China, Russia, New Zealand	Timber
Rioverde OOO	Russia	Beef
Rougier SA	France	Timber
Royal Dutch Shell	Netherlands	Palm oil, Soy
Royal Golden Eagle	Singapore	Palm oil, Pulp & Paper, Soy
Sadesa	Argentina	Leather
Saint Gobain S.A.	France	Timber
Salim Group	Indonesia	Palm oil
Samko Timber Ltd.	Singapore	Timber
Samling Group	Malaysia	Palm oil, Timber
Sampoerna Agri Resources Pte. Ltd	Indonesia	Palm oil
Samsonite International S.A.	Hong Kong	Leather, Pulp & Paper
Schwarz Group	Germany	Beef, Palm oil, Pulp & Paper, Soy
SC Johnson & Son Inc	United States	Palm oil, Pulp & Paper
Sekisui House Ltd.	Japan	Timber
Seven & I Holdings Co Ltd	Japan	Beef, Palm oil, Pulp & Paper, Soy
Shandong Chenming Paper Holdings Co.ltd.	China	Pulp & Paper

Company	Headquarter country	Powerbroker commodities
Shanghai Construction Group	China	Timber
Shiseido Co. Ltd.	Japan	Palm oil, Pulp & Paper
Shuangbaotai Group (Twins Group)	China	Palm oil, Soy
SHV holdings	Netherlands	Palm oil, Soy
SIFCA Group	Nigeria	Palm oil
Sime Darby Bhd.	Malaysia	Palm oil
Sinar Mas Group Co. Ltd.	Indonesia	Palm oil, Pulp & Paper, Soy
Sinograin	China	Soy
Sipef Group	Belgium	Palm oil
Skechers USA Inc.	United States	Leather, Pulp & Paper
Socfin Group	Multiple	Palm oil
Sociedad Cooperativa Colonizadora Chortitzer Komitee Ltda	Paraguay	Beef
Sodrugestvo Group S.A	Brazil	Soy
Soyuz Corporation	Russia	Palm oil
Staples inc.	United States	Pulp & Paper, Timber
Starbucks Corp.	United States	Palm oil, Pulp & Paper, Soy
Stora Enso	Finland	Pulp & Paper
Strong OOO	Russia	Beef
Suguna Foods	India	Palm oil, Pulp & Paper, Soy
Sumitomo Forestry	Japan	Timber
Suzano SA	Brazil	Pulp & Paper
Sysco Corporation	United States	Beef, Palm oil, Pulp & Paper, Soy
Tangrenshen Group (TRS)	China	Palm oil, Soy

Company	Headquarter country	Powerbroker commodities
Tangshan sanyou	China	Pulp & Paper
Tapestry	United States	Leather, Pulp & Paper
Target Corp	United States	Leather, Palm oil, Pulp & Paper, Soy, Timber
Tesco PLC	United Kingdom	Beef, Palm oil, Pulp & Paper, Soy
Tetra Laval	Switzerland	Pulp & Paper
The Home Depot	United States	Leather, Pulp & Paper, Timber
The Kroger Co.	United States	Beef, Palm oil, Pulp & Paper, Soy
The Woodbridge Company Ltd	Canada	Pulp & Paper
Tong Hong Tannery	China	Leather
Total Enterprise Limited	Brazil, Uruguay and Argentina	Beef
Toyo Suisan Kaisha Ltd.	Japan	Palm oil, Pulp & Paper, Soy
Toyota Group	Japan	Leather
Tradewinds (M) Berhad	Malaysia	Palm oil
Triputra Group	Indonesia	Palm oil
Tyson Foods Inc.	United States	Beef, Palm oil, Soy
Unicharm Corporation	Japan	Pulp & Paper
Unifood Industrial Group	China	Beef, Palm oil, Soy
Unigra	Italy	Palm oil
Unilever PLC	United Kingdom	Palm oil, Pulp & Paper, Soy
Uni-President Enterprises Corp.	Taiwan	Palm oil, Pulp & Paper, Soy
Upfield Holdings BV	Netherlands	Palm oil, Soy
UPM	Finland	Pulp & Paper, Timber
Vancouros Indústria e Comércio de Couros LTDA	Brazil	Leather
VF Corp.	United States	Leather, Pulp & Paper

Company	Headquarter country	Powerbroker commodities
Vicentin S.A.I.C.	Argentina	Soy
Vicwood Group	Cameroon, Republic of the Congo, China, Central African Republic	Timber
Viterra	Netherlands	Soy
VW Group	Germany	Leather
Walgreens Boots Alliance	United States	Palm oil, Pulp & Paper, Soy
Walmart Inc	United States	Beef, Leather, Palm oil, Pulp & Paper, Soy, Timber
Want Want	Taiwan	Palm oil, Pulp & Paper, Soy
Weltra	Italy	Leather
Westrock	United States	Pulp & Paper
WH Group	Hong Kong	Beef, Palm oil, Pulp & Paper, Soy
Wilmar International Ltd	Singapore	Palm oil, Soy
Wings Corp	Indonesia	Palm oil
WM Morrison Supermarkets PLC	United Kingdom	Beef, Palm oil, Pulp & Paper, Soy
X5 Group	Russia	Beef, Palm oil, Pulp & Paper, Soy
Yakult Honsha Co. Ltd.	Japan	Palm oil, Pulp & Paper, Soy
Yamazaki Baking Co.	Japan	Palm oil, Pulp & Paper, Soy
Yihua Group	China	Leather, Pulp & Paper, Timber
Yildiz Holding	Turkey	Palm oil, Pulp & Paper, Soy
Yomiuri Group, The	Japan	Pulp & Paper
YPF	Argentina	Soy
Yum! Brands Inc	United States	Beef, Palm oil, Pulp & Paper, Soy
Zhejiang Tongtianxing Group Joint-Stock Co Ltd	China	Leather



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