HOW U.S. SNACK FOOD BRANDS

ARE CONTRIBUTING TO ORANGUTAN EXTINCTION, CLIMATE CHANGE AND HUMAN RIGHTS VIOLATIONS

RAINFOREST ACTION NETWORK

PHOTO: *RHETT BUTLER / MONGABAY*

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RAINFOREST ACTION NETWORK

Rainforest Action Network campaigns for the forests, their inhabitants and the natural systems that sustain life by transforming the global marketplace through education, grassroots organizing and non-violent direct action.

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EXECUTIVE SUMMARY

In rainforests half a world away from the United States, orangutans are making their last stand for survival. Scientists warn that these gentle and intelligent animals, among humankind's closest kin, could become extinct within our lifetime if their rainforest homes continue to be destroyed for palm oil plantations. But the primary threat pushing them toward extinction lies much closer to home than you may think: you'll find it hidden in the snack food aisle of your local grocery store, and likely in your own shopping cart.

When you eat food that comes out of a bag, a box, or a package of any kind, chances are you are eating palm oil. It is added to chocolate, turned into fry oil, and snuck into snacks of all sorts—in fact, it can now be found in roughly half the packaged food products sold in grocery stores. This palm oil comes at a terrible human and environmental cost. Skyrocketing demand has driven massive, industrial palm oil plantations into millions of acres of formerly lush rainforest habitat in Indonesia and Malaysia, worsening climate change and causing widespread human rights violations.

This report announces the launch of an ambitious new national campaign by Rainforest Action Network (RAN) called "The Last Stand of the Orangutan." This campaign exposes the dark secret of conflict palm oil in the U.S. snack food industry and calls on companies to adopt responsible palm oil policies and commit to only using traceable palm oil that is free of deforestation, carbon-rich peatlands and human rights violations.

RAN's carefully selected "Snack Food 20" group of companies are named here publicly for the first time. This report assesses the palm oil purchasing commitments and policies of each of these influential corporations and spells out the critical role they have in reforming the destructive practices widely associated with palm oil production.

When you eat food that comes out of a bag, a box or a package of any kind, chances are you are eating palm oil.

The "Snack Food 20" group of companies—Campbell Soup Company; ConAgra Foods, Inc.; Dunkin' Brands Group, Inc.; General Mills, Inc.; Grupo Bimbo; Hillshire Brands Company; H.J. Heinz Company; Hormel Foods Corporation; Kellogg Company; Kraft Food Group, Inc.; Krispy Kreme Doughnuts Corp.; Mars Inc.; Mondelēz International, Inc.; Nestlé S.A.; Nissin Foods Holdings Co., Ltd.; PepsiCo, Inc.; The Hershey Company; The J.M. Smucker Company; Toyo Suisan Kaisha, Ltd.; and Unilever—manufacture a wide range of popular snack foods in the United States and abroad that contain conflict palm oil.

While some companies are beginning to take steps to address their palm oil problem, none have yet adopted and fully implemented adequate safeguards to eliminate conflict palm oil from entering their supply chains and contaminating their products. These big, global food companies have the power, through their supply chains, to drive a transformation in the way palm oil is now commonly produced. Increased consumer and citizen pressure on these companies is a key ingredient for success.

Working together with our families, friends, and allies, we will hold these companies to account and push them to eliminate conflict palm oil from their products. We will work with them to adopt and implement responsible palm oil procurement policies that ensure the palm oil they buy is not associated with deforestation, child or forced labor, plantation expansion on carbon-rich peatlands, or violations of forest-dependent communities' rights.

The fate of the orangutan, forest peoples, and some of the world's most rich and important rainforests hang in the balance.

INTRODUCTION

This report documents the alarming secret of conflict palm oil in America's most popular snack food brands and publicly lists RAN's "Snack Food 20" by name for the first time. This report describes why conflict palm oil is an urgent global problem and how twenty of America's most popular snack food companies are key to achieving traceable, responsible palm oil in our food supply.

The dramatic and growing global demand for palm oil in recent decades has fueled a massive expansion of industrial palm oil plantations deep into some of the world's most valuable rainforests. Palm oil production is now one of the leading causes of tropical deforestation and the degradation of carbon-rich tropical peatlands, making palm oil a major global driver of human-induced climate change.

The expansion of industrial palm oil plantations directly threatens the survival of critically endangered species like the Sumatran and Borneo orangutan, Sumatran tiger, and Sumatran and pygmy elephants.

Palm oil production is also responsible for widespread human rights violations and ongoing conflicts with communities whose rights, livelihoods, and lands are being stolen and developed without their Free, Prior, and Informed Consent. Plantation workers are frequently victims of serious exploitation, including being trafficked into bonded labor, being forced to live and work under extreme conditions, with limited legal recourse, and suffering from abuse or the threat of abuse. Child labor is also known to be rampant throughout palm oil plantations.

WHAT IS PALM OIL?

Palm oil is a globally traded agricultural commodity that is found in roughly half of packaged goods sold in grocery stores.[1] Palm oil and its derivatives are used in a remarkable array of products, such as ice cream, cookies, crackers, chocolate, cereals, breakfast bars, cake mixes, doughnuts, potato chips, instant noodles, frozen sweets and meals, baby formula, margarine, and dry and canned soups. Palm oil is also found in detergents, soaps, personal care products, and increasingly as a feedstock for biofuels. Palm oil is derived from pulping the fruit of oil palms originally native to Africa.

One of the main reasons why these social and environmental problems occur is that global companies are demanding cheap palm oil to use in their products while asking few questions about where it comes from or the impacts caused by its production. Many of these brands cultivate a low profile about the palm oil ingredients in their products, and customers are typically unaware they are even consuming palm oil, let alone realizing the hidden environmental and social costs contained in the foods they are buying.

There is a fundamental obstacle to solving the crises of deforestation, human rights violations, and carbon pollution caused by the production of conflict palm oil: the international corporations producing most of the food sold in grocery stores usually cannot trace the palm oil they are using back to the plantations where it was grown. This means that even well-intentioned companies cannot currently offer verifiable assurances that the palm oil they are purchasing is not contributing to these egregious violations. Until these powerful companies insist on transparency and traceability in their palm oil supply chains, they are complicit with the problem.

Growing Demand, Growing Destruction

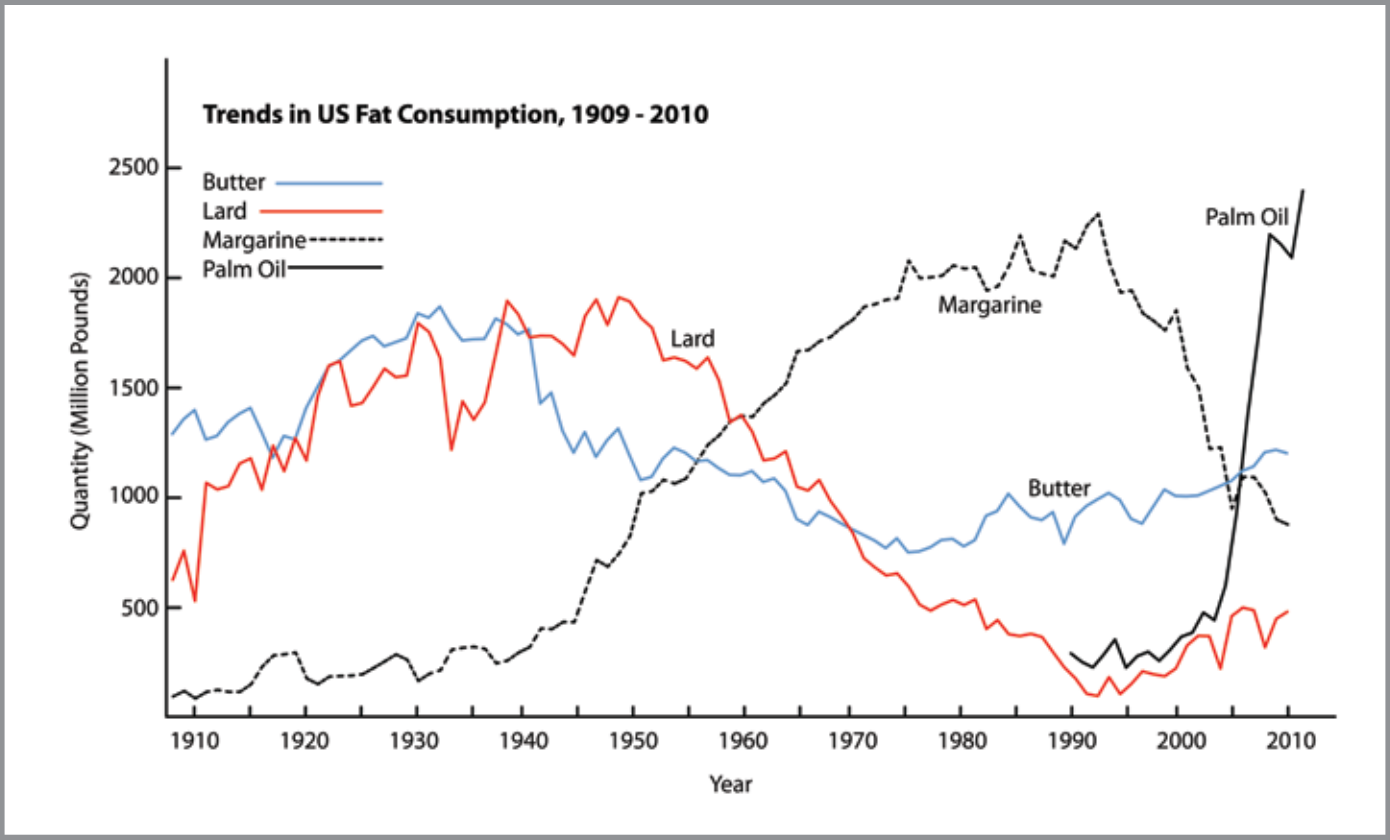
Consumption of palm oil has been growing rapidly in the United States, increasing nearly sixfold since 2000 to reach 1.25 million metric tons in 2012.[2] This explosive growth has been partly driven by changes in U.S. food labeling laws for trans fats. This has caused U.S. companies to shift to palm oil with its low trans fat content, despite growing evidence that palm oil's high saturated fat content is unhealthy[3] (see figure 1).

Palm oil has quickly become a pervasive ingredient in the everyday foods that touch our lives. In less than two decades palm oil production has nearly quadrupled to 55 million metric tons and surpassed soybeans to become the world's most widely traded and used edible vegetable oil.[4]

About 98 percent of all palm oil imported into the United States comes from Southeast Asia, with most of the small remainder coming from Latin America. While Indonesia is the largest producer and exporter of palm oil globally, Malaysia accounts for more than 90 percent of exports to the United States. This can be misleading, however, because much of the palm oil grown and exported from Malaysia is blended with the palm oil that it imports in significant volumes from Indonesia.[5]

After Malaysia, the top five palm oil importing countries in 2012 were China, India, the European Union, Pakistan, and the United States.[6]

Palm oil production is quickly expanding into Africa and Latin America, with those regions increasingly facing the same social and environmental consequences now devastating Southeast Asia.



Trends in U.S. Fat Consumption, 1909-2010[7]

IS PALM OIL HEALTHY?

Palm oil is often mistakenly promoted for its health benefits based on low trans fat content, while ignoring the fact that it is also very high in saturated fats. Other health claims about the virtues of palm oil are largely hearsay and based on the purported antioxidant properties of fresh and unprocessed palm oil, not the highly processed food additive widely used in packaged foods. Respected health organizations including the World Health Organization; the National Heart, Lung, and Blood Institute; the National Institute of Diabetes and Digestive and Kidney Diseases; and the USDA's Agricultural Research Service all recommend against consuming palm oil and other tropical oils because of their high content of artery-clogging saturated fats and their link to "bad" cholesterol.[8]

Seeking Solutions

Traditionally, palm oil was grown as part of diverse mixed farming systems by small holders in West Africa for local consumption.[9] There are now examples where such relatively low-impact palm oil production systems in West Africa have been further developed and linked into international Fair Trade Organic markets.[10] However, these cases are the exception rather than the rule. Most palm oil on the market today is grown in large monoculture estates of uniform age plants with low biological diversity, intensive use of fertilizers and pesticides, growing social inequalities between small holders and large transnational palm oil companies, and expansion at the expense of rainforests.[11]

Some non-governmental organizations (NGOs) and companies attempted to address the problems with palm oil by forming the Roundtable on Sustainable Palm Oil (RSPO) in 2004. The RSPO created a set of standards for certifying so-called sustainable palm oil by consensus of the membership, which includes many of the major industrial palm oil producers. However, the RSPO standards are inadequate since they certify and endorse both deforestation and peatland expansion as sustainable.[12] Furthermore, the RSPO has a poor track record of resolving land conflicts between companies and impacted communities and enforcing its criteria regarding human rights violations[13] (see box 3).

Many of the "Snack Food 20" are members of the RSPO and most of their palm oil policies include commitments to sourcing this so-called sustainable palm oil. Due to the shortcomings in the RSPO standard and its spotty success at enforcement[14], companies who want to purchase only responsible palm oil must adopt independent global palm oil procurement policies that go above and beyond the standards of the RSPO.

Some large palm oil companies are starting to innovate toward more environmentally and socially responsible policies and practices, including the elimination of deforestation and expansion on peatlands, respect of customary land rights, and strengthened benefits-sharing agreements with small producers. These commitments toward responsible palm oil are significant and address some of the most egregious practices associated with the sector. They also demonstrate the economic viability of palm oil production with biodiversity and climate safeguards that go well beyond the current standards of the RSPO.[15]

Solving the problem of conflict palm oil requires building strong public and market demand for responsible palm oil and eliminating demand for conflict palm oil. The goal is to create tipping points that enhance the economic viability of responsible palm oil and transform the global infrastructure of palm oil supply chains.

Rainforest Action Network is calling on the "Snack Food 20" to adopt responsible palm oil policies and to only use traceable palm oil that is free of deforestation, expansion on carbon-rich peatlands and human rights violations.

CONFLICT PALM OIL IN AMERICA'S FAVORITE SNACK FOODS

Packaged snack foods are among the most visible points of contact where conflict palm oil enters the lives and homes of most Americans on a daily basis. Palm oil is found in roughly half of packaged goods sold in grocery stores[16]. Palm oil and its derivatives are used in a remarkable array of products, such as ice cream, cookies, crackers, chocolate products, cereals, breakfast bars, cake mixes, baked products, doughnuts, potato chips, instant noodles, frozen sweets and meals, baby formula, margarine, and dry and canned soups.

An estimated 74 percent of global palm oil is used in food products and cooking.[17] This is why global food companies, including the "Snack Food 20" exposed in this report, have an important role to play in transforming the way palm oil is grown and produced.

With over 950 brands included in the "Snack Food 20," most American households can find examples of these products in their kitchen pantry. Eleven of the "Snack Food 20" companies are ranked in the top 1000 of this year's Forbes Global 2000 list of biggest public companies, seven are listed in Newsweek Green Rankings 2012's Top 500 Global Companies, and many others have won individual business recognitions for being a "responsible company."

Each of these companies can play a critical role in stopping forest destruction, climate change, human rights violations, and forced and child labor. Each of these companies is currently feeding the demand for conflict palm oil by buying from global commodities traders like Cargill, Archer Daniels Midland Company (ADM), Fuji Oils, Aarhuskarlshamn (AAK), Wilmar International Limited, IOI Group, Bunge and Kuala Lumpur Kepong Berhad (KLK), who in turn are buying, and in some cases growing, conflict palm oil from plantations in Southeast Asia. This means the "Snack Food 20" have significant buying power and can help transform the way palm oil is produced by demanding responsible palm oil, not conflict palm oil, from their suppliers.

Conflict palm oil vs. Responsible palm oil vs. RSPO "Sustainable" palm oil

- A DEFINITION OF TERMS

Conflict palm oil is produced under conditions associated with the ongoing destruction of rainforests, expansion on carbon-rich peatlands, and/or human rights violations, including the failure to recognize and respect the customary land rights of forest-dependent communities and the use of forced labor and child labor.

The expansion of palm oil plantations into natural rainforests and customary lands of Indigenous Peoples and rural communities causes widespread conflict across Indonesia and Malaysia. It causes conflict between people and wildlife as palm oil plantation workers too often shoot, kill, or capture orangutans, elephants, and tigers that have lost their habitat and wander onto plantations. There is conflict between Indigenous Peoples and palm oil producers who gain permits from government officials but fail to obtain Free, Prior, and Informed Consent (FPIC) before they clear their forests for palm oil. There is horizontal conflict between community members who accept compensation from palm oil companies and those that do not accept compensation and continue to oppose the development of their lands for palm oil. There is conflict when palm oil companies deprive workers and children of their fundamental rights and subject them to forced labor conditions. Additionally, there is conflict with the law when illegally grown palm oil freely enters the global palm oil supply chains of the world's largest palm oil traders. And finally there is conflict with a low-carbon future, as tropical forests and carbon-rich peatlands are destroyed to make way for palm oil plantations, sending huge amounts of heat-trapping carbon into the atmosphere.[18]

Conflict palm oil contaminates almost all globally traded palm oil and is used to make food products consumers buy every day from the many trusted brands offered by the "Snack Food 20."

Responsible palm oil is palm oil that is produced without contributing to deforestation, expansion on carbon-rich peatlands, and/or the violation of human and labor rights. Responsible palm oil is produced legally and can be verifiably traced back to the plantation where it was grown.

The term **RSPO** "**sustainable**" **palm oil** has been diluted by association with the weak certification standards of the Roundtable on Sustainable Palm Oil (RSPO). It has been further diluted by the many companies who buy GreenPalm certificates (which provide small monetary support to producers following the RSPO "sustainable palm oil" standards) rather than buying segregated RSPO-certified palm oil (which is sourced from a known RSPO certified producer and is not mixed with controversial sources at any point in the supply chain) or, better yet, responsible palm oil. These companies can then put the GreenPalm logo on their packaging and websites to make the palm oil in their products appear sustainable, but in reality the company still buys conflict palm oil and pays a very low fee to "offset" their palm oil use.

Many companies are buying mass balance RSPO-certified palm oil (which allows mixing of RSPO-certified palm oil and non-RSPO-certified palm oil) and claiming they are sourcing 100% sustainable palm oil. There is growing concern that this amounts to little more than a greenwashing tactic to the point that "sustainable palm oil" is no longer a useful term to distinguish good palm oil from bad. Consumers are being misled by labels on products that say "sustainable" but contain palm oil from producers still causing rainforest and peatland destruction.[19]

Companies that produce, trade, and use palm oil must go beyond the inadequate "sustainable" standards of the RSPO to be truly responsible.

THE PROBLEMS WITH CONFLICT PALM OIL

Rainforest Destruction

Palm oil production has become one of the world's leading causes of rainforest destruction.[20] It has been identified by scientists as "the greatest immediate threat to biodiversity in SE Asia."[21] More than 85 percent of palm oil is grown in the two Southeast Asian tropical countries of Indonesia and Malaysia[22], largely on industrial plantations that have severe impacts on rainforests, the climate, and forest peoples.

Indonesia has experienced one of the most rapid plantation expansions ever witnessed in the world. The area covered by palm oil plantations has grown by 600 percent since 1990, to cover over nearly twenty million acres of land in 2013 (an area the size of Maine).[23] This growth is associated with a 40 percent decline of lowland rainforests in the area over the same period. Not only is expansion continuing, but also the rate of expansion is accelerating. Palm oil expansion in Indonesia has risen from a growth rate of 1.2 million acres per year over the previous decade to nearly 1.6 million acres per year between 2011–2013.[24]

The Indonesian government has announced plans to more than double the size of palm oil plantations to 44 million acres (an area the size of Missouri). Much of this is expected to occur on carbon-rich peatlands and will require further deforestation, which is one reason why Indonesia is one of the most critically threatened rainforest regions in the world today, and also why Indonesia has become a global priority for focused efforts to reverse these trends and save what remains.[25]

Palm oil production has become one of the world's leading causes of rainforest destruction.

RELIEF MAPS: *ARID OCEAN*

The bulk of the conversion of rainforests into palm oil plantations and the projected expansion for the coming years is occurring on two islands: Sumatra (Indonesia) and Borneo. Borneo, the third largest island in the world, is largely divided between Malaysia (with the states of Sabah and Sarawak in the north) and Indonesia (with five Kalimantan provinces).

Palm oil plantation expansion, often driven by large Malaysian and Indonesian palm oil companies, is spreading quickly beyond these two countries to Papua New Guinea, across tropical South and Central America, and into western and central African countries. About two thirds of the 284 million acres of rainforests in the Congo Basin is considered suitable for palm oil plantations. Over two and a half million acres of large land concession deals have been identified in four Congo Basin countries, and industrial palm oil plantation expansion is actively underway in the Congo to develop 1.2 million acres (an area nearly the size of Delaware).[26]

Large concessions totaling more than two and a half million acres are also being sought and signed in adjacent African countries including Liberia, Cameroon, and Uganda.[27] In Latin America, Brazil alone has 72 million acres of rainforest land suitable for palm oil cultivation in the Amazon.[28] In Central America, palm oil expansion has already turned deadly.[29] If left unchecked, dramatic palm plantation expansion could lead to increasingly drastic consequences for rainforests, people, and wildlife across the globe.

Species Extinction

Palm oil is driving iconic wildlife species like the Sumatran orangutan[30] and the Borneo orangutan[31] to the brink of extinction. Orangutans are among our closest kin in the animal kingdom. They are amazingly like us in how they learn, play, and care for their young.[32]

Between 1990 and 2005, 55–60 percent of palm oil expansion in Malaysia and Indonesia occurred at the expense of virgin tropical rainforests, and destruction of rainforests continues largely unabated.[33] For the last remaining wild orangutans, these shrinking forests are their only home. Scientists estimate that converting a forest area into an industrial palm oil plantation results in the death or displacement of over 95 percent of the orangutans who originally lived in the area.[34]

The survival of the Sumatran tiger, found only on the island of Sumatra, is also threatened by palm oil plantation expansion. This tiger is listed as critically endangered by the International Union for the Conservation of Nature (IUCN), with estimates of only 300–500 left in the wild.[35]

Palm oil expansion also threatens the critically endangered Sumatran elephant, which has suffered a 69 percent decrease in habitat since the 1930s and an estimated population size reduction greater than 80 percent. The Sumatran elephant is now locally extinct in about half of its traditional range, and only several thousand are estimated to remain in the wild.[36]

In Borneo, the highly unusual and endangered pygmy elephant, only found in Sabah and adjacent parts of Indonesian Kalimantan, is also under threat from expanding palm oil plantations, with less than 1,500 left in the wild.[37]

PHOTO: *MIKE GRIFFITHS*

THE LAST STAND OF THE ORANGUTAN

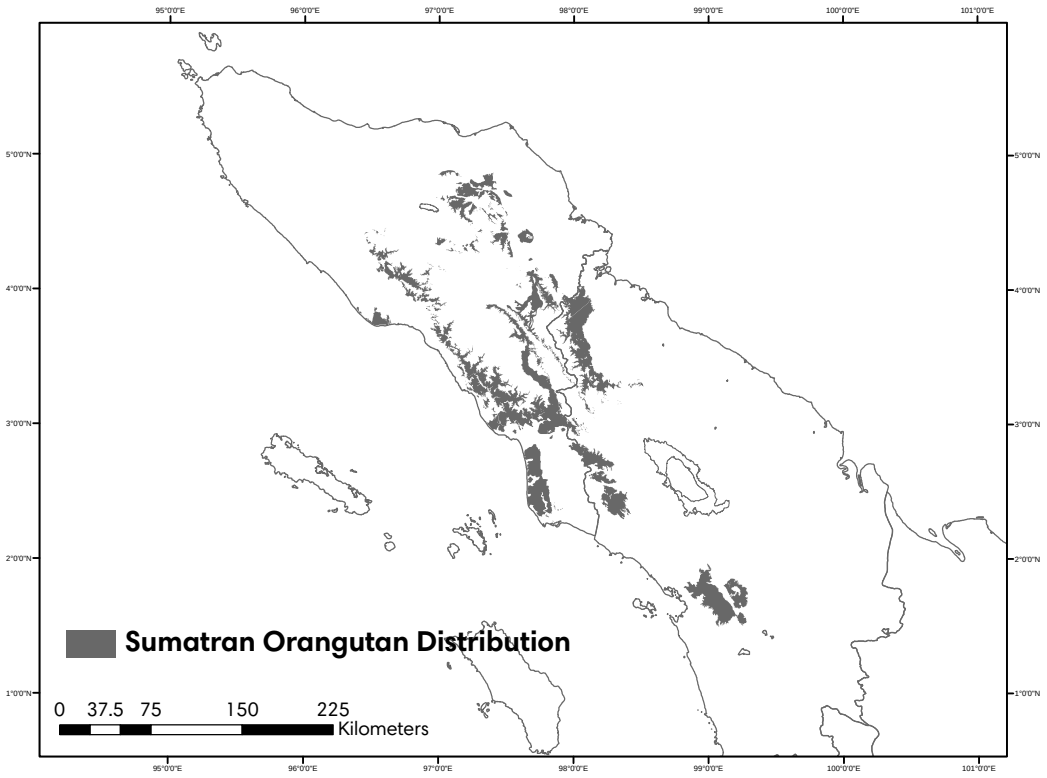
Today's populations of orangutans exist only in shrinking areas of tropical rainforests on the islands of Borneo and Sumatra, and the species is at extreme risk of extinction within our lifetime. As much as 80 percent of the orangutan's rainforest habitat has already been destroyed. [38] The Sumatran orangutan, whose last strongholds are in the provinces of North Sumatra and Aceh (in the northern portion of the Indonesian island of Sumatra), is rarer than the Borneo orangutan, but both species are urgently threatened by palm oil expansion.[39]

The IUCN's Red List categorizes the Sumatran orangutan as critically endangered, meaning this species faces the highest possible threat of extinction,[40] with the Borneo orangutan classified as endangered.[41] There are fewer than 6,600 Sumatran orangutans left in the wild and they have been called one of the world's twenty-five most endangered primates.[42]

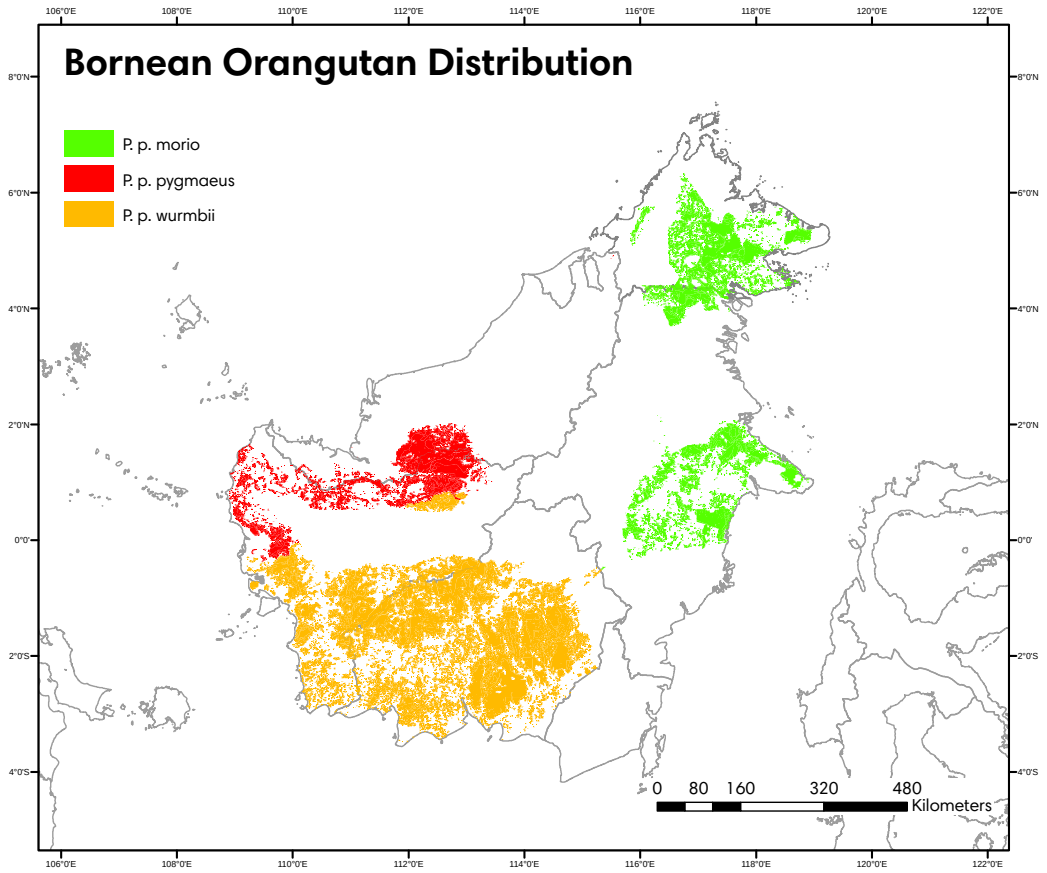
There are approximately 54,000 Borneo orangutans left in the wild and they live primarily in lowland forests that cover 21 percent of the Borneo landmass. Nearly 20 percent of their remaining habitat is allocated as palm oil concessions, which are due to be cleared and planted with palm oil trees in the near future, and additional areas are at risk.[43]

Researchers in Borneo concluded that without radical changes in plantation practices in existing and new plantation areas—including limiting new plantation expansion to already-deforested regions—half of the Borneo orangutan's remaining forest habitat will be lost due to the development of palm oil plantations, timber plantations and other drivers of forest loss. Losses will be even higher unless illegal expansion of palm oil into protected areas and logging concessions are also halted.[44]

These are the final strongholds—the "last stands"—for the orangutans if they are to survive and thrive in the wild.



Distribution of the Sumatran Orangutan / Based on data from Wich et al. 2008, 2011, and unpublished data.



Distribution of the Bornean Orangutan / Based on Wich et al. 2012

HUMAN AND LABOR RIGHTS VIOLATIONS

PHOTO: *E. BENJAMIN SKINNER, SCHUSTER INSTITUTE FOR INVESTIGATIVE JOURNALISM, BRANDEIS UNIVERSITY*

It's not only orangutans that depend on the rainforests of Indonesia and Malaysia—millions of people do, too. Indonesia's forests are a hotspot of world cultural diversity, home to hundreds of distinct language groups. Tens of millions of people depend on Indonesia's forests to meet their basic livelihood needs for food, water, medicines and other timber and non-timber forest products, as well as for maintaining their cultural identity. Estimates of the number of forest-dependent people in Indonesia who rely directly on the forest for their livelihoods vary widely, but they range from 20 million to 100 million out of a total population of 210 million.[45]

Operating on Stolen Lands

Working with corrupt officials, some palm oil companies are stealing the land out from under the communities who depend on these forests for their livelihoods.

Palm oil production has a sordid history of human rights violations, land grabbing, community conflict, and failure to respect the rights of Indigenous Peoples and forest-dependent communities to give or withhold their Free, Prior, and Informed Consent (FPIC) regarding developments on their lands. Indonesian government policies on plantations and forestry[46] facilitate large-scale industrial expansion without protecting the rights of Indigenous Peoples and local communities to control and access their customary forests[47]. Licenses for palm oil plantation establishment are issued by the national government and involve the conversion of forests and agricultural lands.

Despite some limited recognition of private use rights, most areas of customary lands are assumed by the government to be state lands. Allocations are made and conversion permits exercised without determining whether competing land claims exist in an area. As a result, the rights of local communities and small farmers to own, manage, and derive livelihoods from these areas are ignored and violated.

Given the large area of land that is under customary tenure and the continued issuing of permits for national palm oil development in these areas, there are a large number of ongoing land disputes and frequent human rights violations related to palm oil development in Indonesia. Knowing their survival is at stake, many communities are fighting back. Indonesia's National Lands Agency has registered 3,000 conflicts between palm oil companies and local communities. However, communities resisting the takeover of their forests and farms for palm oil plantations are often treated as criminals.

Village leaders have been imprisoned for months or years without trial, and community protests are often repressed by the police with beatings or even shootings. Villages and gardens have been bulldozed to force communities off lands that have been licensed to palm oil companies.[48] In the end, many communities have lost the battle to resist palm oil development on their lands and have been forced to enter into contractual relations as smallholder farmers and laborers indebted to incoming palm oil companies.

Forced Labor and Child Labor

Due to the geographic isolation of many palm oil plantations, companies often rely on the recruitment of workers in distant labor markets. Labor brokers working for palm oil companies lure men, women, and children to work on faraway plantations with promises of high wages, easy work, and good living conditions. In Malaysia roughly 70 percent of laborers on palm oil plantations are foreign migrants, most commonly from Indonesia.[49] Migrant laborers in both Malaysia and Indonesia are particularly vulnerable, often experiencing restrictions on their freedom of movement, retention of their passports and other valuable documents, indebtedness to labor brokers, and delayed or unpaid wages. Many of these situations amount to forced labor, a form of modern-day slavery.

Child labor is also common on palm oil plantations in Indonesia and Malaysia. In 2012 the U.S. Department of Labor listed palm oil as one of the industries most notorious for forced labor and child labor. In Malaysia it is estimated that between 72,000 and 200,000 stateless children work on palm oil plantations.[50] Children of migrant parents in Malaysia are not granted citizenship in Malaysia or their parents' country. The result is that the children are not awarded the rights of either country, including a right to an education, and are rendered "stateless." These children, faced with no other options, end up as child laborers, often in situations of bonded labor.[51]

The July 2013 *Bloomberg Businessweek* article "Indonesian Palm Oil Industry Rife with Human Rights Abuses" documented widespread cases of forced labor and child labor in Indonesia's palm oil industry.[52] The article, based on a nine-month investigation by the Schuster Institute for Investigative Journalism at Brandeis University, describes abusive labor practices on twelve different palm oil plantations and tells of workers and children being held captive, deprived of clean drinking water, working without pay for up to two years, and beaten if they tried to escape.

Few of these human or labor rights violations are acknowledged by the Indonesian or Malaysian governments, and proper restitution is almost never made. Without government and private sector policy changes to recognize and respect community and labor rights and a robust implementation of these policies, the planned rapid expansion of palm oil plantations in the coming decade will lead to further human and labor rights violations and widespread impoverishment, as thousands more communities lose control of their traditional lands and livelihoods as a consequence of imposed, rather than bottom-up and rights-based, development.

Communities resisting palm oil development on their customary lands, as well as palm oil workers seeking a decent living, need help to amplify their voices to brands selling palm oil in U.S. supermarkets.

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CLIMATE CHANGE

Indonesian and Malaysian rainforests naturally breathe in millions of tons of carbon dioxide a year and breathe out oxygen in its place. The trees remove carbon dioxide from the atmosphere by storing carbon in their trunks, branches, and roots, and in the soil beneath them. Keeping these forests standing, along with keeping fossil fuels in the ground, offers the Earth's best hope for fighting catastrophic climate change. When rainforests are cleared and burnt they release massive quantities of carbon into the atmosphere, worsening climate change.

How valuable are forests for the climate? Each year about 30 percent of all the carbon we release from burning fossil fuels worldwide is taken out of the atmosphere and sequestered by the world's intact forests, free of charge. Intact tropical rainforests are particularly effective at sequestering carbon, sinking as much carbon each year as all the temperate and boreal forests combined.[53]

But instead of maintaining intact rainforests, we are destroying them at unprecedented rates—about one acre is lost every second—[54] including for corporate-controlled commodity production such as palm oil.

The impact can be huge. Worldwide, tropical deforestation contributes as many emissions to climate change as those from the global transportation sector. That's equivalent to the pollutants coming out of the engine of every car, truck, ship, plane, and train on the planet.

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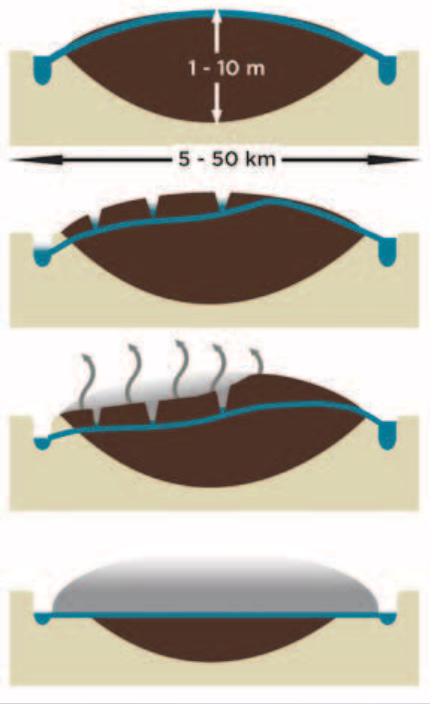
The Importance of Peatlands

Indonesia is the third largest greenhouse gas emitter after China and the United States. But whereas fossil fuels are the main source of emissions in China and the United States, 85 percent of Indonesia's emissions come from deforestation and from the degradation of carbon-rich peatlands, much of which occurs to produce palm oil.

Peatlands are wet, carbon-rich ecosystems that sequester carbon through thousands of years of accumulating leaf litter and organic material, forming large domes of carbon-rich organic peat soil. Palm oil trees cannot grow on these waterlogged soils, so plantation growers must first drain the peatlands in order to plant. This exposes the ancient organic peat to the air and the exposed peat starts to oxidize as carbon emissions, year after year for decades. A single hectare of drained peat under palm oil will emit more than 4,000 tons of CO_2 over fifty years. [55]

Indonesian and Malaysian forests provide a wide variety of important environmental services, including erosion control, watershed protection, and climate regulation. Indonesia in particular, with 65 percent of the world's tropical peatlands spread across 13 percent of its land base, has a remarkable concentration of the most carbon-rich forests in the world.[57] The peatlands in this region contain around 70 billion tons of carbon, nearly nine times as much carbon as was released from burning all fossil fuels globally in 2006, making protection of these peatland forests a global climate priority. Around 85 percent of this regions' peatlands are found in Indonesia and 15 percent in Malaysia.[58]

Figure 2: Peatland drainage and CO_2 emissions[56]



Natural Situation:
- Water table close to surface
- Peat accumulation from vegetation over thousands of years

Drainage:
- Water tables lowered
- Peat surface subsidence and CO_2 emission starts

Continued drainage:
- Decomposition of dry peat: CO_2 emission
- High fire risk in dry peat: CO_2 emission
- Peat surface subsidence due to decomposition and shrinkage

End Stage:
- Most peat carbon above drainage limit released to the atmosphere within decades, unless conservation / mitigation measures are taken

Water Table
Peat dome
Clay / Sand
Stream channels
Former extent of peat dome

PHOTO: *CARLOS QUILES*

Despite contributing an estimated half of Indonesia's climate emissions, Indonesian government agencies report that economic activity on peatlands contributes less than one percent of GDP.

Palm oil plantation expansion is increasingly targeting these crucial peatland forest areas. From a small palm oil plantation base on peatlands of about 600,000 acres in Malaysia and Indonesia in 1990, expansion on peatlands has exploded to reach 5.1 million acres in 2010.[59]

What's worse, expansion of palm oil plantations onto peatlands is accelerating. Under current trends, the area of palm oil plantations on peatlands is projected to triple from 2010 to 2020, reaching nearly 15 million acres. The associated on-going annual emissions from peat degradation would be on the order of 510 million tons of CO_2 per year. This is a hugely significant source of global emissions, equivalent to the annual CO_2 emissions from 145 average sized U.S. coal-fired power plants, our dirtiest source of power.[60]

Sarawak has the highest concentration of peatlands in Malaysia, many of which serve as important coastal buffer zones. If the Sarawak government proceeds with its expansion plans, it is expected that more than 80 percent of its peatlands will be converted to palm oil plantations.[61]

Sumatra and Kalimantan in Indonesia also both have high concentrations of peatlands which are being targeted for palm oil expansion. An estimated 13.5 million acres, nearly half of the total peatlands in Sumatra and Kalimantan, have already been formally allocated for conversion to industrial palm oil plantations.[62]

Despite contributing an estimated half of Indonesia's climate emissions, Indonesian government agencies report that economic activity on peatlands contributes less than one percent of GDP.[63] Emissions from sparsely populated rural Central Kalimantan alone now exceed those of Jakarta, a sprawling traffic-choked mega-city of more than 10 million people.[64]

PHOTO: *CARLOS QUILES*

Smoke and Fire

Further adding to climate emissions associated with palm oil is the use of fires to clear and prepare land for planting with palm oil. These fires are worst during the dry season from June into October, and rainfall is further reduced by periodic El Niño conditions and droughts. The last intense El Niño event from 1997–98, for example, saw the region erupt in fires, not only of trees but also of dried peat soils in drained areas as well. The resulting CO_2 emissions were estimated to exceed the entire fossil fuel emissions of Western Europe as fires smoldered uncontrolled for months.[65] The resultant smoke and haze spread across Southeast Asia, disrupting air traffic, smothering major cities, and provoking public health emergencies.

More recently, in late June 2013, smoke from hundreds of fires in Sumatra and Borneo once again blanketed Singapore and Peninsular Malaysia in a thick choking haze. At the height of the fires, the Pollutant Standard Index (PSI), a calculation of air quality derived by the U.S. Environmental Protection Agency, attained a maximum reading of over 400, well into what is categorized as the "hazardous" range for human health and shattering the previous air pollution record in Singapore, and well above the 100 level generally accepted as the maximum for healthy air quality.[66] Research by the Center for International Forestry Research in Indonesia found that nearly a quarter of the fires occurred in industrial plantations. Satellite data also showed that many industrial plantations exist where there are no concession licenses, greatly complicating efforts to identify responsible parties.

Chronic fires and regional haze spark annual regional diplomatic crises among Malaysia, Indonesia, and Singapore. Their inability to prevent and control fires illustrates the poor state of forest governance to control reckless and destructive practices in the palm oil sector.

THE SNACK FOOD 20

The "Snack Food 20" are Campbell Soup Company; ConAgra Foods, Inc.; Dunkin' Brands Group, Inc.; General Mills, Inc.; Grupo Bimbo; Hillshire Brands Company; H.J. Heinz Company; Hormel Foods Corporation; Kellogg Company; Kraft Food Group, Inc.; Krispy Kreme Doughnuts Corp.; Mars Inc.; Mondelēz International, Inc.; Nestlé S.A.; Nissin Foods Holdings Co., Ltd.; PepsiCo, Inc.; The Hershey Company; The J.M. Smucker Company; Toyo Suisan Kaisha, Ltd.; and Unilever.

Why Snack Foods?

RAN has carefully chosen these twenty corporations because they are globally significant snack food manufacturing companies that consume palm oil and/or palm oil derivatives. As a group, the "Snack Food 20" gross more than $432 billion in revenue annually, and sell their products in dozens of countries in addition to the U.S., including Southeast Asia, India, China, Japan, and Europe. Together, they have the power to engage with their global supply chains to drive a fundamental transformation of the way palm oil is traded and produced.

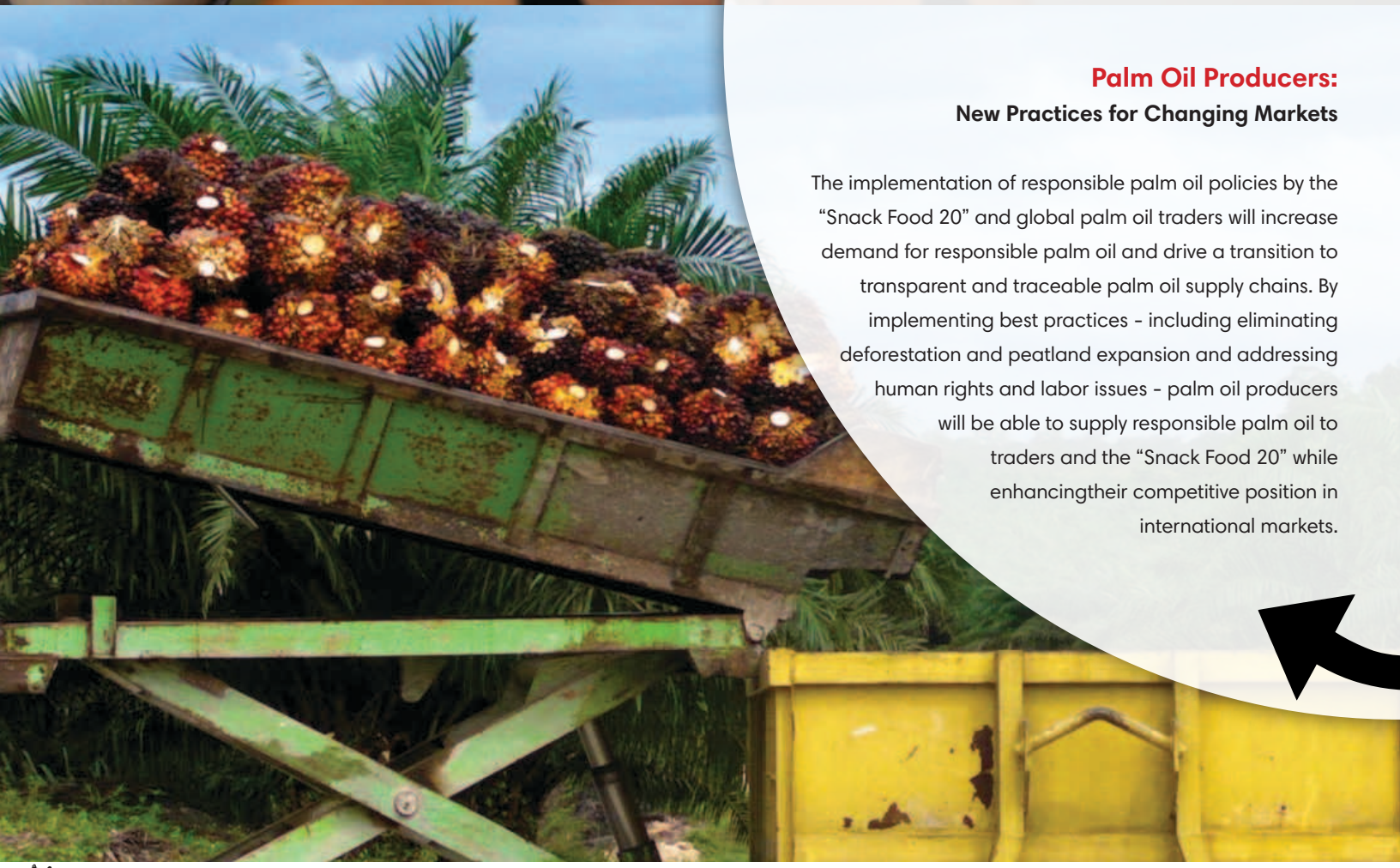

SMUCKER'S
Mondelēz International
Kellogg's
HERSHEY'S
ConAgra Foods
Hillshire
Unilever
KRAFT
Krispy Kreme
PEPSICO
Nestlé
NISSIN

DRIVING CHANGE BACK TO THE SOURCE

Snack Food Shoppers:

The Power is in Your Palm

The "Snack Food 20" spend hundreds of millions of dollars a year to gain the trust and loyalty of consumers, and examples of their products can be found in virtually every home in America. They truly care what their customers think of their brands. If enough people call on the "Snack Food 20" to adopt responsible palm oil policies, they will listen and start demanding traceable palm oil from their suppliers that does not contribute to deforestation, expansion on carbon-rich peatlands or human and labor rights violations.



Palm Oil Producers:

New Practices for Changing Markets

The implementation of responsible palm oil policies by the "Snack Food 20" and global palm oil traders will increase demand for responsible palm oil and drive a transition to transparent and traceable palm oil supply chains. By implementing best practices - including eliminating deforestation and peatland expansion and addressing human rights and labor issues - palm oil producers will be able to supply responsible palm oil to traders and the "Snack Food 20" while enhancingtheir competitive position in international markets.

The Snack Food 20:

Consumer Brands Must Lead the Way

The "Snack Food 20" manufactures hundreds of valuable brand name products, which gross more than $432 billion in sales each year. They have the obligation to protect their brands' value, and the power to demand that their suppliers - global palm oil traders -build traceable supply chains, eliminate conflict palm oil, and sell them only responsible palm oil that is not connected to deforestation, expansion on carbon-rich peatlands or human and labor rights violations.

Global Palm Oil Traders:

The Linch-Pins of the Palm Oil Supply Chain

A handful of global palm oil traders, including Cargill, ADM, Wilmar, IOI, Bunge, AAK, Fuji Oils and KLK dominate the buying and selling of nearly all palm oil on international markets. Global palm oil traders must insist that the palm oil they buy from refineries, mills and growers is fully traceable and not associated with deforestation, expansion on carbon-rich peatlands or human and labor rights violations.

RECOMMENDATIONS:
A ROADMAP TO RESPONSIBLE PALM OIL

International food companies are increasingly coming to understand and acknowledge that they have a critical role, alongside NGOs and national governments, in changing the way palm oil is produced in order to stop the terrible toll it now costs. Responsible snack food companies can use their buying power to drive changes by taking the following steps:

1. **Articulate social and environmental commitments:** Make a public commitment to protect rainforests, peatlands, climate, biodiversity and human and labor rights and to eliminate conflict palm oil from the company's supply chain.

2. **Adopt a global responsible palm oil procurement policy:** Develop and implement a global policy that requires palm oil that is 100 percent traceable and does not come from illegal sources or companies that contribute to deforestation, expansion on carbon-rich peatlands, and/or the violation of human and labor rights.

3. **Develop a robust time-bound implementation plan:** Set measureable time-bound performance targets and outline auditing and verification measures for implementing the company's responsible palm oil policy. Publicly report on progress annually.

4. **Create supply chain transparency and traceability:** Work with suppliers to develop 100 percent traceable supply chains to ensure the sources of all palm oil are known, documented, and grown in accordance with the company's responsible palm oil policy.

5. **Require suppliers to eliminate sources of conflict palm oil:** Make and implement a time-bound plan to eliminate palm oil sourced from companies who continue to produce conflict palm oil. Work with supply chain partners who are willing to deliver traceable supply chains, eliminate conflict palm oil and adopt comprehensive responsible palm oil policies.

6. **Become an advocate for protecting rainforests, peatlands, climate, biodiversity and human and labor rights.** Work with peers and other stakeholders, including governments, to advocate for wider actions that address underlying causes of conflict palm oil, reduce adverse environmental and social impacts from supply chains, and support enabling laws and regulations, policies and actions in both producer and consumer countries.

If the "Snack Food 20" companies take these steps, the demand for responsible palm oil will grow and provide a significant incentive for palm oil producers to fundamentally change their practices and stop destroying rainforests, worsening climate change, and violating human and labor rights.

THE POWER IS IN YOUR PALM

The stakes are high and transforming the way palm oil is globally produced and distributed is a large and complex undertaking. We know it will not be easy, but it is absolutely crucial that all stakeholders—including consumer goods companies, global palm oil traders, governments, NGOs, and consumers—do our part to bring about the change that is so urgently needed.

Governments need to begin enforcing existing laws like those that protect the habitat of endangered species and prohibit the use of fire to clear natural forest. They also must recognize and respect the rights of Indigenous Peoples to exercise Free, Prior, and Informed Consent over the development of their customary lands while establishing clear and agreed upon maps that document protected natural areas as well as the customary lands of Indigenous Peoples and forest-dependent communities.

International palm oil traders need to prioritize developing fully transparent and traceable supply chains so they can verifiably deliver responsible palm oil to their customers. The "Snack Food 20" companies each need to adopt and implement robust palm oil procurement policies that eliminate conflict palm oil from their products and replace it with responsible palm oil or or other responsible alternatives.

Rainforest Action Network and our allies are committed to raising awareness about the problems with conflict palm oil in the United States and to ensuring that public and consumer concerns are communicated clearly and directly to the "Snack Food 20" group of companies. We are ready to work with companies to develop procurement policies that remove palm oil tainted by deforestation, expansion on carbon-rich peatlands and/or human and labor rights violations from entering their supply chains.

We have mobilized the public before to convince some of the world's largest companies to change the way they do business for the better—and with the help of our supporters we will do it again.

To find out more, visit www.TheProblemWithPalmOil.org

SNAPSHOT OF SNACK FOOD 20
PALM OIL COMMITMENTS AND POLICIES

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Campbell Soup Company **Corporate headquarters:** Camden, NJ	**Annual Global Revenues:** $7.7 billion (70% in U.S.)	**Current Commitments and Policies:** » Has initiated some sourcing of segregated RSPO-certified palm oil in Europe and Australia » Has a public commitment to "strive to convert to certified sustainable sources of palm oil by 2015" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products, and reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil. » Company products at high risk of contamination with conflict palm oil http://www.campbellsoupcompany.com/csr/pages/planet/supply-chain-logistics-and-transportation.asp#.UWXnDhlAvzw http://www.campbellsoupcompany.com/csr/download_Files.aspx?type=pdf&extension=pdf&filename=Campbells_2012_CSR_Nourishing_Our_Planet.pdf
ConAgra Foods, Inc. **Corporate headquarters:** Omaha, NE	**Annual Global Revenues:** $13.3 billion (94% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to "source 100 percent of our palm oil from RSPO sustainably certified sources by 2015" » Has a public commitment to work with its suppliers to "support the development of a sustainable, cost-effective market for palm oil to prevent the deforestation of lands for the purpose of developing new palm plantations." **Weaknesses:** » No public palm oil commitment to protect peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products, and reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil » Company products at high risk of contamination with conflict palm oil http://www.conagrafoodscitizenship.com/good-for-the-planet/sustainable-sourcing/supplier-engagement/

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Dunkin' Brands Group, Inc. **Corporate headquarters:** Canton, MA	**Annual Global Franchise Revenues:** $8.8 billion (76% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to "work with suppliers to develop a plan to source 100% sustainable palm oil by 2020, and to ensure independent verification of compliance with their policy" » Supports a moratorium on palm oil expansion in rainforests and peatlands **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Company products at high risk of contamination with conflict palm oil http://news.dunkinbrands.com/ImageLibrary/DownloadMedia.ashx?MediaDetailsID=301
General Mills, Inc. **Corporate headquarters:** Minneapolis, MN	**Annual Global Revenues:** $16.7 billion (75% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » Has a responsible palm oil procurement policy that states it will only buy palm oil that is free of deforestation, expansion on carbon-rich peatlands, and the violation of human rights » Has a public commitment to "strive to sourcing 100% of palm oil from responsible and sustainable sources by 2015" » Policy requires direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » Has a public commitment to support transparency and regularly report on progress **Weaknesses:** » No public commitment to 100 percent traceable supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil » Company products at high risk of contamination with conflict palm oil http://www.generalmills.com/Responsibility/Sourcing/palm_oil_statement.aspx http://www.generalmills.com/~/media/Files/CSR/2013_global_respon_report.ashx
Grupo Bimbo **Corporate headquarters:** (Global) Mexico City, Mexico; (U.S.) Horsham, PA	**Annual Global Revenues:** $13.2 billion (45% in U.S)	**Current Commitments and Policies:** » Has a public commitment that its suppliers will guarantee a "supply of sustainable palm oil before 2015, through a certification process of their purchases of this ingredient" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Company products at high risk of contamination with conflict palm oil http://www.grupobimbo.com/en/innovation/sustainability-innovation.html

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Hillshire Brands Company **Corporate headquarters:** Peoria, IL	**Annual Global Revenues:** $4 billion (97% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to "support palm oil produced in an environmentally and socially responsible manner by purchasing GreenPalm palm oil certification" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products » Company products at high risk of contamination with conflict palm oil http://www.hillshirebrands.com/Sustainability/PoliciesandCommitments.aspx
H.J. Heinz Company **Corporate headquarters:** Pittsburg, PA	**Annual Global Revenues:** $11.6 billion (46% in North America)	**Current Commitments and Policies:** » Has a public commitment to reduce global demand for its palm oil use by 25 percent in 2012, compared to 2011, to enhance product health and wellness » Has initiated some sourcing of RSPO-segregated palm oil » Has a public commitment to "convert to sourcing 100% certified sustainable palm oil by 2013" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products » Company products at high risk of contamination with conflict palm oil http://www.heinz.com/CSR2011/environment/sustainable_agriculture_initiatives.aspx
Hormel Foods Corporation **Corporate headquarters:** Austin, MN	**Annual Global Revenues:** $8.2 billion (94% in U.S.)	**Current Commitments and Policies:** » No announced substantive actions on palm oil **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Company products at high risk of contamination with conflict palm oil

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Kellogg Company **Corporate headquarters:** Battle Creek, MI	**Annual Revenues:** $14.2 Billion ($9.5 Billion in U.S)	**Current Commitments and Policies:** » Has a public commitment to the "protection of forests, biodiversity, and peatlands, to minimizing the carbon footprint of our palm oil supply chain, and to respecting human rights including no forced or child labor, slavery or human trafficking" » Has a public commitment to "work with our suppliers to achieve 100% traceable sources of palm oil that are economically viable, environmentally appropriate and socially beneficial, and meet the above commitments." » Sources 100 percent of its palm oil through a combination of GreenPalm Certificates, Mass Balance and Segregated RSPO supply » Has initiated some sourcing of segregated RSPO-certified palm oil in Europe » Supports the Consumer Goods Forum (CGF) pledge to help achieve zero net deforestation by 2020 **Weaknesses:** » No public commitment to transparent supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products, and reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil » Company products at high risk of contamination with conflict palm oil http://crr.kelloggcompany.com/en_US/corporate-responsibility/overview/our-commitments.html http://crr.kelloggcompany.com/en_US/corporate-responsibility/environment/sustainable-agriculture/palm-oil.html
Kraft Foods Group, Inc. **Corporate headquarters:** Glenview, IL	**Annual Global Revenues:** $18 billion (100% in North America)	**Current Commitments and Policies:** » In October 2012 Kraft Foods, Inc. split into two companies, Kraft Foods Group and Mondelēz International. Mondelēz International has a public palm oil commitment (see related entry), but Kraft Foods Group does not. **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Company products at high risk of contamination with conflict palm oil

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Krispy Kreme Doughnut Corporation **Corporate headquarters:** Winston-Salem, NC	**Annual Global Revenues:** $0.44 billion (90% in U.S.)	**Current Commitments and Policies:** » No announced substantive actions on palm oil **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Company products at high risk of contamination with conflict palm oil
Mars, Inc. **Corporate headquarters:** McClean, VA	**Annual Global Revenues:** $30 billion (23% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » Has a public commitment to develop and implement responsible sourcing policies » Has a public commitment to "working towards achieving a 100% traceable supply chain and only buying palm oil that is free of deforestation, expansion on carbon-rich peatlands, the violation of human and labor rights" » Aims "to increase pressure on [palm oil producers and] traders to raise their standards, eliminate palm oil… associated with deforestation, further expansion on carbon-rich peatlands, human and labor rights violations and illegal sources and achieve full traceability of supplies" » Is mapping the "impact on deforestation and social impacts of palm oil and other raw materials in [its] supply chain" » Has a public commitment to "purchase 100% of palm oil from RSPO-certified sources" by the end of 2013 **Weaknesses:** » No publicly available responsible palm oil procurement policy » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil » Company products at high risk of contamination with conflict palm oil http://www.mars.com/global/about-mars/mars-pia/our-supply-chain/palm-oil.aspx http://www.mars.com/global/about-mars/mars-pia/our-supply-chain/our-strategy-and-priorities.aspx

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES

Mondēlez International, Inc.

Corporate headquarters:
Deerfield, IL

Annual Global Revenues:
$35 billion
(20% in U.S.)

Current Commitments and Policies:

- Has a public commitment that "palm oil should be produced on legally held land, protecting tropical forests and peatlands, respecting human rights, including land rights, and without forced or child labor"
- Has a public commitment to "expect palm oil suppliers to eliminate sources of palm oil that do not meet these criteria" [above] by 2020
- Has a public commitment to "expect palm oil suppliers to provide transparency on the proportion of their supplies traceable to plantations" meeting its production criteria [above] by the end of 2013
- Has a "plan to cover 100% palm oil requirements with RSPO certified palm oil by 2015"
- Has initiated some sourcing of segregated RSPO-certified palm oil
- Advocates for reducing deforestation within the Consumer Goods Forum and with governments

Weaknesses:

- No publicly available responsible palm oil procurement policy
- Has a time-bound public commitment to transition to responsible palm oil but no public time-bound plan to implement this commitment
- No public commitment or time-bound plan for transitioning to purchasing 100 percent traceable palm oil
- Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products, and reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil
- Company products at high risk of contamination with conflict palm oil

http://www.mondelezinternational.com/DeliciousWorld/sustainability/climate.aspx

Nestlé S.A.

Corporate headquarters:
(Global) Vevey, Switzerland;
(U.S.) Glendale, CA

Annual Global Revenues:
$99 billion
(26% in U.S.)

Current Commitments and Policies:

- Has a public commitment to protect rainforests, peatlands, climate, biodiversity, and human rights
- Has a responsible palm oil procurement policy that includes a set of "Responsible Sourcing Guidelines," which states it will only buy palm oil that is legal, does not contribute to deforestation or expansion on carbon-rich peatlands and other areas of high conservation and high carbon stock forests, and does not violate human rights
- Has a public commitment to continuously increase the amount of traceable palm oil
- Is mapping and assessing all the suppliers in its supply chain for adherence to RSPO standard plus the protection of High Carbon Stock Forests and no expansion on peatlands. It is working with suppliers who are not currently in compliance to improve practices and eliminating those suppliers who do not improve their operations.
- Has comprehensive reporting of progress
- Has a public commitment to "achieving 100% RSPO certified by 2013"

Weaknesses:

- No public commitment to 100 percent traceable supply chains
- Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products, and reliance on Mass Balance supply chain system without traceability provides no guarantee that their products contain any RSPO-certified palm oil
- Company products at risk of contamination with conflict palm as company is still in the process of addressing risks

http://www.nestle.com/media/newsandfeatures/nestle-commits-to-using-certified-sustainable-palm-oil

http://www.nestle.com/csv/responsible-sourcing/deforestation

http://www.nestle.com/media/statements/update-on-deforestation-and-palm-oil

http://www.nestle.com/asset-library/documents/creating%20shared%20value/rural_development/2011-palm-oil-nestle-responsible-sourcing-guidelines.pdf

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES

Nissin Foods Holdings Co., Ltd.

Corporate headquarters:
(Global) Shinjuku-ku, Tokyo;
(U.S.) Gardena, CA

Annual Global Revenues:
$3.7 billion
(8% in U.S.)

Nissin Foods, Frozen Foods, Cisco, *Top Ramen, Bowl Noodles, Cup Noodles*

Current Commitments and Policies:

- Has a public commitment to reach a "goal of utilizing 100% usage of sustainable palm oil starting with the USA by end of 2015."
- States it will procure palm oil based on the following guidelines: "1. Compliance with applicable laws and regulations; 2. Use of appropriate best practices by growers and millers; 3. Responsible consideration [and human rights protection] of employees, and of individuals and communities affected by growers and mills; and 4. [Implementation of] Commitment to continuous improvement [responsibility] towards environmental preservation [conservation]."

  [Bracketed text denotes different text in Japanese version]

Weaknesses:

- No public palm oil commitment to protect rainforests, peatlands, climate and biodiversity
- No public commitment to sourcing responsible palm oil
- No public commitment to transparent and 100 percent traceable supply chains
- No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains
- No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil
- Company products at high risk of contamination with conflict palm oil

http://www.nissinfoods-holdings.co.jp/english/csr/environmental/index.html

http://www.nissinfoods.com/whatsnew.php

http://www.nissinfoods-holdings.co.jp/csr/environment/products/index.html

PepsiCo, Inc.

Corporate headquarters:
Purchase, NY

Annual Global Revenues:
$65.5 billion
(50% in U.S.)

Current Commitments and Policies:

- Has replaced palm oil for specific brands and markets, including Frito-Lay North America, with healthier oils such as sunflower, corn, and canola because they are both lower in saturated fat and do not contain trans fats
- Has a public commitment "to purchasing only 100 percent certified sustainable palm oil for use in the production of our products by 2015"

Weaknesses:

- No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity and human rights
- No public commitment to sourcing responsible palm oil
- No public commitment to transparent and 100 percent traceable supply chains
- No publicly available responsible palm oil procurement policy
- No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains
- No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm
- Reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil
- Company products at high risk of contamination with conflict palm oil

http://www.pepsico.com/Purpose/Environmental-Sustainability/Agriculture.html

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
The Hershey Company **Corporate headquarters:** Hershey, PA	**Annual Global Revenues:** $6.6 billion (89% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to "ensure that all palm oil procured will be Roundtable on Sustainable Palm Oil (RSPO) certified, provided availability of supply, by 2015" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm oil » Reliance on Mass Balance supply chain system provides no guarantee that their products contain any RSPO-certified palm oil » Company products at high risk of contamination with conflict palm oil http://www.thehersheycompany.com/social-responsibility/environment.aspx http://www.thehersheycompany.com/assets/pdfs/hersheycompany/scorecard2012.pdf
The J.M. Smucker Company **Corporate headquarters:** Orrville, OH	**Annual Global Revenues:** $5.5 billion (75% in U.S.)	**Current Commitments and Policies:** » Has a public commitment to "strive to source 100% of direct palm oil purchases from responsible and certified sustainable sources by 2015" **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Company products at high risk of contamination with conflict palm oil http://www.smuckers.com/pdf/SMUCKER_2012_CRR.pdf

SNACK FOOD 20 COMPANY NAME	ANNUAL REVENUE	ASSESSMENT OF PALM OIL COMMITMENTS AND PROCUREMENT POLICIES
Toyo Suisan Kaisha, Ltd. **Corporate headquarters:** (Global) Minato-ku, Tokyo; (U.S.) Maruchan Inc. Irvine, CA	**Annual Global Revenues:** $3.2 billion (22% in North America)	**Current Commitments and Policies: :** » No announced substantive actions on palm oil **Weaknesses:** » No public palm oil commitment to protect rainforests, peatlands, climate, biodiversity, and human rights » No public commitment to sourcing responsible palm oil » No public commitment to transparent and 100 percent traceable supply chains » No publicly available responsible palm oil procurement policy » No requirement for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent traceable and responsible palm » Company products at high risk of contamination with conflict palm oil
Unilever **Corporate headquarters:** (Global) London, UK; (U.S.) Englewood Cliffs, NJ	**Annual Global Revenues:** $67 billion (13% U.S.)	**Current Commitments and Policies:** » Has a public commitment to "work with suppliers, peers, competitors and governments to transform the [palm oil] industry [and to]… help to break the links between palm oil, deforestation and land conflict" » Has a public commitment to "purchase all palm oil sustainably from certified, traceable sources by 2020" » Has a public commitment to "purchase all palm oil from certified sources by 2015" » Has required direct suppliers to eliminate some particularly controversial sources of conflict palm oil from their supply chains » Has initiated some sourcing of segregated RSPO-certified palm oil and invested in building a PKO processing plant in Sumatra to enable sourcing of traceable palm kernel oil » Has played a leadership role as founder of the Roundtable for Sustainable Palm Oil and advocate for zero net deforestation by 2020 within the Consumer Goods Forum and with governments **Weaknesses:** » No public commitment to sourcing responsible palm oil » No publicly available responsible palm oil procurement policy » No consistent requirements for direct suppliers like Cargill to eliminate sources of conflict palm oil from their supply chains » No time-bound plan for transitioning to purchasing 100 percent responsible palm oil » Reliance on purchasing GreenPalm Certificates provides no guarantees about the palm oil in their products » Company products at high risk of contamination with conflict palm oil http://www.unilever.com/sustainable-living/sustainablesourcing/palmoil/index.aspx http://www.unilever.com/sustainable-living/sustainablesourcing/palmoil/ourtargets/ http://www.unilever.com/sustainable-living/greenhousegases/deforestation/index.aspx http://www.unilever.com/sustainable-living/greenhousegases/deforestation/index.aspx http://unilever.com/images/PDF_generator_-_Sustainable_sourcing_tcm_13-365054.pdf

The table above presents a summary analysis of each company's publicly available palm oil commitments and/or procurement policies. Some companies have publicly released only palm oil commitments, others have released both palm oil commitments and procurement policies, and a few companies have failed to release any palm oil commitments or procurement policies. Some companies without public palm oil commitments or procurement policies may have started the process of developing palm oil commitments and/or procurement policies but had not completed or publicly released their commitments at the time of publication of this report. Companies may have additional general policies or company wide supplier codes of conduct that are not incorporated into palm oil commitments and/or procurement policies. For the purposes of this report, analysis is focused on palm oil specific commitments and policies only.

In our analysis, purchasing GreenPalm Certificates or sourcing RSPO-certified palm oil through Mass Balance supply chain systems is a weakness since in both cases companies are clearly not physically sourcing traceable, responsible palm oil in their products, yet are allowed to make market claims about sustainable palm oil. GreenPalm Certificates provide no guarantees about the palm oil used in a company's products. The Mass Balance supply chain system provides no guarantee that a company's products contain any RSPO-certified palm oil. Therefore companies who purchase GreenPalm Certificates or source Mass Balance RSPO-certified palm oil do not know the plantation sources of the palm oil they are actually using, putting their products at high risk of contamination with conflict palm oil. Traceability can be guaranteed by sourcing 100 percent RSPO-certified palm oil through Segregated or Identity Preserved supply chain systems, but none of the companies above have yet achieved that. These supply chain systems are preferable to sourcing GreenPalm Certificates or Mass Balance RSPO-certified palm oil since Segregated RSPO-certified palm oil is traceable back to RSPO-certified plantations. At the same time, given the well-known weaknesses in the RSPO's Principles and Criteria, 100% Segregated RSPO-certified palm oil may have been grown by companies still associated with on-going deforestation, continuing expansion on carbon-rich peatlands and unresolved human and labor rights violations in their plantation holdings. Therefore consumer companies are encouraged to seek responsible palm oil, which is sourced from 100% traceable supply chains to palm oil producers whose practices are verified to meet standards that overcome the current weaknesses in the RSPO standard.

Cargill – Placing Brands at Risk with Conflict Palm Oil

Conflict palm oil is being produced by a significant number of large and medium plantation companies and smallholder farmers, but it is being bought, delivered, and sold to the global market by an exclusive few global commodity traders. These agribusiness giants, including Cargill, ADM, Wilmar, IOI, Bunge, AAK, Fuji Oils and KLK, then sell their palm oil, which includes conflict palm oil, to consumer goods companies that include the "Snack Food 20."

Traders like Cargill, which is the largest importer of palm oil into the United States, buy from the companies that grow, mill, and refine palm oil. Traders are the linchpin in the international palm oil supply chain and they have uniquely influential leverage to drive a transformation in the way palm oil is produced. By failing to clean up their supply chains, these traders have been putting the valuable brand assets of their consumer goods company customers at risk by continuing to supply them with controversial conflict palm oil.

In order for the "Snack Food 20" to source responsible palm oil, they need to use their power as customers to convince these traders to address the lack of transparency and traceability in palm oil supply chains. If the "Snack Food 20" demand 100 percent traceable and responsible palm oil, then traders like Cargill will be forced to reform their supply chains to eliminate conflict palm oil and supply responsible palm oil.

REFERENCES

PHOTO: *GREENPEACE*

1 Hickman, Martin. "The Guilty Secrets of Palm Oil: Are You Unwittingly Contributing to the Devastation of the Rain Forests?" *The Independent*, May 2, 2009. Accessed August 10, 2013. http://www.independent.co.uk/environment/the-guilty-secrets-of-palm-oil-are-you-unwittingly-contributing-to-the-devastation-of-the-rain-forests-1676218.html

2 Index Mundi, "United States Palm Oil Domestic Consumption by Year." Compiled with USDA data. Accessed August 10, 2013. http://www.indexmundi.com/agriculture/?country=us&commodity=palm-oil&graph=domestic-consumption

3 USDA/Agricultural Research Service. "Palm Oil Not a Healthy Substitute for Trans Fats, Study Finds." *ScienceDaily*, May 11, 2009. Accessed August 9, 2013. http://www.sciencedaily.com/releases/2009/05/090502084827.htm

4 The Product Board for Margarine Fats and Oils (MVO). "Fact Sheet Palm Oil." 2010. Accessed August 9, 2013. http://www.mvo.nl/LinkClick.aspx?fileticket=jsFVMZwZzkc%3D

5 USDA Foreign Agricultural Service. "Palm Oil: World Supply and Distribution." Last modified, July 11, 2013. Accessed August 9, 2013. http://www.fas.usda.gov/psdonline/psdHome.aspx

Food and Agriculture Organization of the United Nations. FAOSTAT search of palm oil import data for 2010. Accessed August 9, 2013. http://faostat3.fao.org/home/index.html

6 USDA Foreign Agricultural Service. "Palm Oil: World Supply and Distribution." Last modified, July 11, 2013. Accessed August 9, 2013. http://www.fas.usda.gov/psdonline/psdHome.aspx

7 Bonner, José. "From Pork Lard to Palm Oil and Back." *Nature* 492 (December 6, 2012): 41. Accessed August 9, 2013. doi:10.1038/492041b.

8 Downs, Shauna M., Anne Marie Thow, and Stephen R. Leeder. "The Effectiveness of Policies for Reducing Dietary Trans Fat: A Systematic Review of the Evidence." *Bulletin of the World Health Organization* 2013; 91:262-269H. Accessed August 10, 2013. doi: http://dx.doi.org/10.2471/BLT.12.111468.

National Heart, Lung, and Blood Institute. "A Word About Fats." Accessed August 10, 2013. http://www.nhlbi.nih.gov/hbp/prevent/h_eating/fats.htm

National Institute of Diabetes and Digestive and Kidney Diseases. "Prevent Diabetes Problems: Keep Your Heart and Blood Vessels Healthy." NIH Publication 13-4283L, November 2012. Accessed August 10, 2013. http://diabetes.niddk.nih.gov/dm/pubs/complications_heart/PDP2_Heart_Healthy_LP_T_508.pdf

USDA/Agricultural Research Service. "Palm Oil Not a Healthy Substitute for Trans Fats, Study Finds." *ScienceDaily*, May 11, 2009. Accessed August 9, 2013. http://www.sciencedaily.com/releases/2009/05/090502084827.htm

9 UNEP. "Oil Palm Plantations: Threats and Opportunities for Tropical Ecosystems." UNEP Global Environmental Alert Service, December 2011. Accessed August 9, 2013. http://na.unep.net/geas/getUNEPPageWithArticleIDScript.php?article_id=73

10 NL Agency, Ministry of Economic Affairs. "PSI Project: Fair Trade Organic ISO 22000 Compliant Palm Oil for Export." Updated June 13, 2013. Accessed August 10, 2013. http://www.agentschapnl.nl/en/onderwerp/psi-project-fair-trade-organic-iso-22000-compliant-palm-oil-export

11 UNEP, "Oil Palm Plantations: Threats and Opportunities for Tropical Ecosystems." UNEP Global Environmental Alert Service, December 2011. Accessed August 9, 2013. http://na.unep.net/geas/getUNEPPageWithArticleIDScript.php?article_id=73

12 Roundtable on Sustainable Palm Oil. "Principles and Criteria for the Production of Sustainable Palm Oil 2013." April 2013. Accessed August 10, 2013. http://www.rspo.org/file/PnC_RSPO_Rev1.pdf

13 Roundtable on Sustainable Palm Oil. "Status of Complaint." Accessed August 12, 2013. http://www.rspo.org/en/status_of_complaint

14 Orang Utan Republik Foundation. "The RSPO and Sustainable Palm Oil." Accessed August 12, 2013. http://www.orangutanrepublik.org/become-aware/issues/environmental-challenges-a-solutions/the-rspo-a-sustainable-palm-oil

15 Schonhardt, Sara. "New Palm Oil Innovation Group Set to Address Haze Issue." Eco-Business.com, July 1, 2013. Accessed August 10, 2013. http://www.eco-business.com/news/new-palm-oil-innovation-group-set-address-haze-issue/

16 Hickman, Martin. "The Guilty Secrets of Palm Oil: Are You Unwittingly Contributing to the Devastation of the Rain Forests?" *The Independent*, May 2, 2009. Accessed August 10, 2013. http://www.independent.co.uk/environment/the-guilty-secrets-of-palm-oil-are-you-unwittingly-contributing-to-the-devastation-of-the-rain-forests-1676218.html

17 USDA Foreign Agricultural Service. "Indonesia: Rising Global Demand Fuels Palm Oil Expansion." *Commodity Intelligence Report*, October 8, 2010. Accessed August 9, 2013. http://www.pecad.fas.usda.gov/highlights/2010/10/Indonesia/

18 World Wildlife Fund, "Palming Off a National Park: Tracking Illegal Oil Palm Fruit in Riau, Sumatra." June 26, 2013. Accessed August 9, 2013. http://worldwildlife.org/publications/palming-off-a-national-park-tracking-illegal-oil-palm-fruit-in-riau-sumatra

Orang Utan Republik Foundation, "Human-Orangutan Conflict," Accessed August 9, 2013. http://ourf.org/become-aware/issues/orangutans-a-wildlife/human-orangutan-conflict;

Johnson, Tomasz. "The Global Land Grab." International Bar Association. Accessed August 9, 2013. http://www.ibanet.org/Article/Detail.aspx?ArticleUid=03cfdc86-767f-4ba1-b95b-4daab95a4d3c

Saxon, Earl, and Sarah Roquemore, "Chapter 6: Palm Oil," in *The Root of the Problem: What's Driving Tropical Deforestation Today?* The Union of Concerned Scientists, 2011: 51-60. Accessed August 10, 2013. http://www.ucsusa.org/assets/documents/global_warming/UCS_RootoftheProblem_DriversofDeforestation_FullReport.pdf

19 IZILWANE, Voices for Biodiversity. "Consumer Groups Slam Greenwashing in Sustainable Palm Oil Marketing." National Geographic News Watch, August 8, 2013. Accessed August 10, 2013. http://newswatch.nationalgeographic.com/2013/08/08/consumer-groups-slam-greenwashing-in-sustainable-palm-oil-marketing/

20 Boucher, Doug. "Deforestation Today: It's Just Business." Union of Concerned Scientists, November 2010. Accessed August 9, 2013. http://www.ucsusa.org/assets/documents/global_warming/Deforestation-Today-It-s-Just-Business.pdf

21 Wilcove, David S., and Lian Pin Koh. "Addressing the Threats to Biodiversity from Oil-Palm Agriculture." *Biodiversity and Conservation* 19 no. 4 (April 2010): 985-997. Accessed August 9, 2013. doi: 10.1007/s10531-010-9779-z.

22 Richter, Björn. "Environmental Challenges and the Controversy about Palm Oil Production: Case Studies from Malaysia, Indonesia and Myanmar." ed. Friedrich Ebert Stiftung, October 2009. Accessed August 10, 2013. http://library.fes.de/pdf-files/iez/06769.pdf

23 Carlson, Kimberly M., Lisa M. Curran, Dessy Ratnasari, Alice M. Pittman, Britaldo S. Soares-Filho, Gregory P. Asner, Simon N. Trigg, David A. Gaveau, Deborah Lawrence, and Hermann O. Rodrigues. "Committed Carbon Emissions, Deforestation, and Community Land Conversion from Oil Palm Plantation Expansion in West Kalimantan, Indonesia." *PNAS* (April 20, 2012). Accessed August 9, 2013. doi:10.1073/pnas.1200452109.

24 USDA Foreign Agricultural Service. "Indonesia: Palm Oil Expansion Unaffected by Forest Moratorium." *Commodity Intelligence Report*, June 26, 2013. Accessed August 9, 2013. http://www.pecad.fas.usda.gov/highlights/2013/06/indonesia/

25 Rainforest Action Network. "Indonesian Rainforests." Accessed August 9, 2013. http://ran.org/indonesian-rainforests#ixzz2KOOtlLeE

Jakarta Post. "Indonesia Allocates 18 Million Hectares of Land for Palm Oil." *Jakarta Post*, December 2, 2009. Accessed August 9, 2013. http://www.thejakartapost.com/news/2009/12/02/indonesia-allocates-18-million-hectares-land-palm-oil.html.

Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew. "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

26 Hance, Jeremy. "Activists Warn of Industrial Palm Oil Expansion in Congo Rainforest." Mongabay.com, February 21, 2013. Accessed August 9, 2013. http://news.mongabay.com/2013/0221-hance-congo-palm-oil.html

The Rainforest Foundation UK. "Seeds of Destruction." February 2013. Accessed August 9, 2013. http://www.rainforestfoundationuk.org/files/Seeds%20of%20Destruction,%20February%202013.pdf

27 Greenpeace International. "Palm Oil's New Frontier." September 2012. Accessed August 9, 2013. http://www.greenpeace.org/usa/Global/usa/planet3/PDFs/Forests/PalmOilsNewFrontier.pdf

28 UNEP. "Oil Palm Plantations: Threats and Opportunities for Tropical Ecosystems." UNEP Global Environmental Alert Service, December 2011. Accessed August 9, 2013. http://na.unep.net/geas/getUNEPPageWithArticleIDScript.php?article_id=73

29 Kennedy, Jennifer. "Deadly Conflict Over Honduran Palm Oil Plantations Spotlights CEO." CorpWatch Blog, December 31, 2012. Accessed August 9, 2013. http://www.corpwatch.org/article.php?id=15802

30 IUCN Red List. "Pongo abelii (Sumatran Orangutan)." 2013.1. Accessed August 9, 2013. http://www.iucnredlist.org/details/39780/0

31 IUCN Red List. "Pongo pygmaeus (Bornean Orangutan)." 2013.1 Accessed August 9, 2013. http://www.iucnredlist.org/details/17975/0

32 Derbyshire, David. "How Humans are 97% the Same as Orangutans: New Research Shows How DNA Matches." *Daily Mail*, January 27, 2011. Accessed August 9, 2013. http://www.dailymail.co.uk/sciencetech/article-1350807/How-humans-97-orangutans-New-research-shows-DNA-matches.html

33 UNEP. "Oil Palm Plantations: Threats and Opportunities for Tropical Ecosystems." UNEP Global Environmental Alert Service, December 2011. Accessed August 9, 2013. http://na.unep.net/geas/getUNEPPageWithArticleIDScript.php?article_id=73

34 Wich, Serge A., David Gaveau, Nicola Abram, Marc Ancrenaz, Alessandro Baccini, Stephen Brend, Lisa Curran, Roberto A. Delgado, Andi Erman, Gabriella M. Fredriksson, Benoit Goossens, Simon J. Husson, Isabelle Lackman, Andrew J. Marshall, Anita Naomi, Elis Molidena, Nardiyono, Anton Nurcahyo, Kisar Odom, Adventus Panda, Purnomo, Andjar Rafiastanto, Dessy Ratnasari, Adi H. Santana, Imam Sapari, Carel P. van Schaik, Jamartin Sihite, Stephanie Spehar, Eddy Santoso, Amat Suyoko, Albertus Tiju, Graham Usher, Sri Suci Utami Atmoko, Erik P. Willems, and Erik Meijaard. "Understanding the Impacts of Land-Use Policies on a Threatened Species: Is There a Future for the Bornean Orang-utan?" *PLoS ONE* 7 no. 11 (November 7, 2012). doi:10.1371/journal.pone.0049142

35 IUCN Red List, "Panthera tigris ssp. sumatrae (Sumatran Tiger)." 2013.1 Accessed August 9, 2013. http://www.iucnredlist.org/details/15966/0

36 IUCN Red List. "Elephas Maximus Ssp. Sumatranus (Sumatran Elephant)." 2013.1. Accessed August 9, 2013. http://www.iucnredlist.org/details/199856/0

37 IUCN Red List. "Elphas Maximus." 2013.1. Accessed August 9, 2013. http://www.iucnredlist.org/details/7140/0

38 Gladikas, Birute Mary. "The Vanishing Man of the Forest." *New York Times*, January 6, 2007. Accessed August 21, 2103. http://www.nytimes.com/2007/01/06/opinion/06galdikas.html

39 Wich, Serge A., Riswan, Johann Jenson, Johannes Refisch, and Christian Nellemann. "Orangutans and the Economics of Sustainable Forest Management in Sumatra." UNEP/GRASP/PanEco/YEL/ICRAF/GRID-Arendal, 2011. Accessed August 9, 2013. http://www.unep.org/pdf/orangutan_report_scr.pdf

Wich, Serge A., Erik Meijaard, Andrew J. Marshall, Simon Husson, Marc Ancrenaz, Robert C. Lacy, Carel P. van Schaik, Jito Sugardjito, Togu Simorangkir, Kathy Traylor-Holzer, Matt Doughty, Jatna Supriatna, Rona Dennis, Melvin Gumal, Cheryl D. Knott, and Ian Singleton. "Distribution and Conservation Status of the Orang-utan (Pongo Spp.) on Borneo and Sumatra: How Many Remain?" *Oryx* 42 (July 2008): 329–339. doi:10.1017/S003060530800197X.

Wich Serge A., et al. "Understanding the Impacts of Land-Use Policies on a Threatened Species: Is There a Future for the Bornean Orang-utan?" *PLoS ONE* 7 no.11 (November 7, 2012). doi:10.1371/journal.pone.0049142.

40 IUCN Red List. "Pongo Abelii (Sumatran Orangutan)." 2013.1. Accessed August 9, 2013. http://www.iucnredlist.org/details/39780/0

41 IUCN Red List. "Pongo Pygmaeus (Bornean Orangutan)." 2013.1 Accessed August 9, 2013. http://www.iucnredlist.org/details/17975/0

42 Mittermeier, Russell A., Janette Wallis, Anthony B. Rylands, Jörg U. Ganzhorn, John F. Oates, Elizabeth A. Williamson, Erwin Palacios, Eckhard W. Heymann, M. Cecília M. Kierulff, Long Yongcheng, Jatna Supriatna, Christian Roos, Sally Walker, Liliana Cortés-Ortiz, and Christoph Schwitzer, "Primates in Peril: The World's 25 Most Endangered Primates 2008–2010." IUCN/SSC Primate Specialist Group (PSG), International Primatological Society (IPS), and Conservation International (CI), February 2010. Accessed August 9, 2013. http://www.conservation.org/publications/Pages/primates_in_peril_2008-2010.aspx

43 Wich Serge A., et al. "Understanding the Impacts of Land-Use Policies on a Threatened Species: Is There a Future for the Bornean Orang-utan?" *PLoS ONE* 7 no.11 (November 7, 2012). doi:10.1371/journal.pone.0049142.

44 Wich Serge A., et al. "Understanding the Impacts of Land-Use Policies on a Threatened Species: Is There a Future for the Bornean Orang-utan?" *PLoS ONE* 7 no.11 (November 7, 2012). doi:10.1371/journal.pone.0049142.

45 Contreras-Hermosilla, Arnoldo, and Chip Fay, "Strengthening Forest Management in Indonesia Through Land Tenure Reform: Issues and Framework for Acttion." Forest Trends, 2005. Accessed August 9, 2013. http://www.forest-trends.org/documents/files/doc_107.pdf

46 Indonesian Plantation Law No. 18, Year 2004;
Indonesian Forest Law No. 41, Year 1999

47 Suhirman, Zulkifli Alamsyah, Ahmad Zaini, Sulaiman, and Anas Nikoyan. "Studi Perencanaan & Penganggaran bagi Pengelolaan Hutan berbasis Masyarakat di Indonesia." Kemitraan, 2012: 27–35. Accessed August 9, 2013. http://www.kemitraan.or.id/uploads_file/20130131070905.studi%20perencanaan%20dan%20penganggaran%20CBFM.pdf

48 Kemp, Melody. "Green Deserts: The Palm Oil Conflict." CorpWatch, February 16, 2012. Accessed August 12, 2013. http://www.corpwatch.org/article.php?id=15667

Colchester, Marcus, Patrick Anderson, Asep Yunan Firdaus, Fatilda Hasibuan, and Sophie Chao. "Report of an Independent Investigation into Land Disputes and Forced Evictions in a Palm Oil Estate." Forest People Program, November 2011. Accessed August 12, 2013. http://www.forestpeoples.org/sites/fpp/files/publication/2011/11/final-report-pt-ap-nov-2011-low-res-1.pdf

49 Accenture. "Exploitative Labor Practices in the Global Palm Oil Industry." Humanity United, 2013. Accessed August 9, 2013. http://humanityunited.org/pdfs/Modern_Slavery_in_the_Palm_Oil_Industry.pdf

50 Accenture. "Exploitative Labor Practices in the Global Palm Oil Industry." Humanity United, 2013. Accessed August 9, 2013. http://humanityunited.org/pdfs/Modern_Slavery_in_the_Palm_Oil_Industry.pdf

51 Maulia, Erwida. "RI Workers, Children 'Enslaved' in Malaysia, Commission Says." *Jakarta Post*, September 17, 2008. Accessed August 9, 2013. http://www.thejakartapost.com/news/2008/09/17/ri-workers-children-039enslaved039-malaysia-commission-says.html

52 Skinner, E. Benjamin. "Indonesia's Palm Oil Industry Rife With Human-Rights Abuses." *Bloomsberg Businessweek*, July 18, 2013. Accessed August 9, 2013. http://www.businessweek.com/printer/articles/135488-indonesias-palm-oil-industry-rife-with-human-rights-abuses

53 Pan, Yude, Richard A. Birdsey, Jingyun Fang, Richard Houghton, Pekka E. Kauppi, Werner A. Kurz, Oliver L. Phillips, Anatoly Shvidenko, Simon L. Lewis, Josep G. Canadell, Philippe Ciais, Robert B. Jackson, Stephen W. Pacala, A. David McGuire, Shilong Piao, Aapo Rautiainen, Stephen Sitch, and Daniel Hayes. "A Large and Persistent Carbon Sink in the World's Forests." *Science*, vol. 333 no. 6045 (July 14, 2011):988–993. Accessed August 9, 2013. doi:10.1126/science.1201609.

54 Food and Agriculture Organization of the United Nations. "World deforestation decreases, but remains alarming in many countries." March 25, 2010. Accessed August 20, 2013. http://www.fao.org/news/story/en/item/40893/

55 Page, S.E., R. Morrison, C. Malins, A. Hooijer, J.O. Rieley, and J. Jauhiainen. "Review of Peat Surface Greenhouse Gas Emissions from Oil Palm Plantations in Southeast Asia." The International Council on Clean Transportation, October 4, 2011. Accessed Auagust 9, 2013. http://www.theicct.org/review-peat-surface-greenhouse-gas-emissions-oil-palm-plantations-southeast-asia#.Uf7NcWR8J-M

56 Page, S.E., R. Morrison, C. Malins, A. Hooijer, J.O. Rieley, and J. Jauhiainen. "Review of Peat Surface Greenhouse Gas Emissions from Oil Palm Plantations in Southeast Asia." The International Council on Clean Transportation, October 4, 2011. Accessed August 9, 2013. http://www.theicct.org/review-peat-surface-greenhouse-gas-emissions-oil-palm-plantations-southeast-asia#.Uf7NcWR8J-M

57 Moore, Sam, Chris D. Evans, Susan E. Page, Mark H. Garnett, Tim G. Jones, Chris Freeman, Aljosja Hooijer, Andrew J. Wiltshire, Suwido H. Limin, and Vincent Gauci. "Deep Instability of Deforested Tropical Peatlands Revealed by Fluvial Organic Carbon Fluxes." *Nature* 493 (January 30, 2013): 660–663. Accessed August 9, 2013. doi:10.1038/nature11818.

58 Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew, "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

59 Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew. "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

60 Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew, "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

Page, S.E., R. Morrison, C. Malins, A. Hooijer, J.O. Rieley, and J. Jauhiainen. "Review of Peat Surface Greenhouse Gas Emissions from Oil Palm Plantations in Southeast Asia." The International Council on Clean Transportation, October 4, 2011. Accessed Auagust 9, 2013. http://www.theicct.org/review-peat-surface-greenhouse-gas-emissions-oil-palm-plantations-southeast-asia#.Uf7NcWR8J-M

Union of Concerned Scientists, "Environmental Impacts of Coal Power: Air Pollution." 2012. Accessed August 9, 2013. http://www.ucsusa.org/clean_energy/coalvswind/c02c.html

61 Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew. "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

62 Miettinen, Jukka, Al Hooijer, Daniel Tollenaar, Sue Page, Chris Malins, Ronald Vernimmen, Chenghua Shi, and Soo Chin Liew. "Historical Analysis and Projection of Oil Palm Plantation Expansion on Peatland in Southeast Asia." The International Council on Clean Transportation, February 22, 2012. Accessed August 9, 2013. http://www.theicct.org/historical-analysis-and-projection-oil-palm-plantation-expansion-peatland-southeast-asia

63 Indonesian National Development Planning Agency (BAPPENAS). "Reducing Carbon Emissions from Indonesia's Peat Lands Interim Report of a Multi-Disciplinary Study." December 2009. Accessed August 10, 2013. http://www.forestforclimate.org/attachments/680_Reducing%20Carbon%20Emissions%20from%20Indonesia%27s%20Peat%20Land.pdf

64 Barclay, Bill. "Peat Fires Greet Governors' Climate and Forests Task Force Assembly." Asia Indigenous People CCMIN. Accessed August 10, 2013. http://ccmin.aippnet.org/index.php?option=com_content&view=article&id=658:peat-fires-greet-governors-climate-and-forests-task-force-assembly&catid=1:news&Itemid=28

65 Tomich, Thomas P., Hubert de Foresta, Rona Dennis, Quirine Ketterings, Daniel Murdiyarso, Cheryl Palm, Fred Stolle, Suyanto, and Meine van Noordwijk. "Carbon Offsets for Conservation and Development in Indonesia?" *American Journal of Alternative Agriculture*, 17 no. 3 (2002):125–137. Accessed August 10, 2013. http://www.asb.cgiar.org/pdfwebdocs/carbonoffsets.pdf

66 Maslog, Crispin. "Ending Indonesia's Forest Fires." Thomas Reuters Foundation, August 8, 2013. Accessed August 10, 2013. http://www.trust.org/item/20130808113953-ozguy/

ADDITIONAL PHOTOS THROUGHOUT: *RAINFOREST ACTION NETWORK ARCHIVES, SHUTTERSTOCK*

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