

A pair of hands is shown from the wrist down, cupped together and holding a large quantity of palm oil fruit (bunches of red and yellow drupes). The hands are positioned in the upper center of the frame. Below the hands, the background is a vast landscape of palm oil plantations, with rows of young palm trees stretching across the terrain. The sky is dark and overcast.

An Investor Brief on Impacts
that Drive Business Risks:

PALM OIL

ENGAGE *the* CHAIN

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Ceres

This brief provides a summary of the main environmental and social factors that affect palm oil production *worldwide*; however, it spotlights key players in the U.S. value chain and provides examples of actions being taken by companies operating or headquartered in the U.S.

KEY TAKEAWAYS

- Palm oil production has more than tripled during the past two decades. It is used in many goods that people use regularly, from processed foods and cosmetics, to detergents, chocolate and biofuel.
- Palm oil sourcing has attracted significant and growing attention and debate by NGOs, investors, companies and consumers due to the commodity's significant environmental and social challenges.
- The palm oil sector employs millions, and a large proportion are smallholders. However, the rapid expansion of production is linked to human rights challenges and nearly 4 percent of global greenhouse gas emissions.
- About 85 percent of palm oil is grown in Indonesia and Malaysia, where its production is the leading driver of deforestation and habitat loss of endangered animals, notably orangutans and Sumatran tigers.
- Investors should address business risk in the palm oil supply chain through direct engagement with their portfolio companies and by supporting relevant policies and multi-stakeholder collaborations.

COMMODITY OVERVIEW

The Global Food Sector Uses Around 70 percent of All Palm Oil¹

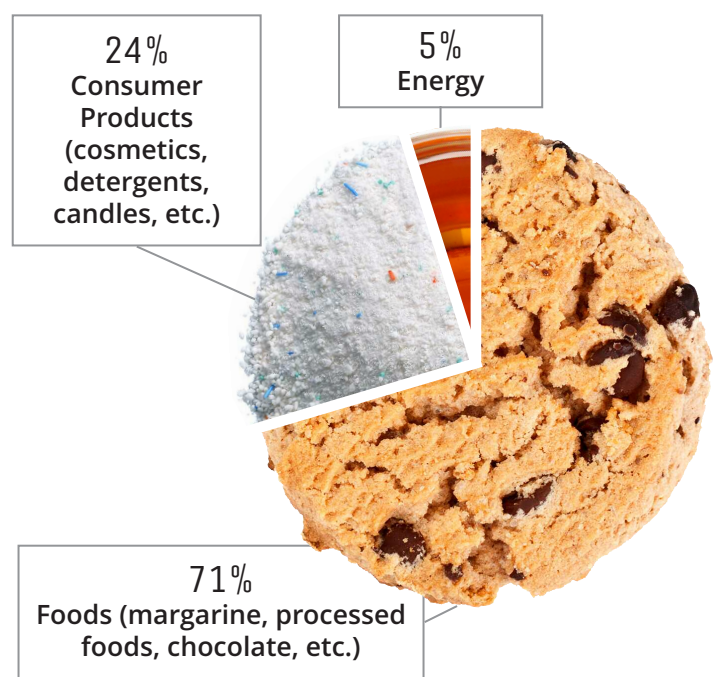
Used in food, household products and increasingly for biofuel, palm oil is the world's most widely used vegetable oil.²

Oil palm fruit produces seven to 10 times more vegetable oil than any other leading oil crop.³

Palm oil's high yield and relatively low labor costs make it one of the lowest cost vegetable oils.⁴ It therefore **accounts for about a third of all vegetable oil produced globally.**⁵

Palm oil can be found in a wide range of food products including frozen pizzas, biscuits, chocolate and margarine, as well as in non-food products including animal feed, body creams, soaps, makeup, candles and detergents. In the European Union, it is widely used as a biofuel.⁶ In developing countries, palm oil is commonly used for cooking oil.

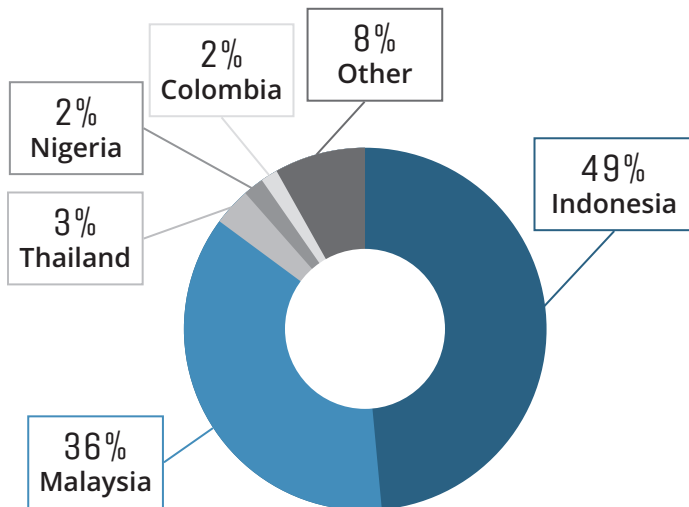
India and China together account for about 25 percent of global consumption of palm oil, Malaysia and Indonesia (the top producing countries), account for 20 percent,⁷ while the **U.S. and EU markets account for only about 13 percent.**



Global Palm Oil Use⁸

GLOBAL PRODUCTION DATA

Indonesia and Malaysia are the Leading Palm Producers
with 85 Percent of Global Production

TOP FIVE PRODUCTION REGIONS¹²

52 MILLION METRIC TONS

Average global palm oil production¹³

\$39.6 BILLION

Global production value¹⁴

76 PERCENT

Proportion of global production exported¹⁵

ABOUT U.S. CONSUMPTION

Palm oil use in the U.S. more than doubled since 2005, driven by demand for a healthier alternative to trans fats.⁹ Palm oil is found in more than half of all packaged products purchased by Americans (food and non-food) though it is often only a minor ingredient.¹⁰ While the U.S. only consumes around 1.3 million metric tons of palm oil, or about 2 percent of total global consumption, the U.S. and the EU are lucrative markets because they buy higher-priced derivatives of palm oil.¹¹

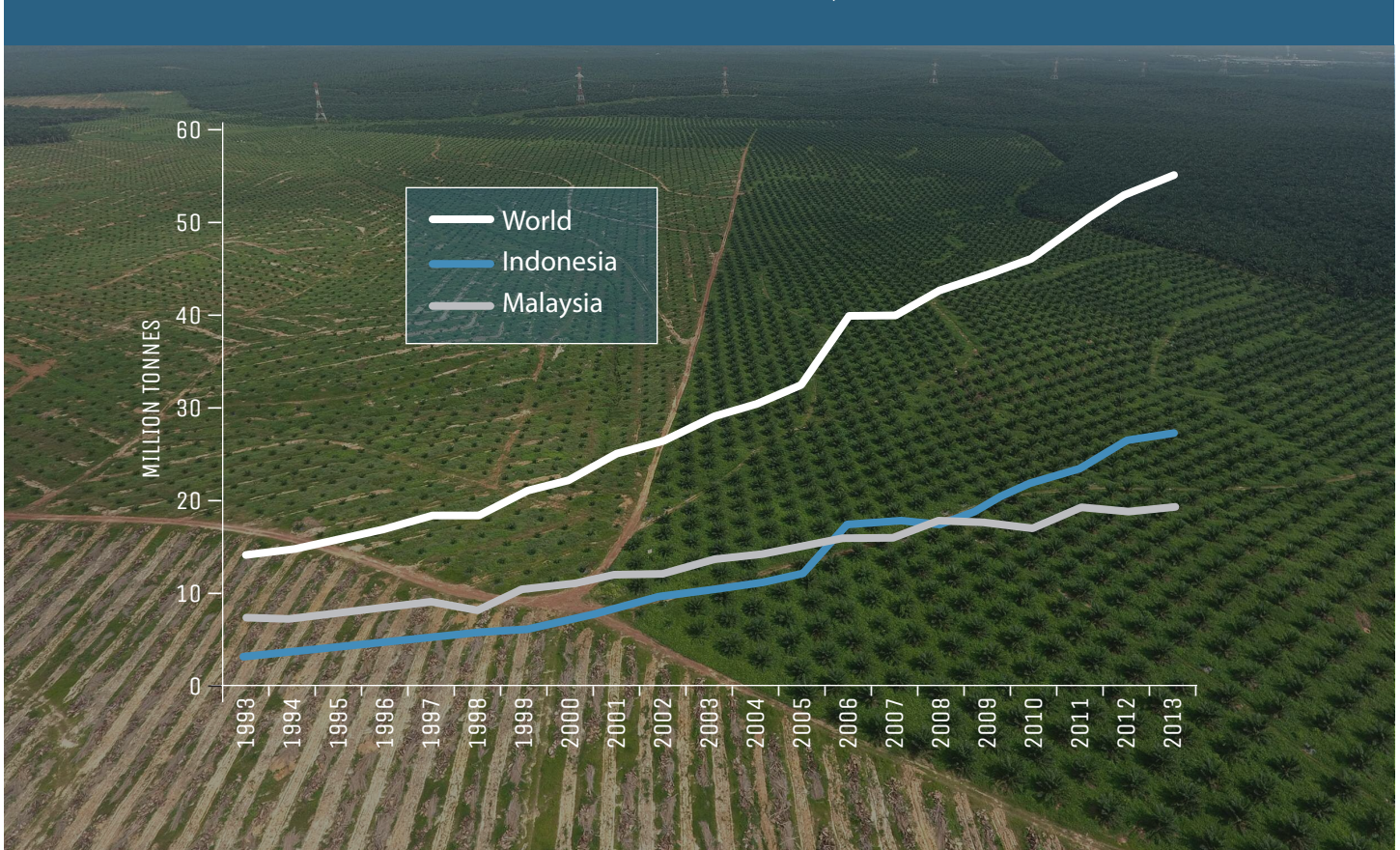
Global Production of Palm Oil Doubled Over the Last Decade, Driven by Population and Income Growth

Over the last two decades, oil palm plantations expanded more rapidly than almost any other agricultural commodity¹⁶

Palm oil expansion is greatest in Indonesia and Malaysia, where clearing for plantations is the leading cause of rainforest destruction, carbon dioxide emissions and human rights challenges. The spike in production is likely to continue, given the commodity's versatility and affordability. Demand is expected to reach 77 million

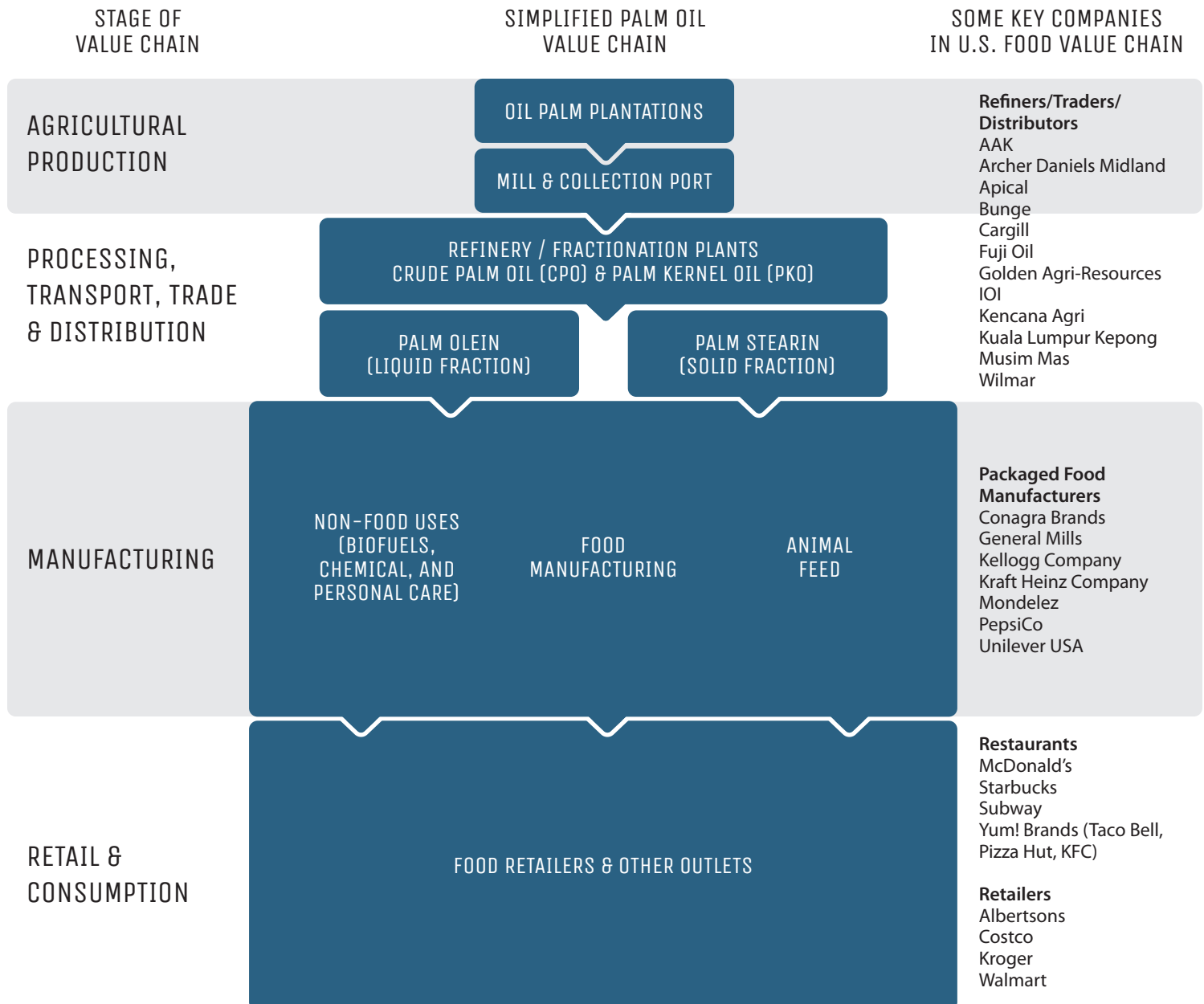
metric tons in 2050, compared to an annual average of 52 million metric tons during the past three years.¹⁷ This increase is partly influenced by consumers in developing countries buying more processed food and from palm oil being used for a wider variety of non-food products.¹⁸

HISTORICAL PALM OIL PRODUCTION, 1993-2013¹⁹



THE PALM OIL VALUE CHAIN

Since Supplies from Different Sources are Mixed Together at Multiple Stages, it is Difficult to Trace Palm Oil Through the Supply Chain



KEY PLAYERS

The following provides additional information about some of the companies in the U.S. palm oil value chain. While the focus is on publicly traded companies headquartered in the U.S., some of the companies mentioned are headquartered outside the U.S. and/or are privately held.

REFINERS, TRADERS AND DISTRIBUTORS

Traders purchase palm oil from the companies that manage palm plantations and produce Crude Palm Oil (CPO) and Palm Kernel Oil (PKO). About 70 percent of global *refining* capacity is controlled by seven companies, which are all based in Asia.²⁰ A similar degree of concentration is found among *traders* with a handful of companies covering over 90 percent of the globally traded palm oil market—Apical, Bunge, Cargill, Golden Agri-Resources, IOI, Kencana Agri, Kuala Lumpur Kepong, Musim Mas and Wilmar. Two of these companies—Bunge and Cargill (privately held)—are headquartered in the U.S.²¹

In the U.S. palm oil market, Cargill is one of the most significant traders. Archer Daniels Midland also trades palm oil and has a large stake in Wilmar, the world's dominant trader (headquartered in Singapore). Bunge trades a smaller amount of palm oil, though much of it comes from Sarawak, a region in Malaysia where there's been significant and controversial peatland destruction as well as community conflict.²² Two of the primary importers into the U.S. market are Fuji Oil (headquartered in Japan) and AAK (headquartered in Sweden).

PACKAGED FOOD MANUFACTURERS

Among food manufacturers, no single company uses a large portion of the world's palm oil in its products. Oxfam calculated that the big 10 food and beverage companies use 6 percent, or around 3.5 million metric tons, of worldwide supply.²³ For example, while Unilever is one of the largest buyers of palm oil globally, using it in products such as margarine, ice cream, and shampoo, it only buys 3 percent of the total world volume, or 1.5 million metric tons.²⁴

While the total amount of palm oil used by U.S. companies is low, it is found in many products. A ranking in 2015 by the Union of Concerned Scientists (*Fries, Face Wash, Forests*) of corporate palm oil policy commitments highlights the wide variety of companies and food products using palm oil. Examples include:

- Conagra Brands (Act II Popcorn, Marie Callender's)
- General Mills (Pillsbury, Nature Valley)
- Kellogg Company (Pop-Tarts, Nutri-Grain)
- Kraft/Heinz (Ore-Ida, Smart Ones, Cool Whip, JELL-O)
- Mondelez (Cadbury, Oreo, Ritz, Nutter Butter)
- PepsiCo (Quaker, Frito-Lay)
- Unilever (Ben & Jerry's, Popsicle, Slimfast)

RESTAURANTS AND RETAILERS

Restaurants and retailers play an important role in the palm oil supply chain. These companies can indirectly influence production practices and supplier standards within their supply chain. Moreover, they are sensitive to external pressures as well as responsive to market trends and consumer preferences.

Restaurants are heavy users of palm oil as a product ingredient or as a frying oil (though other vegetable oils are used more commonly than palm oil for frying in U.S. stores). The four largest quick-service and fast-casual restaurants in the U.S. are McDonald's, Yum! Brands (Taco Bell, Pizza Hut, KFC), Starbucks and Subway. All are headquartered in the U.S.²⁵ In terms of food retailers, the four largest in the U.S. are Walmart, Kroger, Costco and Albertsons.²⁶

ENVIRONMENTAL AND SOCIAL FACTORS

CLIMATE
CHANGE

DEFORESTATION

LAND USE &
BIODIVERSITYWORKING
CONDITIONS

LAND RIGHTS



LIVELIHOODS

WATER USE
& POLLUTION

High Impact



Medium Impact



Low Impact

Globally, the environmental and social impacts linked to palm oil production include significant GHG emissions, biodiversity loss and poor working conditions. The impacts related to palm oil are made worse in certain countries by deep-seated, systemic problems related to a lack of governance and inability to enforce existing laws. Because the political landscape and production systems vary significantly across regions and even within countries, the impacts of palm oil production vary in terms of severity, scale and scope.

1. PLANTATION EXPANSION CONTRIBUTES TO TROPICAL DEFORESTATION & GREENHOUSE GAS (GHG) EMISSIONS

The rapid and poorly managed expansion of production is causing massive large scale deforestation and significant GHG emissions²⁷ from clearcutting and burning tropical forests.²⁸

- Draining and burning the carbon-rich peat soils in which some rainforests grow, particularly in Indonesia, can emit up to 30 times more greenhouse gases than simply clearing the forest.²⁹
- Clearing peat lands for palm plantations creates four percent of global annual GHG emissions.³⁰

- The smoke and haze from these blazes contribute to air pollution and have devastating health and economic consequences throughout Southeast Asia. The 2015 fires alone contributed to the deaths of about 100,000 people across the region and cost Indonesia as much as \$47 billion.³¹
- Indonesia is now one of the world's biggest emitters of greenhouse gases.³²

2. DESTRUCTION OF FORESTS THREATENS ENDANGERED SPECIES AND HARMS LOCAL COMMUNITIES

Large swaths of key habitat area for highly threatened species, including orangutans, tigers, elephants and rhinos, are being destroyed at an alarming rate. For example, 43 percent of Tesso Nilo National Park in Sumatra, established to provide habitat for the endangered Sumatran Tiger, has been overrun by illegal palm oil plantings.³³ The natural forests destroyed for oil palm plantations also provide many "ecosystem services," such as water, food and fuel to local indigenous communities, estimated at around 50-70 million people in Indonesia alone.³⁴

3. EXPLOITATION OF WORKERS IS PROMPTING CONSUMER CONCERN AND LEGAL ACTION THAT COULD HARM BRANDS

Rapid plantation expansion is creating exploitative working conditions, including child labor, forced labor and trafficking of migrant workers, exposing companies to reputational risks.³⁵ The U.S. Department of Labor identified palm oil production in Indonesia as high risk for child labor and palm oil production in Malaysia as high risk for forced labor.³⁶

In 2015, NGOs put the spotlight on human rights challenges in Guatemala.³⁷ While Guatemala exports only a small amount of palm oil to the U.S., U.S. traders operate in the region and multinational U.S. companies sell products in Guatemala, Central America and Mexico.^{38,39}

4. SMALLHOLDERS' LACK OF ACCESS TO RESOURCES AND MARKETS LIMITS THEIR PRODUCTIVITY AND THE SHIFT TO MORE SUSTAINABLE PRODUCTION⁴⁰

Smallholders play a key role in the labor-intensive palm oil industry, making it critical to get them involved in driving changes in production. Smallholders need help gaining access to markets and may require additional technical and financial resources to support productivity improvements and shifts in cultivation practices.

- In Indonesia, for example, smallholders produce up to a third of the country's palm oil.⁴¹

- Globally, around three million smallholders are involved in oil palm cultivation.⁴²
- Since smallholders' productivity is 35 percent lower than larger plantations, improvements could help meet increasing demand without further expansion of palm plantations.^{43,44}

5. SOCIAL DISPUTES WITH LOCAL COMMUNITIES AND WORKERS CONTRIBUTE TO OPERATIONAL DISRUPTIONS

Social disputes with local communities and workers can disrupt operations through roadblocks, development delays, demonstrations or employee strikes. Though the palm oil sector provides employment for millions and significantly reduces poverty, the current work is done through long, hard hours at low pay.⁴⁵ The development of new large-scale oil palm plantations is also leading to social conflict when the rights and livelihoods of the local communities are ignored.

6. ENVIRONMENTAL AND SOCIAL IMPACTS LEAD TO REPUTATIONAL RISKS

Many consumer brands have become the targets of campaigns over destructive sourcing practices by organizations including Greenpeace, Rainforest Action Network and Oxfam. Greenpeace's mock advertisement linking Nestlé's palm oil sourcing for KitKats to orangutan deaths was viewed by over 300,000 during its first day online.⁴⁶ Kellogg Company was accused of rainforest destruction in over 30 prominent media outlets.⁴⁷ Recently, organizations began ranking companies' commitments to addressing the impacts of palm oil production. For instance, the Union of Concerned Scientists in April 2015 published a scorecard entitled *Fries, Face Wash, Forests: Scoring America's Top Brands on Their Palm Oil Commitments*⁴⁸ and in March 2016 Greenpeace published a ranking of progress towards deforestation-free commitments in *Cutting Deforestation Out of the Palm Oil Supply Chain*.⁴⁹

OPPORTUNITIES FOR ACTION

Investors can encourage companies to take the following actions to reduce business risks.

1. JOIN MULTI-STAKEHOLDER SUSTAINABILITY EFFORTS

Many players, including buyers, producers, governments, NGOs and communities understand the impacts and are collaborating to ensure the long-term sustainability of palm oil. Investors should encourage companies to join these multi-stakeholder efforts to demonstrate commitment and help accelerate progress. When a company is already involved in these efforts, investors should encourage constructive participation and progress in meeting commitments. This includes

supporting and actively participating in the development and use of sustainability standards (see section 4).

There are numerous multi-stakeholder efforts that have been created to address the issues related to palm oil production. This includes collaborations between companies and local governments as well as national efforts, such as the Sustainable Palm Oil Initiative (SPO), focused on production in Indonesia.

ADDRESSING DEFORESTATION ACROSS MULTIPLE COMMODITIES

Many of the business risks affecting palm oil production affect other commodities as well. Multi-stakeholder efforts that address deforestation related to palm oil as well as other commodities include:

- **Tropical Forest Alliance 2020 (TFA)**

TFA is a global umbrella partnership that brings together governments, private sector, and civil society organizations to remove deforestation from palm oil, beef, soybean and pulp and paper. It supports commitments by partners to reduce deforestation in tropical forest countries and was founded in 2012 after The Consumer Goods Forum (CGF)⁵⁰ committed in 2010 to zero net deforestation by 2020.

- **The “Soft Commodities” Compact**

The compact is a joint initiative of the Banking Environment Initiative (BEI) and CGF, mobilizing the global banking industry to help remove deforestation from soft commodity supply chains and achieve zero net deforestation by 2020.

- **New York Declaration on Forests**

In 2014, world leaders (close to 200 governments, financial institutions, companies at all points of the supply chain, and influential civil society and indigenous organizations) committed to cut natural forest loss in half by 2020, and to strive to end it by 2030. Concrete commitments and partnerships were also announced and are being implemented.



2. ENGAGE DIRECTLY WITH PRODUCERS

Where companies have visibility into their supply chains, they can work with suppliers to promote better management practices. While purchasing RSPO certified sustainable palm oil is a good first step (see section 4), the standard doesn't address all the negative impacts, including the destruction of high carbon stock forests and peat lands at any depth.

Companies can also:

- Evaluate suppliers' public disclosures using their own websites or aggregate scoring systems such as the Zoological Society of London's Sustainable Palm Oil Transparency Toolkit (SPOTT) platform.⁵¹
- Engage suppliers on issues that need improvement. Consider dropping suppliers with egregious practices that fail to improve after several years of engagement.
- Encourage producers to grow palm oil on degraded land instead of forested land. In 2010, the Indonesian President said that the national goal of doubling the palm oil industry by 2020 could be accomplished entirely through expansion on already degraded land.⁵²
- Promote improvements at existing palm oil plantations to increase crop yields, making new plantation expansion unnecessary.⁵³
- Provide training and support to smallholders on agricultural best practices to help improve their yields so that more oil can be produced on the same amount of land.⁵⁴

3. SUPPORT GOVERNMENT POLICIES

In producer countries, speaking out collectively to promote transparency and legislative reform is particularly critical. Companies and investors can support efforts by governments, such as Indonesia, to eliminate the illegal and uncertified conversion of forests.⁵⁵ Another example would be addressing the current lack of transparency regarding land tenure in Indonesia and asking suppliers to publish concession maps covering their entire operations, which is a requirement for membership in the Roundtable for Sustainable Palm Oil (RSPO).⁵⁶

Companies can also press for better labor protections and enforcement in palm oil production. They can also support policies in countries that import palm oil that take into account the greenhouse gas impact of palm oil-based biofuels and impose robust sustainability standards.⁵⁷



4. ENCOURAGE USE AND DEVELOPMENT OF SUSTAINABILITY STANDARDS

Investors and companies that want to support more sustainable production face the challenge of tracing palm oil through the supply chain. Purchasing palm oil certified by third-party sustainability standards can help address this problem. The following provides detail on a few of the standards. A full listing of standards relevant to palm oil production is available online through SPOTT.

- The most well established standard was developed by the Roundtable for Sustainable Palm Oil (RSPO). Created in 2004, RSPO has over 2,500 members, encompassing the entire supply chain, from oil palm producers to investors. Currently about 20 percent of global palm oil production is RSPO certified. The International Finance Corporation and a growing number of Equator Banks include RSPO certification in their lending and investing policies.⁵⁸

While the RSPO is critical to ensuring sustainable production practices and has unmatched infrastructure for evaluating compliance, concern is growing among various stakeholders that the RSPO doesn't represent the best science on forest conservation and carbon emissions, nor have robust enforcement standards. For example, certified sustainable palm oil is not guaranteed to be deforestation-free and destruction of peatlands isn't banned.⁵⁹ As a result, RSPO NEXT has been developed to recognize the efforts of RSPO members who are exceeding the requirements of RSPO's "Principles and Criteria."⁶⁰

- Building on the RSPO standards and commitments, the Palm Oil Innovation Group (POIG) was created in 2013 to demonstrate innovation around implementing the RSPO standards. It has developed a set of verification indicators that outline leading standards for protecting forests, peatlands, biodiversity and carbon while also improving livelihoods and upholding the rights of local communities and workers.⁶¹
- Another relevant program is the High Carbon Stock (HCS) Approach. This approach identifies forest areas that should be conserved and distinguishes them from land that might be suitable for development (e.g., degraded lands with low carbon and biodiversity values). Companies hire trained practitioners to conduct an assessment and submit it to a small panel of peer reviewers.⁶²

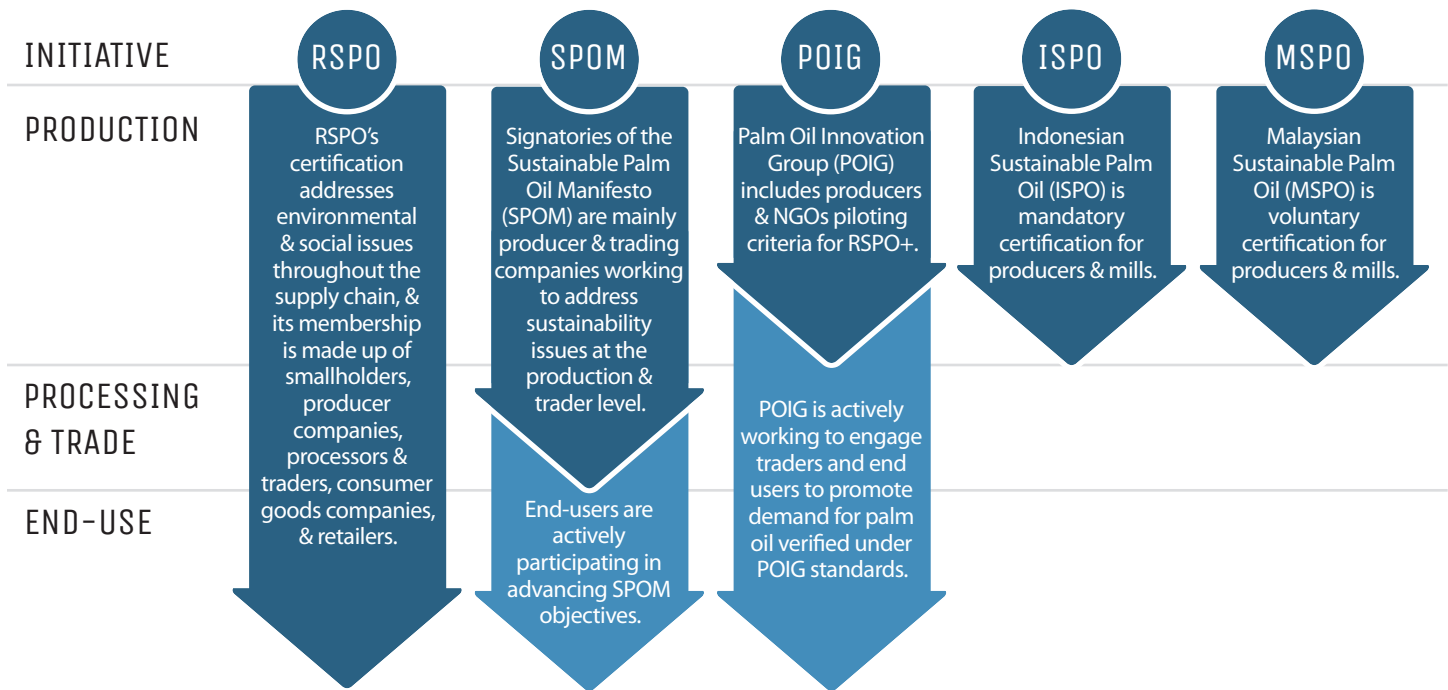
Other third-party programs include: ^{63 64}

- Organic standards (though production is limited);
- The Rainforest Alliance standard, which has certified 102 oil palm producers in Guatemala and Colombia;⁶⁵
- The International Sustainability and Carbon Certification (ISCC) and the Roundtable on Sustainable Biomaterials (RSB), which certify sustainable production of biomass, biofuels and feedstock; and
- The Indonesian Sustainable Palm Oil System (ISPO) and the Malaysian Sustainable Palm Oil System (MSPO), which are national initiatives that sustainability advocates believe should be a floor—not a ceiling—for production standards.



The Sustainable Sourcing Guide for Palm Oil Users, produced by World Wildlife Fund and Conservation International, includes a comparison of multiple standards and includes the graph shown below.

INDUSTRY INITIATIVES ADDRESSING SUSTAINABILITY THROUGHOUT THE PALM OIL SUPPLY CHAIN



Ceres has not evaluated the robustness and effectiveness of these standards but is providing them as options to consider. Ideally, standards are comprehensive and focused on measuring improvements across environmental as well as social issues.

RECOMMENDATIONS BY CERES

Ceres works with companies and investors to encourage sustainable palm oil sourcing. It is recommended that companies:

1. Establish a time-bound policy committing to sourcing from suppliers that implement:
 - **No Deforestation** (including protection of High Carbon Stock Forests, peatland of any depth, and High Conservation Value areas)
 - **No Exploitation** (including protection of human rights, fair treatment of workers and recognition of community land rights)
 - **A fully traceable, transparent and legal supply chain to the plantation**
 - **Certification and verification**
2. Provide regular public reports on implementation using meaningful metrics.
3. Support multi-stakeholder and government efforts to create enabling conditions for the company's commitment to be met. This includes engaging certification schemes and policymakers.

COMPANIES IN ACTION

Though U.S. companies do not purchase a large percentage of palm oil produced globally, many are taking action to promote more sustainable palm oil production, given their global role in the food and personal care sectors.

Since 2013, over 50 major companies have adopted sustainable palm oil sourcing policies, including [Yum! Brands](#), [Hershey](#), [Mars](#), [Nestlé](#), [PepsiCo](#), [Unilever](#), [Proctor & Gamble](#), [Wilmar Group](#) and [Cargill](#). Several reports provide guidance for the steps companies can take, including *Sustainable Sourcing Guide for Palm Oil Users* by World Wildlife Fund and Conservation International and *Sustainable Palm Oil Sourcing Guidelines* by The Consumer Goods Forum.⁶⁶

- At [Kellogg Company](#), in 2015, 100 percent of the palm oil the company uses in the U.S. and Canada was RSPO mass balance certified. The company requires that suppliers trace palm oil to plantations that are independently verified; meet its principles for protecting forests, peat lands, and human and community rights; and comply with RSPO. Traceability reviews were completed in 2015 and the company is now working to close gaps. In an effort to demonstrate transparency, Kellogg also lists its top three palm oil suppliers.⁶⁷
- [Mondelez](#) met its pledge to make all of its palm oil 100 percent RSPO certified in 2013. At the end of 2015, 90 percent of the palm oil sourced by the company was traceable back to the mill and 91 percent was from suppliers with published policies. It has acted against suppliers that did not comply; at the end of 2015, it confirmed plans to exit 11 suppliers. Importantly, the company is calling for transparency of concession maps to ensure compliance.⁶⁸



ADDITIONAL RESOURCES

GENERAL

- The U.S. Department of Agriculture conducts research on multiple commodities, including palm oil. This includes data on production and consumption, prices and trade and is published through the [Economic Research Service](#), [Foreign Agricultural Service](#), and [National Agricultural Statistics Service](#).
- Both [The Sustainability Consortium](#) and [World Wildlife Fund](#) offer high-level insights and analysis about potential risks and opportunities across a number of commodities, including palm oil. In addition, WWF has evaluated the steps retailers, manufacturers and food service companies from around the world have taken in its [Palm Oil Buyers Scorecard](#) and also provides a set of recommended actions.

MAPPING AND EVALUATION TOOLS

- The [Sustainable Palm Oil Transparency Toolkit](#) or SPOTT provides information about the sustainability of 50 of the world's largest palm oil producers using publicly available information. It was developed by The Zoological Society of London (ZSL).
- World Resources Institute (WRI), provides several resources including the "[Suitability Mapper](#)" which was developed under Project POTICO with Sekala to identify potentially suitable sites for sustainable palm oil production in Indonesia. It has also published *How to Identify Degraded Land for Sustainable Palm Oil in Indonesia*. A related map through the [Forest Cover Analyzer](#) enables users to assess forest cover change and risks related to sustainable palm oil production in areas of their choice in Kalimantan, Indonesia.

SOCIAL IMPACTS

- [KnowTheChain](#) is a resource for businesses and investors who need to understand and address forced labor risks within their supply chains.
- [Free and Fair Labor in Palm Oil Production: Principles and Implementation Guidance](#) (2015) by Humanity United provides the normative standard for labor and working conditions on palm oil plantations and in palm oil mills along with guidance on a set of practices to operationalize these principles. It is focused on the hired labor workforce on palm oil plantations and mills, where the risk of worker exploitation is greatest.
- [Modern Slavery in the Palm Oil Industry](#) (2012) produced by Accenture for Humanity United, provides an overview of the global palm oil production market and supply chain, describes various examples of labor exploitation in Malaysia and Indonesia, the work of the RSPO, and recommended interventions for governments and companies to address the conditions under which the palm oil industry recruits and employs workers.
- Verite has assessed labor conditions in [multiple countries](#). Its appraisals were undertaken in [Malaysia and Indonesia](#), and [Guatemala](#) and [Ecuador](#).

- [International Labor Rights Foundation](#) analyzed with partner Sawit Watch in 2013 the on-the-ground realities at three RSPO certified palm oil plantations in Indonesia.
- [Bloomberg's](#) examination of human rights challenges in Indonesia
- [Respecting Land and Forest Rights: A Guide for Companies](#) (2015) by The Interlaken Group and the Rights and Resources Initiative (RRI) was developed through a multi-stakeholder forum to support companies in respecting land rights by aligning operations with the United Nations Food and Agriculture Organization's Voluntary Guidelines on the Responsible Governance of Tenure (VGGT).

SUSTAINABLE SOURCING GUIDANCE

- [No one is safe: Illegal Indonesian palm oil spreads through global supply chains despite global sustainability commitments and certification](#) (2016) by Eyes on the Forest, which reports on how Crude Palm Oil (CPO) tainted by illegally grown Fresh Fruit Bunch (FFB) from government protected areas deep inside Sumatra entered the supply chains of palm oil suppliers.
- [Sustainable Palm Sourcing Guidelines](#) (2015) by The Consumer Goods Forum, which is intended to assist companies in the development of their own policies for effectively sourcing palm oil. It was developed by a large set of retailers and manufacturers from across the CGF membership, with input from a number of external stakeholders.
- [Sustainable Sourcing Guide for Palm Oil Users: A practical handbook for US consumer goods and retail companies](#) (2015) by World Wildlife Fund and Conservation International, which helps companies take steps to understand their palm oil footprint and the various issues related to sourcing certified sustainable palm oil.
- [Profitability and Sustainability in Palm Oil Production Analysis of Incremental Financial Costs and Benefits of RSPO Compliance](#) (2011) by World Wildlife Fund, which shows RSPO-compliant plantations and mills are more profitable and have improved staff morale and reduced turnover, better yields, more consistency, along with improved community and government relations.
- [Realizing zero-deforestation: Transforming supply chains for the future](#) (2015) by CDP, which provides examples of actions being taken by companies and lays out a five-stage process for companies to drive deforestation out of their supply chain. The steps involve "enhancing procurement processes, communicating effectively, tracking progress, collaborating along the value chain, and reviewing what's working, and what's not."
- [Palm Oil Investor Review: Investor Guidance on Palm Oil. The role of investors in supporting the development of a sustainable palm oil industry](#) (2012) by World Wildlife Fund, which is based on a 2012 review of 35 palm oil investors with significant exposure to the 68 largest listed entities in the palm oil sector. The report includes results of the survey, as well as company and market research and a set of recommendations for investors and RSPO.
- [How Investors are Changing the Supply Chain for Palm Oil](#) (2014) by Green Century Capital Management, which reviews how investors can and have driven change.

[Engage the Chain](#) offers briefs on seven other key commodities, a compelling [case](#) for sustainable agriculture and opportunities for action that cut across all types of agricultural commodities.

ENDNOTES

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March 2017