



Land being cleared and replanted with oil palms at the Butaw plantation, Sinoe County, Liberia (2014).
Anna Fawcus/Oxfam America

STANDING ON THE SIDELINES

Why food and beverage companies must do more to tackle climate change

For the food and beverage industry, climate change is a major threat. For millions of people, it means more extreme weather and greater hunger. The Big 10 companies are significant contributors to this crisis, yet they are not doing nearly enough to help tackle it.

In this paper, Oxfam calls on the Big 10 to face up to the scale of greenhouse gas emissions produced through their supply chains, and address the deforestation and unsustainable land-use practices they allow to happen.

The Big 10 must set new targets to cut greenhouse gas emissions throughout their supply chains. But they cannot tackle climate risk by acting alone. They have a duty to step off the sidelines and use their influence to call for urgent climate action from other industries and governments.

SUMMARY

The food and beverage sector: Accomplices to the climate crisis

Climate change threatens the world's food and beverage industry like few other sectors of business. It is a major risk to food supply chains, to consumer demand, and ultimately to companies' future profitability. The Big 10 food and beverage companies — Associated British Foods (ABF), Coca-Cola, Danone, General Mills, Kellogg, Mars, Mondelez International, Nestlé, PepsiCo and Unilever — are significant emitters of greenhouse gases (GHGs) across their global operations. If together they were a single country, these 10 famous companies would be the 25th most polluting country in the world, emitting more GHGs (263.7 million tons per annum) than Finland, Sweden, Denmark, and Norway combined.¹ They are not doing nearly enough to cut their own carbon footprint.

But worse, they are failing to use their experience, leadership, and power to transform their own industry and push for the level of climate action the world needs. The Big 10 are being silent accomplices to this unfolding crisis. It is a serious charge because these companies should be fully aware of the impact that climate change is having on the planet's food system, given their dominance and reach into it. Two companies in particular, Kellogg and General Mills, are clear laggards among the Big 10. Both companies are highly vulnerable to climate impacts but also well positioned to lead the industry towards a more sustainable future.

Climate change is contributing to storms, floods, drought, and shifting weather patterns. These are causing crop failures, food price spikes, and supply disruptions. The end result will be more poverty and hunger. By 2050, there could be an extra 25 million malnourished children under the age of 5 because of climate change,² and 50 million more hungry people.³ This is the human dimension of the climate change crisis that is already unfolding.

The poorest, most vulnerable people are being hit first and worst. But all of us will be affected. In major markets like the US and the UK, Oxfam calculates that climate change will drive up the retail price of products like General Mills' Kix cereal by up to 24 percent and Kellogg Corn Flakes by as much as 44 percent over the next 15 years. Such retail price hikes are the consequence of rising prices of commodities like corn and rice, projected to double by 2030, with half of the increase due to climate change.⁴

Some of the Big 10 companies are already being hit financially because of climate change. In March 2014, General Mills' CEO Ken Powell, said that in the previous fiscal quarter, extreme weather had dampened sales and cost his company 62 days of production, or the equivalent of 3–4 percent of production, "which hasn't happened in a long time to us, think decades".⁵ Unilever says it now loses €300 million (\$415 million) a year due to extreme weather events such as flooding and extreme cold.⁶

The Big 10 are failing to do all they can to cut greenhouse gas emissions from their supply chain.

If the Big 10 food and beverage companies were a single country, it would be the 25th most polluting country in the world.

Oxfam calculates that climate change will drive up the retail price of products like General Mills' Kix cereal by up to 24 percent and Kellogg Corn Flakes by as much as 44 percent over the next 15 years.

The fossil fuel industries are the biggest “climate villains” but the agriculture sector is a massive problem too. The latest report from the Intergovernmental Panel on Climate Change (IPCC) shows that agriculture and deforestation (largely driven by expansion of agricultural land) are responsible for around 25 percent of global emissions.⁷ But even more significantly, when experts calculate how far we need to cut emissions for the world to stay within a “safe” 2°C temperature rise, they assume that total emissions from these two sources will stop entirely by the middle of this century, and indeed become a net “carbon sink”, working to remove carbon dioxide from the atmosphere.⁸ However, agricultural emissions are actually set to increase by 30 percent by 2050 as demand for food increases,⁹ and the latest research suggests that deforestation rates are also still rising.¹⁰ Turning global agriculture and forestry into a net carbon sink will not happen without huge new efforts by companies and governments.

The agricultural industry faces a daunting double responsibility – to do its part to ensure “zero hunger” while undergoing a fundamental revolution in its production methods. This is something the Big 10 have not properly grasped. Between them, they generate \$1.1 billion a day in revenues, equivalent to the gross domestic product (GDP) of all the world’s low-income countries combined.¹¹ They have the economic power to drive the required transformation of the food system and to influence the direction of the wider global economy. Their vested interests coincide with the world’s need for a cleaner and more equitable global food system and a sustainable energy system. But they are not properly acting upon this coincidence.

Not acting on their own emissions footprint

When it comes to getting their own house in order, Oxfam research into the policies of the Big 10 shows that the industry has a very patchy record, which for some companies verges on downright negligence. Kellogg and General Mills are among the worst performers in this regard.

All of the Big 10 have set targets to reduce emissions from their operations (so-called “Scope 1 and 2” emissions, which account for 29.8 million tons).¹² But in the main, these targets are not science-based — they are based on what the company says is feasible, rather than on what is really needed or justified. But even more significantly, they do not cover the major share of the emissions for which the company is responsible — the indirect emissions associated with the company, from their supply chains to the end use of their products (so-called “Scope 3” emissions, which account for 233.9 million tons).¹³ The largest part of these unaddressed emissions across the Big 10 is from the production of their agricultural raw materials (approximately 114.1 million tons).¹⁴ This includes both the direct emissions caused by agricultural production — like nitrous oxide released from fertilizer usage, and methane released from livestock — and the indirect carbon emissions caused by expansion of agricultural land into forests. The impact of these agricultural emissions alone is the same as the carbon emissions of around 40 coal-fired power stations each year¹⁵ — too big for any responsible company to ignore.

The IPCC estimates that agriculture and deforestation account for 25 percent of global emissions. Yet emissions scenarios to keep global warming below 2°C assume these sources will become a net carbon sink by mid-century, despite rising emissions trends.

The largest source of the Big 10’s emissions is agricultural production of their raw materials — comparable to the annual emissions from 40 coal-fired power stations — yet these are not covered by the companies’ emissions reductions targets.

All of the Big 10 companies recognize that they need to reduce their agricultural emissions, and seven of them measure and report these Scope 3 agricultural emissions through the Carbon Disclosure Project (CDP) each year, though pointedly Kellogg, General Mills, and Associated British Foods fail to do even that. But from there, things slide downhill. Most companies do not disclose suppliers of commodities driving the most emissions (Unilever, PepsiCo, Nestlé, and Coca-Cola are honorable but partial exceptions here), and none of them have committed to a target to reduce their total agricultural emissions or require their suppliers to make reduction targets.

The Big 10, but especially Kellogg and General Mills, are not addressing the vast bulk of their emissions in the reduction targets they are setting — the huge “Scope 3” emissions, including those associated with the production of agricultural raw materials within their supply chains. Oxfam calculates that Scope 3 emissions from agriculture alone make up around 50–60 percent of the global emissions footprint of the Big 10 companies, with total Scope 3 emissions accounting for 80–90 percent of their total responsibility (see Figure 3).¹⁶ As oversights go, this is a terribly big one to be making.

To their credit, and thanks to the great campaigning by people’s movements and NGOs in recent years, most of the Big 10 have now committed to ending deforestation in their supply chains for palm oil, one of the biggest drivers of deforestation. This is important, as Oxfam’s investigations have revealed that General Mills, Kellogg, and other companies remain the ultimate beneficiaries of supply chains, which continue to tolerate massive deforestation and land clearances that are causing high-levels of GHG emissions, not to mention human rights abuses and worsening poverty and hunger among local communities.

But only very few of the companies have set concrete plans to implement and monitor these policies or to extend them to other key commodities that are driving deforestation, like soy, sugarcane and maize. Without these plans, the encouraging commitments that have been made may prove to be little more than warm words and paper promises, with little scope for local communities and others in civil society to hold them to account. And having made such commitments on palm oil, there is now no excuse for not replicating them across all commodities that have an impact on forests and the people whose livelihoods depend on them.¹⁷

Not vocal enough about the climate action needed from others

Finally, the Big 10 have, for the most part, remained silent in public debates over climate action. With a few notable exceptions — Unilever, Nestlé, and, to some extent, Coca-Cola and Mars — most do not speak out about the need for governments and other businesses to act, despite spending millions of US dollars on political lobbying each year.¹⁸ Most refrain from publicly challenging the backward stances of trade associations that represent them. Only two have signed the Trillion Tonne Communiqué (a recent business statement recognizing the limited global carbon budget).¹⁹ Their silence leaves the field open for the dirty fossil fuel industries to dominate the debate with policy-makers.

Most of the Big 10 have now committed to zero deforestation in their palm oil supply chains, but many lack robust and transparent implementation plans, and few have extended these policies to other key commodities.

The Big 10 are largely silent witnesses in public debates on climate action, despite spending millions of US dollars on political lobbying each year.

In the intensive corporate lobbying on the 2009 US climate change legislation in Congress, the Big 10 were all but absent in a debate dominated by players from energy and biofuel industries — submitting just 19 lobby reports between them, compared with more than 200 by the biggest 10 energy companies, and more than 100 by biofuels companies. The Big 10 are being too coy. They have exercised their political clout before, by pushing the European Union (EU) and other decision-makers to improve their biofuels policies and numerous other policy issues. It is time they lent their weight to the broader fight over climate policy.

Time to act

The food and beverage industry has both a moral imperative and a corporate responsibility to step up its efforts to tackle climate change. The Big 10 are uniquely placed to reveal the risks of climate change to their investors and to our global food chain. Kellogg and General Mills in particular must reverse their position as climate laggards. Companies must ensure that their supply chains are able to produce ingredients in more equitable and sustainable ways, including moving towards production and land-use methods that diminish GHG emissions and replenish carbon sinks. If each of the Big 10 companies made the same commitment to cut emissions from agriculture as PepsiCo UK, together they could save an extra 80 million tons of CO₂e compared to business-as-usual by 2020.²⁰

The Big 10 need to set new targets to cut GHG emissions throughout their supply chains and, where necessary, to support their suppliers in doing so. They need to transparently implement and extend their laudable new deforestation policies to all commodities. And critically, they need to step off the sidelines and lead the call on other industries and world leaders for more progressive, more equitable, and cleaner energy and food policies. In the fight for zero hunger in a safer climate, the silence of the food and beverage industry is not a virtue.

1 FOOD COMPANIES, CLIMATE RISK, AND HUNGER

The Big 10 and the global food crisis

In 2013, Oxfam launched Behind the Brands as part of its GROW campaign.²¹ GROW calls on governments and companies to build a better food system: one that sustainably feeds the growing global population and that empowers poor people to earn a living, feed their families, and thrive. Behind the Brands tracks 10 of the world's biggest food and beverage companies, assessing their policies and their commitment to helping create this system. The Big 10 are: Associated British Foods (ABF), Coca-Cola, Danone, General Mills, Kellogg, Mars, Mondelez International, Nestlé, PepsiCo, and Unilever. Together, they generate revenues of over \$1.1 billion every day.²²

The Behind the Brands scorecard ranks the Big 10's policies and commitments in seven critical areas: women, small-scale farmers, farm workers, water, land, climate change, and transparency.²³ Of these, climate change is where the Big 10 arguably have the most direct economic interests at stake. But while some companies have begun to address their climate footprint, others are showing worrying negligence in the face of an urgent global crisis.

None of the 10 companies is doing all it can to use its influence to change food production practices and public policy at local, national, and global levels, but General Mills and Kellogg stand out at the bottom of the pack. Even though these two companies are well positioned to lead both the food and beverage industry and the political system towards more ambitious action to address climate change, their current policies fail to measure up.

Climate change spreading hunger

Climate change is magnifying global poverty and hunger. Consumers and farmers around the world are already feeling the impacts of climate change in their stomachs and their pockets, as acute and chronic climate disasters cause crop losses, food shortages, and price shocks. Production losses and price shocks have pushed millions of people deeper into poverty, and led to widespread hunger and social unrest.²⁴

In its March 2014 scientific assessment, the Intergovernmental Panel on Climate Change (IPCC) concluded that climate change has already lowered wheat and maize yields in many regions and, on average, globally since the 1960s.²⁵ Going forward, it projects that climate change will reduce growth in global food production by up to 2 percent each decade, even as global food demand rises by 14 percent per decade over the same period.²⁶

The IPCC concludes that climate change has already lowered yields of wheat and maize in many regions and, on average, globally since the 1960s.

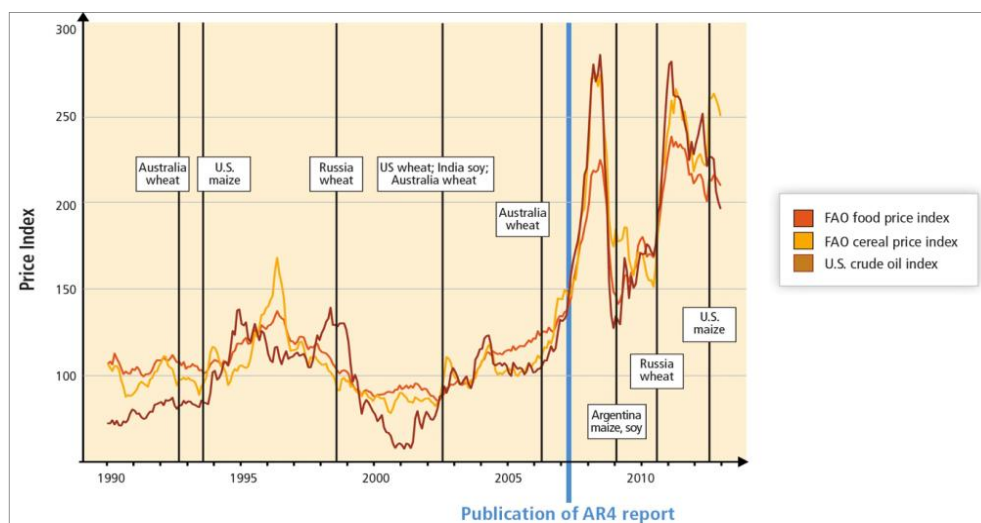
Agricultural regions in the world's poorest countries will feel the effects of climate change most acutely. Across Africa and South Asia, crop yields of wheat, maize, sorghum, and millets are expected to be reduced by about 8 percent by 2050.²⁷ In some African nations, by 2020, yields from rain-fed agriculture could fall by 50 percent.²⁸ Climate change is projected to reduce agricultural productivity by between 9 percent and 21 percent throughout Asia, Africa, and Latin America by 2080.²⁹ Wheat yields in South Asia could plummet by 50 percent by 2050, while rice yields are predicted to decline by 30 percent in the Middle East and North Africa.³⁰

In Guatemala, rainfall shortages during peak growing seasons have caused serious harvest declines, including an 80 percent drop in maize crops in 2013. Soaring temperatures destroyed up to 40 percent of Guatemala's coffee harvests in 2013–2014, putting thousands of agricultural laborers out of work.³¹

With yields struggling to keep pace with demand, the price of key commodities will rise. Oxfam projects that world market prices of key staple crops could approximately double by 2030, with around half of the increase driven by climate change impacts, while the IPCC suggests that prices could rise by up to 84 percent by 2050 due to climate change.³² More extreme weather will mean further short-term price hikes on top of this. Another drought in 2030 like that which hit the US Midwest region in 2012 could see the world market price of corn rocket by an additional 140 percent.³³

The IPCC shows that crop losses from extreme weather are already leading to volatility in global food prices. The 2010 Russian heat wave and subsequent wheat export ban contributed to global wheat prices more than doubling by the end of that year (see Figure 1).³⁴ The World Bank estimates that since June 2010, rising food prices have resulted in an additional 44 million people living in extreme poverty in low and middle-income countries.³⁵

Figure 1. Weather-related food price increases 1990–2013



Source: IPCC (2014) 'Chapter 7: Food Security and Food Production System', WGII AR5

As climate change makes food more expensive, all consumers will suffer. This includes poor rural communities, which purchase more food than they produce, as well as poor urban consumers, who may spend upwards of 50 percent of their incomes on food. The result of all this is clear: greater hunger. The IPCC cites research estimating that nearly 50 million more people could go hungry by 2050 because of climate change — equivalent to the population of Spain.³⁶

Production shocks hurt food companies too

Production shocks and climate-induced price spikes don't just harm consumers, they also hurt companies' bottom lines. Economic losses from climate change pose a significant financial risk. In 2011, the worst-recorded drought in Texan history cost the agriculture sector \$7.6 billion.³⁷ The previous year, exceptionally heavy rains and flooding in Guatemala caused a \$4 million loss for Fresh Del Monte Produce's banana operations, resulting in a \$9 million loss in profits.³⁸ Bunge, the global commodity trading firm, reported a \$56 million loss in its sugar and bioenergy sector during one quarter of 2010, primarily due to drought in its growing areas.³⁹ When Russia banned wheat exports following severe droughts in 2010, it "rippled through the stock market [...] separating winners from losers. Shares of food makers that face rising wheat costs fell, with General Mills dropping 2.2 percent."⁴⁰

In January 2014, Coca-Cola's Vice-President for environment and water resources described "increased droughts, more unpredictable variability, 100-year floods every two years" as problems disrupting the company's supply chain for sugarcane and sugar beets, as well as citrus for its fruit juices. "When we look at our most essential ingredients, we see those events as threats," he said.⁴¹ Paul Polman, CEO of Unilever, estimates that the company loses €300 million (\$415 million) a year due to extreme weather events such as flooding and extreme cold.⁴²

In March 2014, General Mills told investors that extreme weather had disrupted production and operations and dampened sales, undermining their quarterly earnings. "We lost 62 days of production, which would be three or four percent," said Ken Powell, CEO of General Mills, explaining that "this year's severe winter weather dampened sales performance across the food industry".⁴³ Extreme weather disrupted oat shipments necessary to make brands like Cheerios, spiking the cost of production, according to Powell.

Climate change is likely to have a significant impact on the future price of products sold by the Big 10, with further dramatic consequences for sales. Oxfam estimates that higher grain prices driven by climate disruption could drive up the retail price of products like Kellogg's Frosted Flakes (Frosties UK) by between 10 and 20 percent in the US and 15 to 30 percent in the UK by 2030. The price of Kellogg Corn Flakes could spike by between 15 and 30 percent in the US, and between 22 and 44 percent in the UK. The price of General Mills' Kix cereal could go up by between 12 and 24 percent in the US.⁴⁴ Given the relationship between price and the amount of cereal purchased by consumers in the ready-to-eat breakfast cereal market, retail price increases of that magnitude would likely slash the volume of cereal sales by at least an equivalent percentage.⁴⁵

"Increased droughts, more unpredictable variability, 100-year floods every two years... When we look at our most essential ingredients, we see those events as threats."

Jeffrey Seabright, Vice-President for environment and water resources, Coca-Cola

"This year's severe winter weather dampened sales performance across the food industry."

Ken Powell, CEO, General Mills

Box 1: The US heartland faces climate change

Across the farming heartlands of the US, farmers are concerned about the changes they are seeing in weather patterns; changes that leave some fearful about the future of agricultural production and questioning how they can make a living in the face of so much uncertainty.

Richard Oswald remembers when he was a boy growing up in Langdon, Missouri, how regular the rain used to be. But in May 2011, his fields and many others across Langdon took a terrible beating when the river flooded, swollen by record snowfall in the Rocky Mountains and unprecedented rainfall in Montana, Wyoming, and the Dakotas. The river scoured craters in the fertile land and blanketed it with sand. For five months, Oswald's farm was under water.

Oswald blames climate change, in part, for the flooding, which eventually led to more than \$2 billion in damages, in a year in which Missouri alone had three declarations of major disasters. The devastation on that river bottomland, where harvests of soybeans and corn flow into global food supply chains, contributed to record high prices of grains that year.

Oswald normally farms corn, which is processed into corn starch and sold on the commercial market. From there it would likely end up as thickener in any number of products made by major food and beverage companies. But this year, "there was nothing to harvest," said Oswald. "We spent all the money for inputs — seed, fertilizer, herbicides — and got nothing in return."

Food companies acknowledge climate risk

Food and beverage companies have both a moral responsibility and a compelling economic incentive to reduce GHG emissions throughout their supply chains and lead the wider fight against the climate crisis. Seventy percent of companies responding to the latest Carbon Disclosure Project (CDP) survey admit that they think climate change has the potential to significantly impact their revenues, with many warning that they expect climate impacts to be felt within the next five years.⁴⁶

All of the Big 10 companies acknowledge that production and supply shocks stemming from climate change represent a significant risk to their bottom line.⁴⁷ For example, Kellogg stated in 2013:

"As a company dependent on a consistent supply of agricultural raw materials, Kellogg is exposed to potential risks associated with changes in weather patterns and their impacts on the growing cycle. Our business operations could also be disrupted by extreme weather events, such as hurricanes and drought. Changes in precipitation patterns, reservoir levels, snowpack, and average temperatures may increase the stress on freshwater supplies. Changes in soil and moisture conditions may change the types of crops present in the areas where we currently source our agricultural crops. These issues could have impact on our global supply chain..."⁴⁸

Yet despite this awareness, major food and beverage companies have been slow to address their own GHG emissions footprint, and do little to press governments and other businesses to increase their climate action. Kellogg and General Mills in particular are dragging their feet when it comes to measuring their true footprints and turning awareness into action. It is time for them to align their business practices with the climate risks they themselves acknowledge.

Oxfam estimates that higher grain prices driven by climate disruption could drive up the retail price of products like Kellogg's Corn Flakes by between 15 and 30 percent in the US, and between 22 and 44 percent in the UK over the next 15 years.

2 CLEANING UP THE FOOD AND BEVERAGE SECTOR

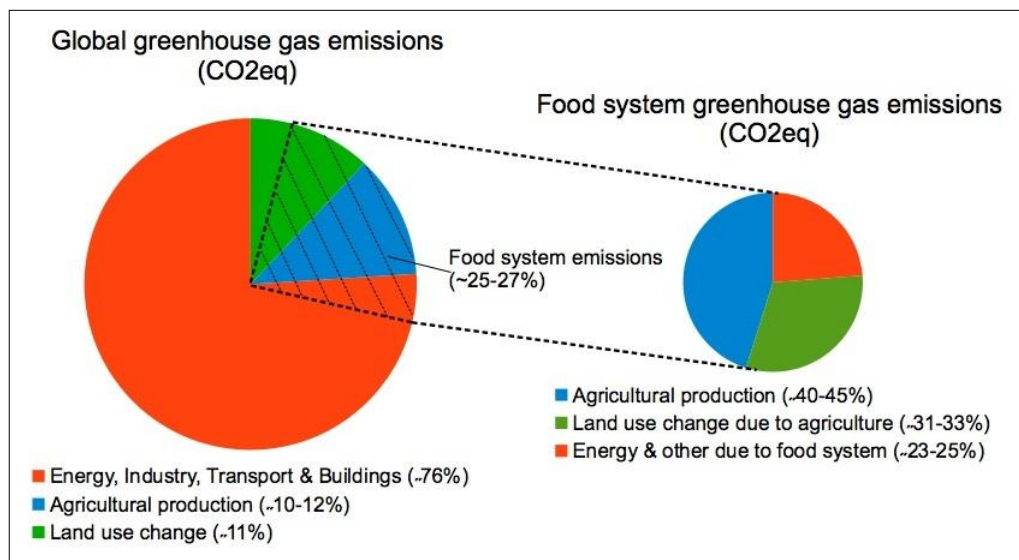
Greenhouse gas emissions and the food system

While burning fossil fuels is the single biggest driver of greenhouse gas (GHG) emissions that cause climate change, agriculture, deforestation and land-use change are also significant contributors to the problem.

Oxfam's best estimate based on available data is that globally, the entire food system — including sources from production of agricultural inputs like fertilizer, to emissions from agricultural production, refrigeration and transport — accounts for approximately 25–27 percent of global emissions (see Figure 2).⁴⁹ That's greater than the emissions of all the cars, planes and ships on the planet.⁵⁰

The largest share of these emissions are from direct agricultural production —such as emissions of nitrous oxide from fertilizer usage or methane from livestock — and from deforestation driven by expansion of agricultural land into forests and other carbon “sinks”.

Figure 2. Global GHG emissions and food system emissions



Sources: IPCC (2013); Vermeulen et al. (2012); FAOStat

At around a quarter of global emissions, reductions from the food system could make a major contribution to global efforts to tackle climate change. But what is perhaps even more significant is that the latest scenarios for keeping global warming below 2°C, as described in the IPCC's Fifth Assessment Report, assume that net emissions from agriculture and deforestation (a sector the IPCC terms “Agriculture, Forestry and Land-use Change” or “AFOLU”) will effectively end entirely and that the sector will become a net carbon sink by the middle of the century.⁵¹

This is a critical assumption, because in the absence of this huge new carbon sink, the rapid transition needed in our global energy system to keep global warming below the 2°C target agreed by governments at the UN will only be possible with a huge scaling-up of as yet unproven and highly risky Carbon Capture and Storage technology (see Appendix). It is therefore clear that while major emissions reductions from agriculture and deforestation will not be sufficient to tackle climate change alone, they are certainly a necessary, indeed vital part of efforts needed to stay below 2°C of warming.

Worryingly, emissions trends in this sector are currently heading in the opposite direction. New research from the United Nations Food and Agriculture Organization (FAO) shows that emissions from agriculture have increased significantly over the past 50 years and even more so over the past decade, and are set to increase another 30 percent by 2050.⁵² Meanwhile, the most recent research, not included in the latest IPCC report, suggests that global deforestation rates are continuing to rise, despite progress in some areas.⁵³

Unless global agriculture and forests become a net carbon sink by mid-century, pathways to keep global warming below 2°C require massive use of unproven and risky Carbon Capture and Storage technology.

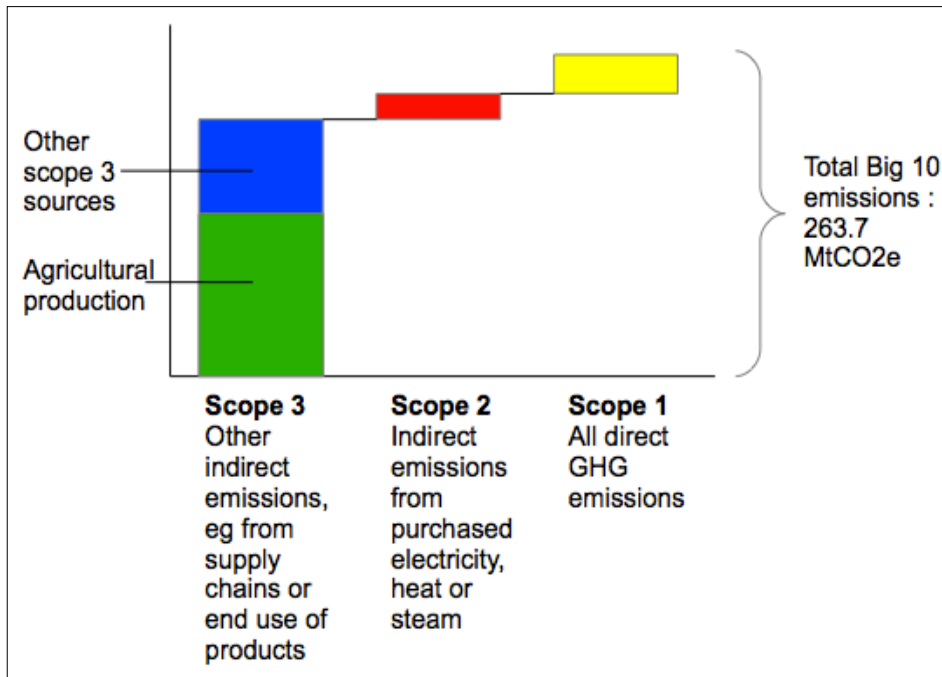
Yet emission trends are currently heading in the opposite direction.

Greenhouse gas emissions and the Big 10

The Big 10 companies are significant emitters in their own right. If they were a country, their combined emissions across their operations and supply chains would make them the 25th biggest polluter, with emissions higher than oil and gas producers like the United Arab Emirates and Qatar, and comparable to the emissions of Denmark, Finland, Norway, and Sweden combined.⁵⁴

According to their submissions to the Carbon Disclosure Project (CDP) — an international NGO that assesses companies' ecological impact, and is considered the gold standard for reporting across industries — the clear majority of these emissions do not come from the operations of offices and manufacturing plants (accounted as so-called “Scope 1 and 2” emissions). They come instead from indirect sources, including the end use of the companies' products and their supply chains — most notably from the agricultural production of their raw materials (so-called “Scope 3” emissions) (see Figure 3). This is largely driven by industrial production of commodities like palm oil, soy, sugarcane, maize, wheat, rice, and livestock, including over-use of chemical fertilizer and deforestation through cropland expansion.

Figure 3. Emissions sources of Big 10 food and beverage companies



The emissions from agricultural production of the Big 10 alone are comparable to the annual emissions of around 40 coal-fired power stations.

Source: Oxfam analysis of CDP submissions. "Agricultural production" is estimated based on Scope 3 category: "purchased goods and services".

In their CDP submissions, the Big 10 acknowledge the significance of their agricultural emissions. Kellogg, for example, notes that they have "assessed the environmental footprint of several of our products... These footprints led us to understand that most carbon impacts associated with our products exist in the agricultural phase of our products' life-cycle".⁵⁵ Mars reports that 86 percent of its footprint comes from Scope 3 sources, and 56 percent of its total GHG emissions are generated from agricultural raw materials.⁵⁶ Elsewhere, General Mills reports⁵⁷ that 41 percent of its emissions come from agriculture alone, with another 14 percent from its packaging supply chain, and 7 percent from ingredient production.⁵⁸

Scope 3 emissions represent 80–90 percent of all the Big 10's emissions, while Scope 1 and 2 emissions make up the remaining 10–20 percent. Their Scope 3 emissions can be broken down further, with agricultural production emissions accounting for around 50–60 percent of total emissions across the Big 10 companies.⁵⁹ These Scope 3 emissions from agricultural production of the Big 10 alone are greater than all of the Scope 1 and 2 emissions of every other sector among the "Global 500" biggest companies reporting to CDP other than energy, utilities and materials.⁶⁰ On an annual basis, they are comparable to the emissions of around 40 average coal-fired power stations,⁶¹ or similar to building four Keystone XL pipelines.⁶² Yet the Big 10 have so far failed to meaningfully address them.

In the years ahead, the food sector must rise to the challenge of reducing its climate impact at the same time as meeting growing demand for food and ensuring that no one on the planet goes hungry. Options exist to reduce emissions by shifting away from a model of industrial agriculture to more sustainable and agro-ecological approaches.⁶³ In addition, significant emissions reductions can be achieved by cutting out food waste and shifting diets.⁶⁴ The Big 10 cannot achieve all of this single-handedly; but as major players in the sector, they must lead the way.

Box 2: General Mills and Kellogg at the bottom of the pile

The Big 10 — particularly General Mills and Kellogg — are failing to drive adequate emissions reductions within their supply chains to help lead the sector towards sustainability. The Big 10 post combined annual revenues of more than \$450 billion, equivalent to the gross domestic product (GDP) of all the world's low-income countries together.⁶⁵ Their supply chains are present in every part of the global food system, from farmers to consumers. Shifts in how they do business have the potential to transform the entire food sector.⁶⁶

But change is coming far too slowly. Oxfam's analysis shows that while some Big 10 companies, such as Nestlé and Unilever, are making improvements in how they trace commodities along their supply chains and in reducing their carbon footprint, others, particularly Kellogg and General Mills, are dragging their feet at best. Unlike most other Big 10 companies, Kellogg and General Mills have failed even to report annually through CDP on their GHG emissions stemming from their agricultural supply chains — by far the largest source of their emissions.⁶⁷

Kellogg gets positive marks on Oxfam's Behind the Brands scorecard⁶⁸ for disclosing its exposure to deforestation risk and asking suppliers to reduce their emissions. But the company does not measure and disclose its GHG emissions associated with agricultural production, and lacks specific targets for reducing emissions from its supply chain. As a result, it scores just 4 out of 10 on climate change.

General Mills scored a meager 2 out of 10 on climate change. Although its 2013 sustainability report indicates that more than half of its emissions came from agriculture and packaging in its supply chain, the company has so far failed to annually report those emissions through CDP or to set reduction targets for its own agricultural emissions, and has made no such requirements for its suppliers.⁶⁹

In a study by Climate Counts, which evaluated companies' GHG emissions goals, Kellogg ranked 60th out of 100 companies surveyed, and was rated "not sustainable". General Mills ranked even lower, at 65th, similarly "not sustainable".⁷⁰ Kellogg also ranks near the bottom of the Big 10 on sustainability scorecards produced by the World Wildlife Fund and the Union of Concerned Scientists.⁷¹

There are some signs of progress though. Overall, the Big 10 have improved disclosures of their GHG emissions and climate risks, principally through the CDP.⁷² In their words if not their deeds, even foot-dragging companies like General Mills have acknowledged the crisis of climate change and the need for urgent reforms. Responding to questionnaires from CDP, General Mills stated, "Climate change is a serious issue with broad implications for agriculture and the world's food supply. We see a clear role for responsible companies to help mitigate the risk of climate change. Our primary focus is reducing our GHG emissions in our operations through improved energy efficiency and the use of low-carbon energy sources."⁷³

Acknowledging climate change and making minimal reductions to operational emissions is a start, but it is not nearly enough. Any company that is serious about addressing its emissions must go beyond its own front door.

Rating the Big 10 on measuring, reporting and reducing emissions

All of the Big 10 now report on “Scope 1 and 2” emissions from their own operations, and some are taking reasonable steps to reduce them by, for example, insulating buildings and improving energy efficiency. Mars has recently shown climate leadership — for example, through its commitment to eliminate fossil fuel energy use and GHG emissions from its direct operations by 2040.⁷⁴

But for the most part, companies have set GHG reduction targets according to an arbitrary set of metrics. Scientific consensus has shown that any global temperature rise at or above the 2°C threshold would have catastrophic impacts on communities and ecosystems globally. Yet companies are not measuring their targets against this threshold. Current vague commitments do little to guarantee truly sustainable emissions reductions. A recent analysis of their operational GHG emission reduction goals found that neither General Mills nor Kellogg have targets that are “sustainable” when measured against what the science demands.⁷⁵

But even more significant is that these companies' emissions reduction targets do not cover the majority of their emissions. “Scope 1 and 2” emissions represent only a small proportion of the food and beverage giants' contribution to climate change. The companies' targets effectively ignore the single largest source of emissions in their value chains — those stemming from agricultural production of their raw materials (classified as “Scope 3” emissions).

Oxfam's research shows that all of the companies recognize the need to reduce agricultural emissions, and 7 of the 10 report and disclose these emissions annually through the CDP, though General Mills, Kellogg, and ABF fail to do even that. However, none of the Big 10 have set clear targets to actually reduce these agricultural emissions (see Figure 4). These targets are crucial to incentivize real reductions. Unilever and Coca-Cola have set reduction targets across the life-cycle of their products, such as Coca-Cola's target of a 25 percent emissions reduction for the “drink in your hand”.⁷⁶ Such targets are commendable, but do not guarantee that emissions from agricultural production will decline (as reductions could all be delivered elsewhere in the product's life-cycle).

All of the Big 10 companies recognize the need to reduce their agricultural emissions, which account for 50–60 percent of their total emissions. Yet none have set targets to do so.

Figure 4. The Big 10 rated on policies to address agricultural emissions in supply chains⁷⁷

	Recognize need to reduce agricultural emissions	Annually report and disclose agricultural emissions	Commit to target for reducing agricultural emissions	Disclose suppliers of commodities that are drivers of emissions	Require suppliers to set clear emissions reductions targets
Associated British Foods plc	Yes	No	No	No	No
Coca-Cola	Yes	Yes	Partial	Partial	No
DANONE	Yes	Yes	No	No	No
GENERAL MILLS	Yes	No	No	No	No
Kellogg's	Yes	No	No	No	No
MARS	Yes	Yes	No	No	No
Mondelez International	Yes	Yes	No	No	No
Nestlé	Yes	Yes	No	Partial	No
PEPSICO	Yes	Yes	No	Partial	No
Unilever	Yes	Yes	Partial	Partial	No

■ Yes
 ■ Partial
 ■ No

Because Scope 3 emissions are, by definition, controlled by the suppliers of goods and services, the Big 10's supplier codes are the most powerful way for companies to bring about significant GHG emission reductions. Accurate data can be an effective motivator for change. If companies do not measure and understand where their emissions are coming from, they have no way of identifying where reductions can be made. Strong data reporting can also capture land-use change emissions, one of the primary drivers of emissions globally.

If companies are serious about meeting their moral and business obligations to help address climate change, they must begin to measure and set targets to reduce emissions that occur outside their own four walls. Companies must use their supplier codes to require suppliers to measure and disclose GHG emissions, and to establish clear, quantifiable reduction targets.

Measurable targets are critical to driving emissions down over time. Vague guidelines that ask suppliers to "aim to" reduce their emissions are unlikely to produce any real reductions. No company in the Big 10 requires suppliers to commit to meaningful targets to reduce their greenhouse gas emissions. Unilever and Nestlé generally ask their suppliers to reduce their agriculture-related emissions, but do not require them to establish specific reduction targets.

Destroying forests and carbon sinks

One of the most damaging causes of Scope 3 emissions comes from deforestation and changes in land-use, such as agricultural expansion into carbon-rich vegetated areas to make way for commodities like soy, palm oil, maize, and sugarcane. Oxfam's investigation has found evidence and threats that companies supplying palm oil to suppliers of Kellogg and General Mills are recklessly clearing forests and burning peatlands.

Worldwide, clearing of forests and other vegetated lands for agriculture is the main driver of deforestation⁷⁸ and accounts for about a third of all GHG releases from the food system (see Figure 2).⁷⁹

The scale of forest loss is staggering. Between 2000 and 2010, around 13 million hectares of forests were lost or converted to agriculture. This amounted to a net global forest loss of 5.2 million hectares, roughly the size of Costa Rica.⁸⁰ Deforestation is by far the most common means of expanding agricultural operations: in tropical regions, approximately 75 percent of all new agricultural land is the result of forest destruction.⁸¹

Leading food and beverage companies and their supply chains are a significant driver of global deforestation and land clearance.

Leading food and beverage companies and their supply chains are a significant driver of global deforestation and land clearance.

Land-use change and palm oil's social footprint

In addition to GHG emissions, land clearing often produces harmful social impacts. Oxfam has previously highlighted the issues of land grabs and land conflicts in agricultural supply chains, particularly in sugar, soy, and palm oil plantations.⁸² The loss of access to land and natural resources brings with it a loss of food security and traditional cultural practices and livelihoods. The establishment of plantations and the consequent use of fertilizers and pesticides often lead to pollution of drinking and fishing waters, harming community health and the ability to grow crops or to fish. Poor labor conditions are also widespread.

The palm oil sector has generated numerous harmful social impacts. In Indonesia alone, 4,000 unresolved palm oil-related land disputes have been documented,⁸³ many involving loss of forest and natural resources. People in these communities often end up as smallholders in outgrower schemes, or laborers who endure harsh working conditions with little economic benefit.⁸⁴ Yet palm oil has the potential to contribute significantly to local and regional economic growth if produced sustainably, safeguarding the climate and respecting host communities around the plantations (see Box 5).

Under current industrial practices, the production of palm oil involves widespread deforestation and destruction of carbon-rich peatlands. Malaysia and Indonesia account for more than 85 percent of the world's palm oil production, with Indonesia supplanting Malaysia as the top producer in the past decade.

Between 2000 and 2012, the proportion of Malaysian land used to cultivate palm oil grew by roughly 50 percent, or 17,000 km². During that time, Malaysia experienced the world's highest rate of forest loss, totaling 47,278 km² — an area larger than Denmark.⁸⁵

In Indonesia, the land area devoted to oil palm plantations has grown nearly eightfold over the past 20 years.⁸⁶ Deforestation has expanded dramatically, doubling from 10,000 km² annually in the early 2000s to 20,000 km² a year by 2011–2012.⁸⁷ From 2000 to 2010, the island nation released between 2 percent and 9 percent of the world's tropical land-use carbon emissions.⁸⁸ Worryingly, Indonesia plans to double production by 2020, compared to 2009 levels.

Oxfam's research in Indonesia and Liberia has shown that Kuala Lumpur Kepong (KLK) — a company that sells palm oil to one of the major traders, Cargill, which, in turn, supplies General Mills and Kellogg — is embroiled in allegations of large-scale ecological destruction linked to climate change, and poor treatment of communities living on and near their plantations.

Box 3: Deforestation in the Indonesian palm oil supply chain



A helicopter putting out a fire in Pelalawan district, Riau province (2014). Des Syafrizal / Oxfam

In June 2013, burning Sumatran forests produced a haze that darkened South-East Asian skies for hundreds of miles. The haze drifted from Riau province, Indonesia, and made air unbreathable in cities and towns across several countries, including Singapore, Brunei, Malaysia, and Thailand.

Indonesia is the largest producer of palm oil in the world,⁸⁹ and most of it comes from Riau province, where the fire originated.

As recently as March 25, 2014, commodities trader Cargill, which has supplied both General Mills and Kellogg with palm oil,⁹⁰ received 2,002 metric tons of palm kernel oil from Indonesian palm oil producer PT Adei Plantation & Industry, which has large-scale operations in Riau province.⁹¹

Some owners of palm plantations in Riau province often use burning to clear land of old growth,⁹² but the fires can get out of control, burning large areas of forest and releasing high levels of greenhouse gases. The 2013 fire was suspected to have been started on land intended for palm oil production in the Bengkalis regency, in Riau province.⁹³ Two high-ranking executives from PT Adei are currently standing trial at the Pelalawan district court, accused of burning land in Bengkalis regency and contributing to the toxic haze.⁹⁴

PT Adei is a subsidiary of Malaysian giant KLK, a multinational corporation headquartered in Ipoh, Malaysia. In a response to Oxfam, KLK denied any wrong doing and referred to the outcomes of an investigation that the Roundtable on Sustainable Palm Oil conducted directly after the fire in July 2013 that cleared them from accusations of burning.⁹⁵

The Indonesian National Council on Climate Change and the Japan International Cooperation Agency estimated that the fires in Riau emitted between 36 million and 49 million tons of carbon dioxide.⁹⁶ That is equivalent to the annual emissions of 10.3 million cars, or more than all of the cars in Los Angeles, New York City, and Chicago combined.⁹⁷

In 2001, another PT Adei executive was tried and convicted for the same crime.⁹⁸

The air pollution caused by the fires is immediate. But GHG emissions from practices like burning forests are driving a changing climate in Indonesia and wreaking more long- lasting damage on people's lives. In Riau province, people report more flooding, more drought, and volatile food prices. People are struggling to feed their families.⁹⁹

PT Adei is also accused by local people of forcing farmers from their land with little compensation, destroying forests used by the community to grow food, and polluting and diverting the river, which is vital to the food security and income of communities where the company operates.¹⁰⁰

KLK, in its response to Oxfam, states that it has provided jobs to 5,307 people, paid above the minimum wage, that the smallholders linked to the plantation benefit from a continuous stream of good income, and that they have provided medical amenities and schools.¹⁰¹

However, villagers told Oxfam that before the company arrived, people had enough food and income to live on. They used their land to grow basic crops like rice, corn and cucumber, which they used to eat and sell. They also harvested rubber and gum from the forest and sold it, and obtained herbs for their traditional medicines.¹⁰²

"Before the company arrived to our village, I was much happier. I didn't need to worry about getting food on the table for my husband and my children," explains a female villager, who could not be identified for security reasons.¹⁰³

Most villagers were offered a job with the company as laborers, but many have quit because they didn't make enough money to live on. Some say their children have been forced to drop out of school because they can no longer pay the fees.¹⁰⁴

Global demand for palm oil is growing by 4–5 percent annually, and is expected to double by 2050.¹⁰⁵ Industrial production is expanding into Africa and Latin America. In countries such as the Democratic Republic of Congo (DRC) and Liberia, palm oil companies — often the same conglomerates dominating South-East Asia — are acquiring lands for plantations. All too often, this expansion brings with it conflict and deforestation, as described in Box 4.

Box 4: Liberia, a new frontier for deforestation



Farmer Eric Pyne at the new gate built by Equatorial Palm Oil at their Butaw plantation, Liberia (2014). Anna Fawcus / Oxfam America

KLK also has a subsidiary company embroiled in allegations of human rights abuses and deforestation in Liberia. The subsidiary, Equatorial Palm Oil (EPO), has signed oil palm concession agreements that pave the way for the large-scale development of land, including forested land, in Liberia. Clearing forests is a major source of harmful carbon emissions. Farmers in Liberia are reporting that changing weather patterns are already damaging crops and leading to food shortages.

Just outside the southern Liberian community of Komonah sits EPO's Butaw palm oil plantation. Through a joint venture with KLK, EPO is gradually regenerating an old plantation, and local people say they are poised to expand by clearing swathes of land that could include virgin forest. They are very worried about the risks to their livelihoods and their families.

More than 40 percent of Liberia's land is forested. The forests are critical for many rural communities who depend on the land to support their families, using them to hunt, fish, and gather wood for building. EPO has published a statement promising that it will only operate on land that has already been cleared, will not clear natural forests to create land for its plantations, and will aim to minimize greenhouse gas emissions. But there are questions hanging over EPO's record to date. The company has faced complaints about human rights abuses from communities living on land that EPO has cleared for plantations in Liberia.

In September 2013, communities in Grand Bassa county filed a complaint with the Roundtable on Sustainable Palm Oil (RSPO) against EPO, accusing them of destroying farms, crops, and a local school without the consent of the community.¹⁰⁶ In December 2013, a coalition of national and international NGOs accused EPO of being involved in the arbitrary arrest and assault of community members who claim they were resisting EPO's attempts to take their land. EPO has denied these allegations.

Some community members living close to the Butaw plantation fear the loss of their land, and many of the villagers say that they have not benefitted from the creation of jobs on the plantation.

"We don't want this company to operate on our land," says Eric Pyne, a married father of five who grows rice, cassava corn, and other vegetables on around two hectares of land in the community. "There will be no benefit to our children. No drinking water, we don't have latrines, we don't have road connections, we don't have school."

EPO plans to more than double its palm oil planting in Liberia by the end of 2014.¹⁰⁷ Over the next 20 years the company plans to expand to 100,000 of its 169,000 hectares — the equivalent of 186,873 American football fields.¹⁰⁸

Rating the Big 10 on setting and implementing plans for zero deforestation

Palm oil is used in everything from margarine, breakfast cereals, chocolate, instant noodles, and ice cream, to shampoo, detergent, and auto fuel.¹⁰⁹ It comprises 65 percent of all vegetable oils produced, and is used in about half of all packaged foods.¹¹⁰

Palm oil provides a compelling illustration of how the Big 10 companies and their supply chains drive climate change, and deplete the carbon resources that are essential to mitigating the unfolding climate crisis. But palm oil also provides an opportunity for the Big 10 to exert their influence to reverse climate change and to increase social benefits for the millions of people worldwide who produce it.

Nearly all of the Big 10 rely on palm oil for many of their products, together using 6 percent of the world's palm oil supply, nearly 3.5 million metric tons.¹¹¹ Yet, their influence reaches far beyond that, as these companies have the economic clout to drive more sustainable practices throughout the palm oil supply chain. They can ensure that KLK, Cargill, and other big traders of palm oil and other commodities make it a priority to source their supplies responsibly.

Some of the Big 10 have used this influence effectively in the Roundtable on Sustainable Palm Oil (RSPO). Launched in 2004, the RSPO is the most widely used certification standard for palm oil, having certified around 8.2 million tons as of 2013.¹¹² But only about half of that certified supply is purchased, so challenges remain to expand the sustainable palm oil market.¹¹³

The fight for sustainable palm oil illustrates the gap between industry leaders and laggards. Unilever, a top palm oil consumer (using roughly 3 percent of global supplies), is committed to sourcing 100 percent of its palm oil from certified sustainable suppliers.¹¹⁴ The company reached that goal in 2012,¹¹⁵ followed by Nestlé in 2013.¹¹⁶ Other companies still have a long way to go: only 17 percent of PepsiCo's palm oil is certified sustainable. While Mars rates better at 56 percent, General Mills sources less than half of its 56,041 tons sustainably.¹¹⁷ Nestlé is working to make its palm oil traceable back to the plantation, and now has a process in place for reporting and verifying progress. However, Nestlé could further strengthen its commitment by requiring suppliers to disclose the GHG footprint of their production processes.

To their credit, both General Mills and Kellogg have recently made strong new commitments and policies for zero deforestation for their palm oil sourcing, going beyond the RSPO's minimum GHG requirements. These include a commitment to no deforestation, and to buy all their palm oil from fully traceable, certified sustainable sources by the end of 2015. These welcome moves are part of a recent momentum for change in the sector that has seen similar commitments from major palm oil traders such as Wilmar, and other food companies such as Mars, which have in key respects gone beyond the commitments of previous industry front-runners, including Unilever and Nestlé.¹¹⁸ Mondelez has made some partial progress in the right direction. But the glaring lack of such commitments by PepsiCo, Danone, and ABF is now increasingly difficult to justify.

While these are important advances, recent experiences in Liberia and Indonesia (Boxes 3 and 4) highlight the urgency with which General Mills and Kellogg must put their commitments on palm oil into practice, with robust implementation plans that include key milestones for fulfilling the policy, as well as commitments to regular transparent reporting on progress and verification mechanisms. Without this, they may prove to be little more than warm words and paper promises. Worse, they could end up causing more social harm than environmental good, if community land rights are not fully respected in their implementation.¹¹⁹ General Mills has neither set clear milestones nor committed to regular reporting, while the milestones Kellogg has set do not pass muster. Of the Big 10, only Unilever and Nestlé have set clear and transparent implementation plans that are reasonably robust.

Figure 5. Big 10 ratings on policies to prevent deforestation in supply chains

	Comprehensive palm oil policy with:		Equivalent deforestation policy across commodities
	Ambitious timeline to stop deforestation	Plan with clear milestones and regular reporting	
Associated British Foods plc	Red	Red	Red
Coca-Cola	Grey	Grey	Red
DANONE	Red	Red	Red
GENERAL MILLS	Green	Red	Red
Kellogg's	Green	Orange	Red
MARS	Green	Orange	Green
Mondelēz International	Orange	Red	Red
Nestlé	Orange	Green	Green
PEPSICO	Red	Red	Red
Unilever	Orange	Green	Orange

■ Yes
 ■ Partial
 ■ No
 ■ N/A

To their credit, most of the Big 10 have now made commitments to zero deforestation in their palm oil supply chains. The glaring lack of such commitments by PepsiCo, Danone, and ABF is increasingly hard to justify.

While there is real momentum for change in the palm oil sector, only Mars, Nestlé, and, to some extent, Unilever have extended their palm oil commitments to other commodities.

The investigations in Indonesia and Liberia show that much work remains to be done across the sector. The Big 10 must urgently exert pressure on commodity traders and other brands to adopt ambitious deforestation policies with concrete and verifiable implementation plans, and monitoring and public reporting mechanisms that exceed RSPO commitments. These policies should include commitments to sourcing 100 percent RSPO-certified palm oil by the end of 2014, and 100 percent traceable RSPO-certified palm oil by the end of 2015.

Investments in smallholders, such as the approach described in Box 5, will also help achieve these commitments and create a win–win situation for communities and companies alike.

Box 5: Getting a FAIR deal for communities in areas of palm oil production

Sustainable palm oil sourcing can create benefits for communities, companies, and the climate. It can create important opportunities to increase land efficiency and productivity on small-scale farms.¹²⁰

New research from Aidenvironment, commissioned by Oxfam, points the way forward for companies wishing to work with communities to implement sustainability commitments that can increase productivity and reduce emissions, while benefiting both companies and communities. The report points to four key principles for its company–community partnership approach: Freedom of choice, Accountability, Improvement, and Respect for rights (FAIR).

The four FAIR principles are not new standards, but support existing palm oil sustainability initiatives. Trading companies, brands, and investors can support suppliers to use these win–win principles to revitalize low-productivity land and embrace small-scale farmers as environmentally sound business partners. Sustainable farming can generate productivity gains without excessive use of agro-chemicals. National and local governments can be crucial allies in this, creating forest protection rules to effectively protect land and the climate.

A recent World Bank survey found that investments that are well integrated within the surrounding community are likely to be financially successful and have a pro-poor impact. But investors who leave consultations to host governments often face costly disputes.¹²¹ These tensions can undermine climate goals, livelihoods, and businesses. Companies and communities can turn this around by building FAIR partnerships.

This momentum for change in the palm oil sector shows the impact that changing company supply chains can have. Yet there has been far less progress in supply chains of other key commodities driving deforestation. More than half of agriculture-related deforestation paves the way for pasture and feed crops for cattle. Soybean production is responsible for 19 percent of crop-related deforestation, while maize causes 11 percent, and oil palm expansion 8 percent. Rice and sugarcane round out the deforestation food basket, causing 6 percent and 5 percent of the forest loss respectively.¹²² Neither General Mills nor Kellogg has extended its palm oil policy to other commodities.¹²³ Only Mars, Nestlé, and, to some extent, Unilever have taken this crucial next step.

3 THE BIG 10 NEED TO RAISE THEIR VOICES FOR CLIMATE ACTION

While there is plenty more that the Big 10 can do to get their own house in order on climate change, they cannot address the climate risks to the food system through their actions alone. Taking their moral and business responsibilities on climate change seriously means they must also become active voices in the wider debates on climate action among business, governments, and the public.

Christiana Figueres, Head of the UN Framework Convention on Climate Change (UNFCCC), has called for companies to urgently step up and counter regressive lobbying from fossil fuel-based industries such as coal and oil: “If we don’t have a voice that is equally as orchestrated, with arguments that are at least as compelling, then governments are going to be taking very timid decisions and they are not going to be tipping the scales.”¹²⁴ Yet with only a few notable exceptions, the Big 10 are acting like silent witnesses to this crisis — acknowledging the risks of climate change, but remaining on the sidelines in efforts to address them.

Rating the Big 10 on advocating for climate action

A simple barometer of the engagement of the Big 10 in climate advocacy is whether the companies have signed the recent Corporate Leaders Group (CLG) Trillion Tonne Communiqué.¹²⁵ This recognizes the limited global carbon budget described by the IPCC and calls for zero net emissions in the second half of the century. Of the Big 10, only two — Unilever and Mars — have signed up (see Figure 6). As Paul Polman, CEO of Unilever, said when promoting the communiqué: “We recognize for the first time that, purely in monetary terms, the cost of inaction is starting to become bigger than the cost of action.”¹²⁶ The silence from his food and beverage industry peers has been deafening.

“If we don’t have a voice that is equally as orchestrated [as the fossil fuel industry], with arguments that are at least as compelling, then governments are going to be taking very timid decisions and they are not going to be tipping the scales.”

Christiana Figueres,
Executive Secretary,
UNFCCC

Figure 6. The Big 10 rated on climate advocacy¹²⁷



"I'd love to see the CEOs of Coke and Pepsi on a screen saying that 'we compete like crazy with one another, but one thing that we all agree on is that climate change is real'."

US Senator Sheldon Whitehouse

However, real climate leadership means going beyond joining collective sign-on statements, and engaging in proactive advocacy on key food and climate legislation at national and regional levels.

Among the Big 10 companies, Kellogg and General Mills are the only two that do not directly engage with governments in efforts to positively influence climate change policy.¹²⁸ But none of the companies are doing enough. US Senator Sheldon Whitehouse, a Rhode Island Democrat and a strong advocate of climate action who convened hearings on climate change in April, said, "I'd love to see the CEOs of Coke and Pepsi on a screen saying that 'we compete like crazy with one another, but one thing that we all agree on is that climate change is real'."¹²⁹

Despite spending tens of millions of dollars on lobbying, funding major campaigns on everything from sugar taxes to GMO labeling, these companies have failed to use their collective voice to advocate for government-led efforts to address climate change. In the intensive lobbying on the 2009 US Clean Energy and Security Act, for example, the Big 10 were all but absent in a debate dominated by energy and biofuels companies. Of 1,002 organizations registered to lobby on the legislation, there were just 3 from the Big 10 (Nestlé, Unilever, and PepsiCo), who between them submitted 19 lobby reports, compared with more than 200 from the biggest 10 energy companies and at least 100 from biofuels companies.¹³⁰ The Big 10 have submitted no lobby reports at all on the

The Big 10 submitted just 19 lobby reports on the US Clean Energy and Security Act, compared with more than 200 from the biggest 10 energy companies, and at least 100 from biofuels companies.

ongoing debate over the Keystone XL pipeline.¹³¹ They have been no more active in Europe. Of 168 groups reported to have lobbied the European Parliament's rapporteur on the landmark revision of the EU's Emissions Trading Scheme in 2008, none were from the Big 10.¹³²

The Big 10's role in advocating against the expansion of biofuels in recent years, especially in the EU context, shows the political influence and clout they can have.¹³³ Now they must use it in wider climate policy debates.

Pushing trade associations to advocate for climate action

Often, the companies will leave it to their industry trade associations to engage with decision makers on climate policy. Yet in many cases, this is a dangerous and irresponsible approach.

Some companies, including Mars, Nestlé, Unilever, and Coca-Cola, are engaged with progressive coalitions such as Business for Innovative Climate and Energy Policy (BICEP) in the US.¹³⁴ But just as significantly, others are actively supporting business lobby groups such as the US Chamber of Commerce (USCC), Business Europe, and the Australian Food and Grocery Council — all of which have attempted to block action on climate change.

Coca-Cola has board membership with the US Chamber of Commerce, and like PepsiCo, is a contributing donor,¹³⁵ and all of the Big 10 are associated with Business Europe through various national business federations.¹³⁶ The role of both USCC and Business Europe in consistently opposing strong climate action has been widely documented, leading several major companies such as Apple, Nike, and Johnson & Johnson to publicly leave the USCC or key positions within it, or to denounce its policy stance.¹³⁷

But the food and beverage industry associations are hardly shining examples of climate leadership either. General Mills, Kellogg, PepsiCo, and Unilever are board members of the Grocery Manufacturers Association,¹³⁸ which does not even seem to have a clear position on climate change — as Unilever notes in its submission to CDP.¹³⁹ FoodDrinkEurope barely mentions the importance of the EU's 2030 Climate and Energy Package in its priorities for the Greek Presidency of the EU.¹⁴⁰ Worse, the Australian Food and Grocery Council took a position actively supporting the repeal of the Australian carbon tax legislation.¹⁴¹

It is clear that, at times, the food and beverage industry has not just been silent, but has veered far off message. At the 2014 World Economic Forum, Nestlé CEO Peter Brabeck told UK newspaper *the Guardian* that climate change is “an intrinsic part of the development of the world” and asked, “Are we God to say the climate, as it is today, is the one we have to keep?”¹⁴²

While Nestlé tops Oxfam's Behind the Brands scorecard, with an 8 on climate change, this shows the company still has much work to do to align its public communications about climate issues with its policies.

The Australian Food and Grocery Council took a position actively supporting the repeal of the Australian carbon tax legislation.

Without a unified front by the food and beverage sector, the well-organized fossil fuel industry lobby will continue to win the political battle over climate change. It is time for the food and beverage industry to confront this head-on.

To their credit, Coca-Cola is the only company in the Big 10 to note that the positions of USCC and Business Europe are “not consistent” with its view on climate change in its CDP submission. Coca-Cola has also distanced itself from Business Europe in terms of its public position on EU climate action.¹⁴³ Unilever has recently taken the commendable step of withdrawing its direct business affiliation with Business Europe, effective from June 2014.¹⁴⁴

However, these examples aside, none of the other companies are proactively calling on these hugely powerful associations, which have done such harm to the prospects of ambitious climate legislation in the biggest emitters among developed countries, to change their positions or publicly distance themselves from them. And none of the companies are doing enough to ensure that the food and beverage industry associations that represent them develop strong policies and advocacy messages on climate action. This must change. If the Big 10 are serious about addressing the climate risks they publicly acknowledge, they must actively push their industry and its representatives to shape public debate and policy that confronts climate change responsibly.

4 CONCLUSIONS AND RECOMMENDATIONS

What the Big 10 food and beverage companies must do

As climate change intensifies, there is a growing humanitarian and economic urgency to do everything possible to reduce GHG emissions. As a significant driver of climate change, the food and beverage industry must act now to address its own significant climate impacts, and step off the sidelines to proactively advocate for greater climate action from others. As Oxfam's Behind the Brands scorecard shows, none of the Big 10 companies is doing enough, but General Mills and Kellogg in particular are failing to do their part.

The good news is that the knowledge and tools needed to greatly reduce the impact of the food and beverage industry on the climate are already here; change is largely a matter of companies' political will and commitment.

Markets for certified sustainable palm oil, sugar, and other commodities are steadily expanding. External pressure, combined with leadership from employees and innovators within companies, have pushed top companies to begin to address their own land-use practices, as well as their larger carbon footprint from packaging, shipping, and energy use. More can be done to focus on what is happening in their supply chains.

Innovations in measurement and disclosure, such as the Cool Farm Tool,¹⁴⁵ make it easier for farmers to understand where their emissions are coming from, and to identify opportunities for reductions. After PepsiCo UK found that 50 percent of its carbon footprint came from agricultural raw materials upstream in the supply chain, they set a goal of reducing 50 percent of their water use and carbon emissions over five years — the "50 in 5" goal.¹⁴⁶ If this commitment were made across the Big 10, emissions from agricultural production could be cut by around 80 million tons compared to business-as-usual by 2020 – a similar order of magnitude to the emissions reduction pledges made by South Africa or Mexico for the same period.

CDP also incentivizes companies to report their emissions and climate risks comprehensively, and provides a good basis for measuring improvements over time. Companies, such as Unilever and Nestlé, are in the lead because they have adopted tools like these, and are making related commitments.

Evidence shows that nations and companies can maintain agricultural production while reducing emissions.¹⁴⁷ By investing in agricultural production that prioritizes smallholders and up-scaling of sustainable agriculture rather than expansion, the industry can reduce emissions significantly.¹⁴⁸

To help build the political will to make all this possible, Oxfam is calling on Kellogg and General Mills, clear industry laggards, to lead the way forward with strong new commitments. These steps are applicable to the entire industry. Oxfam is calling on each company to understand the full scope of its GHG emissions across their agricultural supply chains, and to commit to meaningful reductions in the sector as part of science-based reduction targets. Companies can contribute to significant emissions reductions by ensuring that their entire supply chain adopts more sustainable practices. In particular, companies should support farmers and smallholders to use ecologically restorative farming practices that avoid land-clearing, synthetic fertilizer use, and other sources of GHG.

Just as importantly, the companies must start now to actively engage governments and other industries to take action to aggressively reduce their emissions too. At the end of 2015, world leaders will seek to agree a new global climate change agreement under the UNFCCC in Paris, and UN Secretary General Ban Ki Moon has convened a special summit to build momentum on climate action in September 2014. Now is the moment for leaders in the food and beverage industry to decide where they stand in the climate debate that will dominate political attention over the next 18 months.

By changing their food production and agricultural practices, the Big 10 companies can play a significant role in reducing the most harmful effects of climate change. By using their own political and economic clout and drawing on their own experiences of climate risk, they can help to shift the wider politics of climate action. If they are successful, they could provide a model for the future of sustainable and equitable food production, helping the world reach a target of zero hunger, in a safer climate.

RECOMMENDATIONS

Specifically, food and beverage companies should:

Know and show their climate change emissions, including emissions in their supply chains.

1. Measure and disclose GHG emissions in the companies' agricultural value chains;
2. Disclose their exposure to the risks of deforestation and degradation of forests and peatlands;
3. Disclose suppliers of commodities that are drivers of deforestation, degradation, and land-use change, including volumes of commodities with high GHG emissions footprints, such as palm oil, soy, sugarcane, maize, and dairy, and their countries of origin;
4. Disclose volumes of commodities with high GHG emissions footprints, or originating from countries with high GHG emissions.

Commit to quantifiable greenhouse gas emissions reductions.

5. Require “high climate risk” commodity suppliers to measure and disclose GHG emissions and to establish clear, quantifiable GHG emissions reduction targets, providing support to suppliers and working with smallholders where necessary;
6. Commit to clear, quantifiable GHG emissions reduction targets in their agricultural value chains;
7. Commit to developing emissions reduction targets that are sustainable when measured against a 2°C temperature change threshold;
8. Commit to developing a time-bound plan related to the sourcing of commodities with high GHG emissions footprints, in order to prevent further deforestation and degradation of forests and peatlands while protecting the rights of communities living on these lands; and to prevent expansion of agriculture within High Carbon Stock and High Conservation Value areas, while avoiding any infringement on land, human, and labor rights.

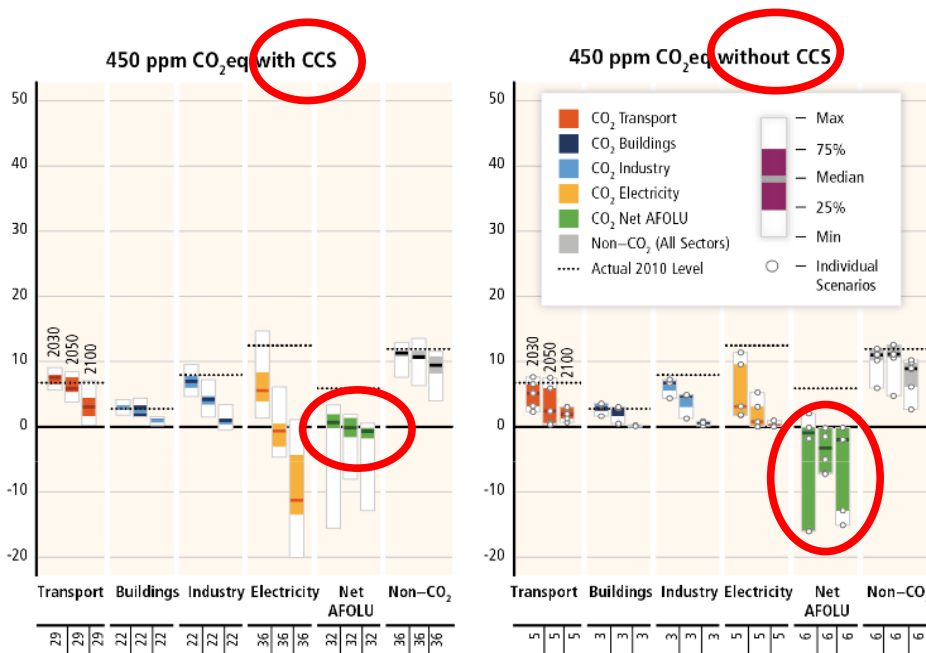
Advocate for ambitious action to combat climate change.

9. Sign on to a public statement committing to bold action on climate change, and conduct additional advocacy actions that urge governments to create ambitious climate change-related policies and programs;
10. Examine climate policies of industry associations of which the company is a member to understand their positioning on climate action and to determine whether that association has worked to undermine progressive climate policy. Work proactively within each trade association to push for constructive engagement on climate issues;
11. Commit to reviewing and revising company statements on climate change for consistency with a 2°C global target, preferably based on the UN Global Compact’s Caring for Climate format, and make details of this internal review publicly available.¹⁴⁹

APPENDIX

Excerpt from IPCC (2014) “Summary for Policy Makers”, Figure 7, in “Climate Change 2014: Impacts, Adaptation, and Vulnerability”, IPCC Working Group II Contribution to AR5, http://ipcc-wg2.gov/AR5/images/uploads/IPCC_WG2AR5_SPM_Approved.pdf

Emissions scenarios giving a reasonable chance of keeping global warming below 2°C require net emissions from agriculture, forestry and land-use change to become a significant net sink by mid-century. In the absence of such a sink, scenarios require significant use of unproven and risky technology for Carbon Capture and Storage (CCS).



NOTES

- 1 Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>; and Climate Analysis Indicators Tool (CAIT 2.0), World Resource Institute, <http://cait2.wri.org/wri>
- 2 G.C. Nelson et al. (2009) 'Climate Change: Impact on Agriculture and Costs of Adaptation', International Food Policy Research Institute, <http://www.ifpri.org/sites/default/files/publications/pr21.pdf>
- 3 IPCC (2007) 'Chapter 5: Food, Fibre, and Forest Products' in 'Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability', IPCC Working Group II Contribution to AR4, http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch5.html
- 4 Projected price increases were generated by translating the previously estimated impacts of climate change by the year 2030 on rice, corn and wheat prices into impacts on the prices of selected consumer food products that contain those grains. We used historical grain and consumer product prices, product ingredient lists and nutrition labels, and historical examples of how rising commodity prices affect retail prices to build a model that estimates the potential increases in retail prices that will result from climate change.
- 5 M. Reilly and N. Halter (2014) 'General Mills blames winter for lower sales', *Minneapolis/St. Paul Business Journal*, March 19, http://www.bizjournals.com/twincities/morning_roundup/2014/03/general-mills-blames-winter-for-lower-sales.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+bizj_twincities+%28Minneapolis+%2F+St.+Paul+Business+Journal%29
- 6 S. Yeo (2014) "Climate action is 'only way' to grow economy – Unilever CEO", Responding to Climate Change, <http://www.rtcc.org/2014/04/08/climate-action-is-only-way-to-grow-economy-unilever-ceo/>
- 7 IPCC (2014) "Summary for Policy Makers", Figure 2, in "Climate Change 2014: Impacts, Adaptation, and Vulnerability", IPCC Working Group II Contribution to AR5, http://ipcc-wg2.gov/AR5/images/uploads/IPCC_WG2AR5_SPM_Approved.pdf
- 8 IPCC (2014) "Summary for Policy Makers", Figure 7, op. cit.
- 9 F.N. Tubiello et al. (2014) 'Agriculture, Forestry and Other Land Use Emissions by Sources and Removals by Sinks: 1990 – 2011 Analysis', Food and Agriculture Organization, <http://www.fao.org/docrep/019/i3671e/i3671e.pdf>
- 10 M.C. Hansen et al. (2013) 'High-Resolution Global Maps of 21st-Century Forest Cover Change', *Science*, Vol. 342 (6160), pp. 850-853, <http://www.sciencemag.org/content/342/6160/850>
- 11 Oxfam (2013) 'Behind the Brands: Food justice and the 'Big 10' food and beverage companies', Oxford: Oxfam International, <http://www.oxfam.org/en/grow/policy/behind-brands>
- 12 Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>
- 13 *Ibid.*
- 14 *Ibid.* Emissions from agricultural production are estimated based on the "Scope 3" reporting category "Purchased goods and services", which for food and beverage companies are predominantly related to production of agricultural raw materials.
- 15 Based on estimated emissions of an "average" 500-megawatt coal-fired power plant. Greenpeace (2010) 'Coal Power Plants', <http://www.greenpeace.org/international/en/campaigns/climate-change/coal/Coal-Power-Plants/>
- 16 Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>. Based on the average percentage of Scope 3 emissions from "Purchased goods and services", as a percentage of total emissions from each of the Big 10 companies for which data is available.
- 17 Triple Pundit (2014) 'All Eyes on the Forests: The New Norm of Zero-Deforestation', Triple Pundit, <http://www.triplepundit.com/2014/04/zero-deforestation/>
- 18 Analysis of data from OpenSecrets.org, maintained by the Centre for Responsive Politics, <http://www.opensecrets.org/industries/indus.php?ind=G2100>
- 19 The Corporate Climate Communiqués, 'What is The Trillion Tonne Communiqué?', <http://www.climatecommuniques.com/Trillion-Tonne-Communique.aspx>
- 20 Pepsico UK has committed to a target to reduce GHG emissions from its agricultural supply chain by 50 percent in 5 years. Mitigation potential of replicating this commitment across the Big 10 calculated based on company submissions to the Carbon Disclosure Project (CDP) 2013, and assuming 3 percent annual growth in agricultural emissions. <http://www.pepsico.co.uk/purpose/environmental-sustainability/agriculture>
- 21 For more information, see <http://www.oxfam.org/en/grow/> and <http://www.behindthebrands.org/en>
- 22 Oxfam (2013) 'Behind the Brands: Food justice and the 'Big 10' food and beverage companies', Oxfam International, <http://www.oxfam.org/en/grow/policy/behind-brands>

-
- 23 First published in February 2013, the scorecard is regularly updated to reflect progress in company policy, <http://www.behindthebrands.org/en/company-scorecard>
- 24 For example:
- Extreme flooding in Pakistan in 2010 exacerbated hunger for eight million people. Oxfam (2010) "Oxfam blasts third 'talk-fest' on Pakistan as nearly seven million remain without shelter", press release, Oxford: Oxfam International, <http://www.oxfam.org/en/pressroom/pressrelease/2010-11-11/oxfam-blasts-third-talk-fest-pakistan-seven-million-without-shelter>
- Food shortages and price shocks led to mass riots in Haiti in 2008. Oxfam (2009) "Haiti: A Gathering Storm", Oxford: Oxfam international, <http://www.oxfam.org/en/policy/haiti-gathering-storm>
- Droughts in 2011 cost Texan agriculture \$7.6 billion. Texas AgriLife Extension Service (2012) "Updated 2011 Texas agricultural drought losses total \$7.62 billion", AgriLife Today, 21 March, <http://today.agrilife.org/2012/03/21/updated-2011-texas-agricultural-drought-losses-total-7-62-billion/>
- 25 IPCC (2014) "Summary for Policy Makers", Section A1, *op. cit.*
- 26 IPCC (2014) "Chapter 7: Food Security and Food Production Systems", in "Climate Change 2014: Impacts, Adaptation, and Vulnerability", IPCC Working Group II Contribution to AR5, http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap7_FGDall.pdf
- 27 IPCC (2014) "Chapter 7.4.1: Projected Impacts on Cropping Systems", in "Climate Change 2014: Impacts, Adaptation, and Vulnerability", IPCC Working Group II Contribution to AR5, http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap7_FGDall.pdf
- 28 *Ibid.*
- 29 Data from: IPCC (2014) "Table 7-1: Projected Impacts for Crops and Livestock in Global Regions and Sub-Regions under Future Scenarios", in "Climate Change 2014: Impacts, Adaptation, and Vulnerability", IPCC Working Group II Contribution to AR5, http://ipcc-wg2.gov/AR5/images/uploads/WGIIAR5-Chap7_FGDall.pdf
- 30 *Ibid.*
- 31 A. Williams (2013) 'Guatemala Coffee Institute Declares Emergency Over Rust Disease', Bloomberg, <http://www.bloomberg.com/news/2013-02-01/guatemala-coffee-institute-declares-emergency-over-rust-disease.html>
- 32 IPCC (2014) "Chapter 7.4.1: Projected Impacts on Cropping Systems", *op. cit.*
- 33 D. Willenbockel (2011) *op. cit.*
- 34 IPCC (2014) "Chapter 7: Food Security and Food Production Systems", *op. cit.*
- 35 M. Ivanic et al. (2011), as cited in IPCC (2014) "Chapter 7: Food Security and Food Production Systems", *op. cit.*
- 36 IPCC (2014) "Chapter 7: Food Security and Food Production Systems", *op. cit.*
- 37 J. Amado and P. Adams (Acclimatise), H. Coleman (Oxfam America) and R. Schuchard (BSR) (2012) "PREP Value Chain Climate Resilience: A guide to managing climate impacts in companies and communities", Oxfam America, <http://www.oxfamamerica.org/explore/research-publications/prep-value-chain-climate-resilience/>
- 38 David Gardiner & Associates (2011) "Physical Risks from Climate Change: A guide for companies and investors on disclosure and management of climate impacts", Oxfam America and Calvert Investments & Ceres, http://www.calvert.com/NRC/literature/documents/sr_Physical-Risks-from-Climate-Change.pdf
- 39 *Ibid.*
- 40 G. Zuckerman (2010) "Russian Export Ban Raises Global Food Fears," Wall Street Journal, August 5, <http://online.wsj.com/news/articles/SB10001424052748703748904575410740617512592>
- 41 C. Davenport (2014) "Industry Awakens to Threat of Climate Change", New York Times, January 23, http://www.nytimes.com/2014/01/24/science/earth/threat-to-bottom-line-spurs-action-on-climate.html?_r=1
- 42 S. Yeo (2014) "Climate action is 'only way' to grow economy – Unilever CEO", Responding to Climate Change, <http://www.rtcc.org/2014/04/08/climate-action-is-only-way-to-grow-economy-unilever-ceo/>
- 43 M. Reilly and N. Halter (2014) 'General Mills blames winter for lower sales', *Minneapolis/St. Paul Business Journal*, March 19, http://www.bizjournals.com/twincities/morning_roundup/2014/03/general-mills-blames-winter-for-lower-sales.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+bizj_twincities+%28Minneapolis+%2F+St.+Paul+Business+Journal%29
- 44 Projected price increases were generated by translating the previously estimated impacts of climate change by the year 2030 on rice, corn and wheat prices into impacts on the prices of selected consumer food products that contain those grains. Oxfam used historical grain and consumer product prices, product ingredient lists and nutrition labels, and historical examples of how rising commodity prices affect retail prices to build a model that estimates the potential increases in retail prices that will result from climate change.
- 45 *Ibid.*

-
- 46 Carbon Disclosure Project (2013) "Reducing Risk And Driving Business Value: CDP Supply Chain Report 2012-13", Carbon Disclosure Project, <https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report-2013.pdf>
- 47 Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>
- 48 Kellogg's submission to Carbon Disclosure Project 2013, <https://www.cdp.net/en-US/Results/Pages/responses.aspx>. The Behind the Brands climate change scorecard (2014) shows that all but General Mills and Mondelez recognize climate change impacts on the company and on communities, and all Big 10 companies recognize the need to reduce emissions from their agricultural supply chain. <http://www.behindthebrands.org/en/company-scorecard>
- 49 This estimate is based on the following components: global emissions from agricultural production – 10-12% of global emissions (IPCC AR5 WGIII, 2014); emissions from land use change attributed to agriculture, assuming agriculture accounts for 75% of deforestation – 8.25% of global emissions (IPCC AR5 WGIII, 2014; CGIAR CCFAS Big Facts); emissions from energy use in agriculture – 0.87% of global emissions (IPCC AR5 WGIII); emissions from pre- and post-production sources – 5.5% of global emissions (based on Vermeulen et al., 2012); emissions from international transport, assuming 10% of global shipping emissions attributed to shipping food – 0.15% (UNCTAD, 2011; FAOStat; IPCC AR5 WGIII).
- 50 Emissions from transport account for 14 percent of the global total. IPCC (2014) "Summary for Policy Makers", Section 2, *op. cit.*
- 51 IPCC (2014) "Summary for Policy Makers", Section 7, *op. cit.*
- 52 F.N. Tubiello et al. (2014) 'Agriculture, Forestry and Other Land Use Emissions by Sources and Removals by Sinks: 1990 – 2011 Analysis', Food and Agriculture Organization, <http://www.fao.org/docrep/019/i3671e/i3671e.pdf>
- 53 M.C. Hansen et al. (2013) 'High-Resolution Global Maps of 21st-Century Forest Cover Change', *Science*, Vol. 342 (6160), pp. 850-853, <http://www.sciencemag.org/content/342/6160/850>
- 54 Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>; and Climate Analysis Indicators Tool (CAIT 2.0), World Resource Institute, <http://cait2.wri.org/wri>
- 55 Kellogg's submission to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>
- 56 Mars, 'Climate Change', <http://www.mars.com/global/about-mars/mars-pia/our-approach-to-business/defining-our-approach/climate-change.aspx>
- 57 General Mills did an assessment that was conducted in 2012. The Trucost findings were not reported in their CDP 2012 or 2013 investor reports. An update of that analysis was not provided in their 2014 Global Responsibility Report, indicating that this is not an analysis that they are conducting on an annual basis. In addition, the amount of emissions were not disclosed, just the percentages.
- 58 General Mills (2013) 'Global Responsibility 2013', http://www.generalmills.com/~media/Files/CSR/2013_global_respon_report.ashx
- 59 Based on the average percentage of Scope 3 emissions from "Purchased goods and services" as a percentage of total emissions from each of the Big 10 companies for which data are available.
- 60 I.e. greater than the entire sector's Scope 1 and 2 emissions among the biggest 500 companies from IT, industrials, healthcare, financials, telecommunications, consumer staples and consumer discretionary. The implication being that if the Scope 1 and 2 emissions from these sectors matter in efforts to fight climate change, then so must the emissions from agricultural production of the Big 10 food and beverage companies.
- 61 Based on estimated emissions of an "average" 500-megawatt coal-fired power plant. Greenpeace (2010) 'Coal Power Plants', <http://www.greenpeace.org/international/en/campaigns/climate-change/coal/Coal-Power-Plants/>
- 62 Based on the EPA's estimated incremental emissions from Keystone XL of 1.3-27.4 MTCO₂e per year. US Department of State (2014) 'Chapter 4: Environmental Consequences', in 'Final Supplemental Environmental Impact Statement for the Keystone XL Project', <http://keystonepipeline-xl.state.gov/documents/organization/221190.pdf>
- 63 Oxfam (2014) 'Building a New Agricultural Future: Supporting agro-ecology for people and planet' Oxfam International, <http://www.oxfam.org/en/grow/policy/building-new-agricultural-future>
- 64 Approximately 3 Gt CO₂e (gigatonnes of carbon dioxide equivalents) per year by 2030 could be mitigated through changes in diet and reductions in food waste compared to a business-as-usual scenario; and approximately 2 Gt CO₂e per year from supply-side measures that are beneficial to producers and to yields (not including potential from carbon sequestration in soils).
- A. Dickie et al. (2014) 'Strategies for Mitigating Climate Change in Agriculture: Recommendations for Philanthropy', Climate Focus and California Environmental Associates, http://www.climateandlandusealliance.org/uploads/PDFs/Strategies_for_Mitigating_Climate_Change_in_Agriculture_Full_Report.pdf
- 65 Oxfam (2013) *op. cit.*

-
- 66 Oxfam (2014) 'Race to the Top: One year of looking Behind the Brands', Oxfam International, http://www.oxfam.org/sites/www.oxfam.org/files/behind_the_brands_year_one_update_media_briefing_0.pdf
- 67 Oxfam Behind the Brands, Company Performance Scorecard, <http://www.behindthebrands.org/en-us/issues/climate>
- 68 Oxfam Behind the Brands, 'Kellogg's', <http://www.behindthebrands.org/en-us/brands/kelloggs/cornflakes>
- 69 Oxfam Behind the Brands, Sustainability Scorecard, <http://www.behindthebrands.org/en-us/issues/climate>; and Carbon Disclosure Project, <https://www.cdp.net/sites/2013/56/7156/Investor%20CDP%202013/Pages/DisclosureView.aspx>
- 70 Climate Counts and Center for Sustainable Organizations (2013) 'Assessing Corporate Emissions Performance Through the Lens of Climate Science', Climate Counts, <http://carbonscore.climatecounts.org/>
- 71 Union of Concerned Scientists (2014) 'Palm Oil Scorecard', http://www.ucsusa.org/global_warming/solutions/stop-deforestation/palm-oil-scorecard.html; World Wildlife Fund (2013) '2013 Palm Oil Buyers Scorecard', http://wwf.panda.org/what_we_do/footprint/agriculture/palm_oil/solutions/responsible_purchasing/palm_oil_buyers_scorecard_2013/
- 72 Carbon Disclosure Project, <https://www.cdp.net/en-US/Results/Pages/responses.aspx>
- 73 Carbon Disclosure Project, Investor CDP Information Request General Mills Inc., 2013.
- 74 Mars, 'Sustainable in a Generation', <http://www.mars.com/global/about-mars/mars-pia/our-operations/sustainable-in-a-generation.aspx>
- 75 Climate Counts and Center for Sustainable Organizations (2013) *op. cit.*
- 76 Coca-Cola Enterprises, 'Energy and Climate Change', <http://www.cokecce.com/corporate-responsibility-sustainability/energy-and-climate-change>
- 77 The ratings in Figure 4 are based on the following sources and assumptions:
- Oxfam Behind the Brands Scorecard, Climate Change indicator 1.2. "Does the company recognize the need to reduce Scope 3 agricultural emissions (purchased goods and services)?"
- Carbon Disclosure Project reporting. "Does the company report and disclose Scope 3 emissions associated with purchased goods and services, including agricultural emissions in its CDP report?"
- While The Coca-Cola Company and Unilever get full credit for scorecard indicator CC3.1.2, due to the nature of our scoring system, there is no guarantee that a lifecycle emissions reductions target will deliver absolute emissions reductions in agriculture. The companies therefore receive a partial score for the purposes of this table.
- Oxfam Behind the Brands Scorecard, Climate Change indicator 3.1.2. "Has the company expressed a target for reduction of GHG emissions associated with agriculture (purchased goods and services) or a life-cycle emissions reduction commitment that includes agriculture?"
- Oxfam Behind the Brands Scorecard, Transparency indicators 3.2.1-6, on disclosing names of suppliers for palm, soy and sugar, commodities associated with deforestation, as well as key commodities such as wheat and maize that use high levels of fertilizers and generate other harmful emissions.
- The requirement for suppliers to set clear emissions reductions targets includes agricultural emissions.
- 78 Agricultural expansion accounts for approximately 75 percent% of global deforestation.
- 79 Oxfam analysis of IPCC (2014); Vermeulen et al. (2012); UNCTAD (2011); FAOStat.
- 80 N. Sizer, M. Hansen, R. Moore (2013) 'New High-Resolution Forest Maps Reveal World Loses 50 Soccer Fields of Trees Per Minute', World Resource Institute, <http://www.wri.org/blog/new-high-resolution-forest-maps-reveal-world-loses-50-soccer-fields-trees-minute>
- 81 Climate Change, Agriculture and Food Security Programme, 'Food Emissions', <http://ccafs.cgiar.org/bigfacts2014/#theme=food-emissions>
- 82 Oxfam (2013) 'Sugar Rush: Land rights and the supply chains of the biggest food and beverage companies', Oxfam International, <http://www.oxfam.org/en/grow/policy/sugar-rush>
- 83 M. Colchester and S. Chao (2013) 'Conflict or Consent? The oil palm sector at a crossroads', Forest Peoples Programme, Sawit Watch and TUK Indonesia, <http://www.forestpeoples.org/conflictorsent>
- 84 M. Colchester and N. Jiwan (2006) 'Ghosts on our Own Land: Indonesian Oil Palm Smallholders and the Roundtable on Sustainable Palm Oil', Forest Peoples Programme and Sawit Watch, <http://www.forestpeoples.org/sites/fpp/files/publication/2011/02/ghostsonourownlandtxt06eng.pdf>
- 85 R. Butler (2013) 'Malaysia has the world's highest deforestation rate, reveals Google forest map', mongabay.com, <http://news.mongabay.com/2013/1115-worlds-highest-deforestation-rate.html>

-
- 86 T. Stecker (2014) 'Stopping Deforestation Makes Business Sense, Says Unilever CEO', *Climate Wire*, *Scientific American*, <http://www.scientificamerican.com/article/stopping-deforestation-makes-business-sense-says-unilever-ceo/>
- 87 CCAFS, "Food Emissions: Emissions from forestry and land use change," <http://ccafs.cgiar.org/bigfacts2014/#theme=food-emissions&subtheme=indirect-agriculture>, citing Van der Werf et al (2010), and Blaser and Robledo (2007).
- 88 Union of Concerned Scientists (2014) *op. cit.*
- 89 'Palm Oil Production by Country', <http://www.indexmundi.com/agriculture/?commodity=palm-oil&graph=production>
- 90 E.B. Skinner (2013) 'Indonesia's Palm Oil Industry Rife With Human-Rights Abuses', *Bloomberg Businessweek*, Global Economics, www.businessweek.com/articles/2013-07-18/indonesias-palm-oil-industry-rife-with-human-rights-abuses
- 91 Panjiva, 'US imports data base from 1 January 2012 to 9 April 2014', www.panjiva.com/, viewed on 9 April 2014.
- Import Genius, 'US imports data base from 7 April 2013 to 7 April 2014', <http://www.importgenius.com/>, viewed on 7 April 2014.
- PT Adei Plantation & Industry, KL-Kepong Plantation Holdings and KL-Kepong Edible Oils all belong to the plantation segment of KLK that is in charge of cultivation and processing of palm and rubber products and refining of palm products.
- Kuala Lumpur Kepong (2013) 'Annual Report 2013', Kuala Lumpur Kepong, http://www.klk.com.my/ar/klk_ar2013.pdf
- 92 This method of slash and burn is favoured because it is considered cheap and fast. However, due to the country's vast peatland forest areas, slash-and-burn clearing often results in massive fires because peat fires spread easily and are very hard to put out. Riau province has Indonesia's largest peatland, at about 2 million hectares. F. E. Satriastanti (2014) 'Fires create a hazy future for Indonesia's carbon emissions targets', Thomson Reuters Foundation, <http://www.trust.org/item/20140209225919-vy5mk/>
- 93 Allegations of illegal slash-and-burn clearing have also surfaced against local farmers and multinational corporations operating in the province. S. Martin (2013) 'Indigenous Peoples in Indonesia Scapegoats for Forest Fires', First Peoples Worldwide, <http://firstpeoples.org/wp/tag/palm-oil/>
- 94 R. Harahap (2014) 'Activists demand Malaysia apologizes for Riau fires', *The Jakarta Post*, <http://www.thejakartapost.com/news/2014/02/11/activists-demand-malaysia-apologizes-riau-fires.html>
- 95 Letter KLK sent to Oxfam 9 May 2014.
- 96 A. Wibowo (2013) 'Greenhouse Gasses Assessment From Forest Fires: Indonesia Case Study. Preliminary Assessment Report', Dewan Nasional Perubahan Iklim (DNPI)/National Council on Climate Change, <http://www.redd-indonesia.org/publikasi/daftar-publikasi/12566-greenhouse-gasses-assessment-from-forest-fires-indonesia-case-study-preliminary-assessment-report>
- 97 US EPA, 'Greenhouse Gas Equivalencies Calculator', <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>;
- A. Chachkevitch (2012) 'Chicago unveils new vehicle stickers', *Chicago Tribune*, http://articles.chicagotribune.com/2012-02-03/news/ct-talk-chicago-city-stickers-0203-20120203_1_stickers-kristine-williams-mayor-rahm-emanuel;
- Department of Motor Vehicles, 'Estimated vehicles registered by county', http://apps.dmv.ca.gov/about/profile/est_fees_pd_by_county.pdf;
- Department of Motor Vehicles, 'NYS Vehicle Registrations on File - 2013', <http://dmv.ny.gov/forms/2013reginforce.pdf>
- 98 D. Simorangkir (2002) 'A Review of Legal, Regulatory and Institutional Aspects of Forest and Land Fires in Indonesia', Project FireFight South East Asia, http://cmsdata.iucn.org/downloads/ff_legal_indonesia.pdf
- 99 Oxfam interviews from 25 March 2014 to 26 March 2014
- 100 *Ibid.*
- 101 Letter KLK sent to Oxfam 9 May 2014.
- 102 *Ibid.*
- 103 *Ibid.*
- 104 *Ibid.*
- 105 As compared to 2009 production. J. Sayer, J. Ghazoul, P. Nelson and A.K. Boedhihartono (2012) 'Oil palm expansion transforms tropical landscapes and livelihoods', *Global Food Security* 1(2) 114–119.

-
- 106 Complaint to the RSPO, http://www.forestpeoples.org/sites/fpp/files/news/2013/10/Community%20Complain_LiberiaGrandBassaCounty_Oct2013.pdf
- 107 Equatorial Palm Oil, <http://www.epoil.co.uk/uploads/announcement-operationalupdateandboardchanges.pdf>
- 108 Equatorial Palm Oil, 'About Us', <http://www.epoil.co.uk/aboutus.aspx>
- 109 World Wildlife Fund (2013) *op. cit.*
- 110 World Wildlife Fund, 'Palm Oil', http://wwf.panda.org/what_we_do/footprint/agriculture/palm_oil/
- 111 Oxfam analysis based on Behind the Brands scorecard data, <http://www.oxfam.org/en/grow/policy/behind-brands>.
- 112 World Wildlife Fund (2011) '2011 WWF Palm Oil Buyers' Scorecard', http://wwf.panda.org/about_our_earth/all_publications/?203742/WWF-Palm-Oil-Buyers-Scorecard-2011; and World Wildlife Fund (2013) *op. cit.*
- 113 Roundtable on Sustainable Palm Oil, 'Market Data - As at 24th Feb 2014', http://www.rspo.org/en/Market_Data_-_As_at_24th_Feb_2014
- 114 Oxfam Behind the Brands scorecard, <http://www.oxfam.org/en/grow/policy/behind-brands>
- 115 Unilever, 'Our Targets: Sustainable Palm Oil', <http://www.unilever.com/sustainable-living-2014/reducing-environmental-impact/sustainable-sourcing/sustainable-palm-oil/our-targets/>
- Note: to achieve this target, Unilever used the GreenPalm certification system, which enables RSPO-certified palm oil producers to register a quantity of their output with GreenPalm. Growers are awarded a GreenPalm certificate for each tonne of palm oil which has been sustainably produced and can sell the certificates via the GreenPalm trading system.
- 116 Union of Concerned Scientists (2014) 'Palm Oil Scorecard: Company Profiles', http://www.ucsusa.org/global_warming/solutions/stop-deforestation/palm-oil-scorecard-company-profiles.html
- 117 World Wildlife Fund (2013) *op. cit.*
- 118 These policies entail the sourcing of 100 percent RSPO-certified palm oil by the end of 2014, and 100 percent traceable sustainable palm oil by the end of 2015, including 3rd party suppliers, and include no expansion on peatlands and high-conservation value areas. Unilever and Nestle have more robust implementation plans, but their commitments require 100 percent traceable sustainable palm oil by deadlines further in the future, respectively 2020 and 2018
- 119 M. Colchester, N. Jiwon, E. Kleden (2014) 'Independent Review of the Social Impacts of Golden Agri Resources' Forest Conservation Policy in Kapuas Hulu District, West Kalimantan', Forest Peoples Programme and TUK Indonesia, <http://www.forestpeoples.org/topics/palm-oil-rspo/publication/2014/independent-review-social-impacts-golden-agri-resources-forest>; E. Reyes (2014) 'Golden Agri, APRIL under fresh scrutiny for unsustainable practices', Eco-Business, <http://www.eco-business.com/news/golden-agri-april-under-fresh-scrutiny-unsustainable-practices/>
- 120 J. Sayer, J. Ghazoul, P. Nelson and A.K. Boedhihartono (2012) 'Oil palm expansion transforms tropical landscapes and livelihoods', *Global Food Security* 1(2) 114–119.
- 121 H. Mirza, W. Speller, G. Dixie and Z. Goodman (2014) 'The Practice of Responsible Investment Principles in Larger Scale Agricultural Investments: Implications for Corporate Performance and Impacts on Local Communities. Agriculture and Environmental Services Discussion Paper, World Bank, <http://documents.worldbank.org/curated/en/2014/04/19437781/practice-responsible-investment-principles-larger-scale-agricultural-investments-implications-corporate-performance-impact-local-communities>
- 122 European Commission (2013) 'The Impact of EU Consumption on Deforestation: Comprehensive Analysis of the impact of EU consumption on deforestation', <http://ec.europa.eu/environment/forests/pdf/1.%20Report%20analysis%20of%20impact.pdf>
- 123 General Mills does have a no deforestation policy for fiber packaging, but their palm oil policy does not extend to other commodities such as sugar cane, maize or soy. http://www.generalmills.com/~media/Files/CSR/2014_global_respon_report.ashx
- 124 J. Confino (2011) 'Christiana Figueres: "lobbyists for fuels of yesterday have a louder voice"', *the Guardian*, <http://www.theguardian.com/sustainable-business/blog/climate-change-low-carbon-global-forum-summary>
- 125 The Corporate Climate Communiqués, 'What is The Trillion Tonne Communiqué?', <http://www.climatecommuniques.com/Trillion-Tonne-Communique.aspx>.
- 126 S. Yeo (2014) *op. cit.*
- 127 The ratings in Figure 6 are based on the following sources and assumptions:
- The Corporate Climate Communiqués, 'What is The Trillion Tonne Communiqué?', *op. cit.*
- Calls on industry associations to take action refer to publicly engaging industry associations in calling for meaningful climate change action.
- 128 Analysis of Big 10 reporting to the Carbon Disclosure Project.

-
- 129 M. Gunther (2014) 'Business lobbying on climate change is "a murmur and not a message"', the Guardian Sustainable Business Blog, <http://www.theguardian.com/sustainable-business/blog/business-lobbying-climate-change-bicep-ikea-mars-ebay>
- 130 Analysis of data from OpenSecrets.org maintained by the Centre for Responsive Politics, <http://www.opensecrets.org/industries/indus.php?ind=G2100>
- 131 *Ibid.*
- 132 <http://www.envirosecurity.org/CCSC/Doyle.pdf>
- 133 The food and beverage industry have been critical advocates for revising the EU's biofuels mandates. See, for example: A. Bowman (2013) 'Unilever and Nestlé join aid charities to call for biofuel curbs', *Financial Times*, <http://www.ft.com/cms/s/0/2023d3e6-ceae-11e2-ae25-00144feab7de.html>; Oxfam (2013) 'Oxfam reaction to EU biofuels debate by Energy Ministers', press release, Oxfam, <http://www.oxfam.org/en/eu/pressroom/reactions/oxfam-reaction-eu-biofuels-debate-energy-ministers>
- 134 BICEP describes itself as "an advocacy coalition of businesses committed to working with policy makers to pass meaningful energy and climate legislation that will enable a rapid transition to a low-carbon, 21st century economy that will create new jobs and stimulate economic growth while stabilizing our planet's fragile climate."
- 135 G. Goldman and C. Carlson (2014) 'Tricks of the Trade: How companies anonymously influence climate policy through their business and trade associations: Appendix: Research Methods', Union of Concerned Scientists Center for Science and Democracy, <http://www.ucsusa.org/assets/documents/center-for-science-and-democracy/tricks-of-the-trade-methodology.pdf>
- 136 Unilever is a member of the Corporate Advisory and Support Group of Business Europe, <http://www.besnesseurope.eu/Content/Default.asp?pageid=604>
- 137 D.A. Fahrenthold (2009) 'Apple Leaves U.S. Chamber Over Its Climate Position', *The Washington Post*, <http://www.washingtonpost.com/wp-dyn/content/article/2009/10/05/AR2009100502744.html>; S. Goldenberg (2009) 'Apple joins Chamber of Commerce exodus over climate change scepticism', *the Guardian*, <http://www.theguardian.com/environment/2009/oct/06/chamber-commerce-apple-climate-change>
- 138 Company board memberships in Grocery Manufacturers Association compiled from Carbon Disclosure Project reports.
- 139 Unilever submission to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>. The GMA statement on the 2009 Clean Energy and Security Bill supports the submission, <http://www.gmaonline.org/news-events/newsroom/grocery-manufacturers-association-urges-congress-to-balance-climate-and-foo/>
- 140 FoodDrinkEurope (2014) 'FoodDrinkEurope sets out priorities for the Greek Presidency', press release, <http://www.fooddrinkeurope.eu/S=0/news/press-release/fooddrinkeurope-sets-out-priorities-for-the-greek-presidency/>
- 141 Australian Food and Grocery Council (2013) 'Submission to : Carbon tax repeal taskforce', <http://www.environment.gov.au/submissions/carbon-tax-repeal/afgc.pdf>
- 142 J. Confino (2014) 'Nestlé chairman warns against playing God over climate change', the Guardian Sustainable Business Blog, <http://www.theguardian.com/sustainable-business/blog/nestle-chairman-climate-change-controversy-peter-brabeck>
- 143 Coca-Cola submission to Carbon Disclosure Project (2013), <https://www.cdp.net/en-US/Results/Pages/responses.aspx>
- 144 T. King (2014) 'Environmentally-concerned businesses seek alliances', *EuropeanVoice*, <http://www.europeanvoice.com/article/imported/environmentally-concerned-businesses-seek-alliances/80373.aspx>
- 145 The Cool Farm Tool is significant because it addresses soil organic carbon, which accounts for 89 percent of agricultural emissions mitigation potential. Cool Farm Institute, 'Cool Farm Tool', <http://www.coolfarmtool.org/>
- 146 Farmers have specifically worked to achieve this goal by investing in low-carbon fertilizers with suppliers, promoting more stable varieties of potatoes, and encouraging the uptake of low-carbon and energy-efficient machinery. G. Kissinger (2012) 'Corporate social responsibility and supply agreements in the agricultural sector: Decreasing land and climate pressures', CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), http://www.coolfarmtool.org/reports/ccafs-wp-14-csr_ag-web.pdf
- 147 L.L. Ching (2008) 'Sustainable Agriculture: Meeting Food Security Needs, Addressing Climate Change Challenges', Third World Network, <http://www.twinside.org.sg/title2/susagri/susagri055.htm>
- 148 J.A. Burney, S.J. Davis, and D.B. Lobella (2010) 'Greenhouse gas mitigation by agricultural intensification', *PNAS*, <http://www.pnas.org/content/early/2010/06/14/0914216107.abstract>
- 149 UN Global Compact (2013) 'Guide for responsible corporate engagement in climate policy: A Caring for Climate Report', http://www.unglobalcompact.org/docs/issues_doc/Environment/climate/Guide_Responsible_Corporate_Engagement_Climate_Policy.pdf

© Oxfam International May 2014

This paper was written by the Behind the Brands campaign, with contributions from Chris Cook, Matt Grainger, Tim Gore, Irit Tamir and Gabrielle Watson. Oxfam acknowledges the assistance of Heather Coleman, Ben Grossman-Cohen, Jon Mazliah, Sean McEternan, Erinch Sahan, Sandra Seeboldt, Danielle Smith, Roy Vink, Dini Widiastuti, Alison Woodhead and Monique Van Zijl in its production. It is part of a series of papers written to inform public debate on development and humanitarian policy issues.

For further information on the issues raised in this paper please e-mail advocacy@oxfaminternational.org

This publication is copyright but the text may be used free of charge for the purposes of advocacy, campaigning, education, and research, provided that the source is acknowledged in full. The copyright holder requests that all such use be registered with them for impact assessment purposes. For copying in any other circumstances, or for re-use in other publications, or for translation or adaptation, permission must be secured and a fee may be charged. E-mail policyandpractice@oxfam.org.uk.

The information in this publication is correct at the time of going to press.

Published by Oxfam GB for Oxfam International under ISBN 978-1-78077-608-8 in May 2014. Oxfam GB, Oxfam House, John Smith Drive, Cowley, Oxford, OX4 2JY, UK.

OXFAM

Oxfam is an international confederation of 17 organizations networked together in more than 90 countries, as part of a global movement for change, to build a future free from the injustice of poverty:

Oxfam America (www.oxfamamerica.org)
Oxfam Australia (www.oxfam.org.au)
Oxfam-in-Belgium (www.oxfamsol.be)
Oxfam Canada (www.oxfam.ca)
Oxfam France (www.oxfamfrance.org)
Oxfam Germany (www.oxfam.de)
Oxfam GB (www.oxfam.org.uk)
Oxfam Hong Kong (www.oxfam.org.hk)
Oxfam India (www.oxfamindia.org)
Oxfam Intermón (Spain) (www.oxfamintermon.org)
Oxfam Ireland (www.oxfamireland.org)
Oxfam Italy (www.oxfamitalia.org)
Oxfam Japan (www.oxfam.jp)
Oxfam Mexico (www.oxfammexico.org)
Oxfam New Zealand (www.oxfam.org.nz)
Oxfam Novib (Netherlands) (www.oxfamnovib.nl)
Oxfam Québec (www.oxfam.qc.ca)

Please write to any of the agencies for further information, or visit www.oxfam.org.

www.oxfam.org

GROW
FOOD. LIFE. PLANET.

