The forgotten 10%

Climate mitigation in agricultural supply chains

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Contents

Executive Summary

By 2050, the global population is set to reach 9 billion. We will need to produce 70% more food by then in order to meet the demands of this larger, richer and more urban population.[1] The agriculture sector[2] is already the second-biggest emitter of greenhouse gases (GHG) after energy and it needs to urgently decouple emissions from growth.

Companies in the Food, Beverage and Tobacco (FBT) sector need to:

- Develop long-term business resilience by making sure that efforts to adapt to the changing climate, which are vital, go hand-in-hand with measures to limit the effect of climate change by cutting emissions;
- Broaden their focus from cutting emissions in their own operations to cutting emissions in their agricultural supply chains;
- And because this is such a complex problem, collaboration is key. Companies must work with their peers, suppliers and policymakers to reap the greatest rewards from action on climate change.

Agricultural production[3] causes around 10-14% of global GHG emissions.[4] Yet CDP data shows that whilst some are acting on this, a high number of companies in the FBT sector do very little to mitigate the emissions from production in their supply chains. This suggests at least 10% of global GHG emissions are unaccounted for, leaving businesses exposed to substantial risk.

As a result of the industry's exposure to climate risk, investors want FBT companies to show what they are doing to cut emissions and to make themselves more resilient. This report draws on the responses to CDP's investor-backed climate change questionnaire and sector-specific FBT module[5] from 2015 and before, and shows why companies need to disclose their agricultural emissions and the actions they are taking to cut them.

Climate change is expected to reduce yields, disrupt production and make certain regions unfarmable – KPMG estimates that the entire profit of food producers is at risk if the industry does not take steps to mitigate climate change.[6] Agricultural productivity depends more than other sectors on climate-related factors such as temperature, rainfall and extreme weather events. To protect the industry's long-term viability, companies must take a long-term view on resilience, and reduce emissions in their agricultural supply chains at the same time as taking measures to adapt.

There is a long way to go. Out of 251 companies in the FBT sector that were asked to respond to CDP, just 40% did so. And of those, most reported on emissions within their own operations, with less than a quarter of FBT respondents accounting for agricultural emissions from their supply chains. As the majority of emissions in food value chains occur in agricultural production[7], it is clear that businesses need to shift their focus to target agricultural production emissions directly.

The complexity of supply chains and the difficulty of accounting for emissions from these activities are two of the many reasons why some companies are not responding to this challenge. The 2015 UN climate conference is set to see governments sign up to binding targets to cut emissions, and agriculture is likely to face tighter regulation. Companies know this, with almost 90% of FBT companies recognizing business risk from regulation related to climate change.

The business case is compelling. Some companies are cutting emissions, often in ways that save money for farmers and their customers, as well as boosting resource efficiency and ensuring future resource availability. In fact, **over a third of FBT companies report lower costs as a result of carrying out agricultural management practices[8] with climate change benefit, either in their own farm or with suppliers.** Cutting supply chain emissions can also enhance a company's reputation. With many farm workers among the world's poorest people and consumers increasingly aware of the environmental and social issues involved in farming, companies can cut financial costs and enhance their reputations at the same time.

Change is needed throughout the value chain, so companies will need to collaborate with others in the sector to succeed. This will increase the impact of efforts to cut emissions, enable knowledge-sharing and lead to faster development of new technologies.

More than 75% of FBT companies already engage with their suppliers, so existing relationships can be built on relatively easily. CDP data show that companies engaging with one or more of their suppliers, consumers or other partners are more than twice as likely to see a financial return from investments in cutting emissions as those that don't.[9]

With agricultural emissions responsible for 10-14% of global GHG emissions, the time to act is now.

1 https://www.populationinstitute.org/resources/populationonline/issue/1/8/
2 This includes associated land use and land use change
3 This excludes land use and land use change emissions
4 IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
5 To drive change where it is needed the most, CDP seeks to increase and tailor disclosure from companies in high impact sectors to gather insight into their environmental performance, allowing these companies to disclose information on the issues that are most relevant to them. A greater sector focus also produces more relevant data for investors. This module focuses on the Food, Beverage and Tobacco sectors.
6 KPMG (2012). Expect the Unexpected: building business value in a changing world.
7 http://www.nature.com/news/one-third-of-our-greenhouse-gas-emissions-come-from-agriculture-1.11708
8 Agricultural management is a term used to describe the application of scientific research at the farm level in the daily actions and planning of farmers.
9 https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report-2014.pdf p.20

Our long-term strategy is evolving to focus more broadly across our supply chain, complementing mitigation efforts with adaptation (business resilience for the supply chain), and capturing emerging market opportunities.

The Coca-Cola Company

Investor interest in FBT companies

Investors are increasingly interested in climate change and the food value chain because of the large proportion of emissions that the sector produces and the associated financial risk of inaction. Recent shareholder resolutions calling on some of the biggest FBT companies – including General Mills, Wendy's Company and Archer Daniels Midland (ADM) – to show what they are doing to cut emissions in agriculture have had considerable impact.[10] [11]

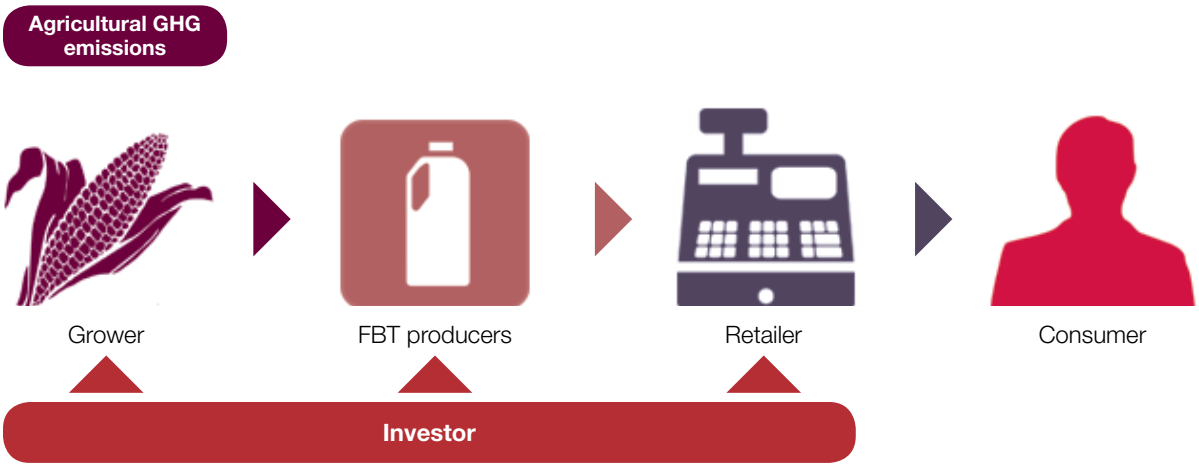
In response to this heightened shareholder interest, CDP is encouraging the largest FBT companies to disclose their agricultural emissions and how they are working to reduce them. CDP is a not-for-profit that runs the global disclosure system that allows investors and purchasers to see how companies manage their environmental impacts. Our data enables businesses to act on opportunities and risks, and investors and purchasers to engage with companies to improve environmental performance.

The FBT companies targeted by CDP are the largest by market capitalization in several key markets. This report focuses on 97 companies that responded to CDP in 2015 and all percentages in the report are based on this number, whilst also drawing from 2014 data.[12] The largest proportion of disclosing companies are from the United States and Canada, 33%, and Europe, 32%. There were 10 or fewer responses from the following countries and regions: Japan, Latin America, South Africa and Asia (ex-Japan).

The sample includes producers of packaged food, alcoholic and soft beverages and tobacco products, and a small number of producers of agricultural products. Food traders and restaurants are not included and by "agriculture" we mean the production of crops and livestock.[13]

This report does not cover emissions from land use and land use change or fresh water use even though these issues are a vital part of the agricultural system and highly relevant for the sector's ability to limit, and adapt to, climate change.[14] FBT companies should consider these issues and include them in climate change mitigation and adaption strategies. However, they were beyond the scope of this report.

Figure 1: The FBT value chain: FBT companies are food, beverage and tobacco producers, with a small number also being growers. This shows the pathway of produce from the farm to the consumer.[15]



10 http://politicsofpoverty.oxfamamerica.org/2014/09/investors-companies-going-green-good-business/
11 http://www.ceres.org/investor-network/resolutions/wendys-adopt-and-implement-a-sustainable-agriculture-policy
12 Companies can report this information through CDP's climate change questionnaire, including the FBT module. This report draws on the responses of FBT companies to CDP's climate change questionnaire and FBT module from 2015, 2014 and, where appropriate, earlier. As of July 5 2015, 97 FBT companies responded to CDP's climate change questionnaire.
13 http://www.fao.org/resources/infographics/infographics-details/en/c/218650/
14 http://faostat.fao.org/site/690/default.aspx; http://www.tyndall.ac.uk/climate-change-land-use-change-and-agriculture-integrated-assessment-using-cias; http://www.oecd.org/environment/wateruseinagriculture.htm; http://pacinst.org/issues/water-food-and-agriculture/
15 https://www.cdp.net/CDPResults/CDP-2011-Agriculture-Report.pd

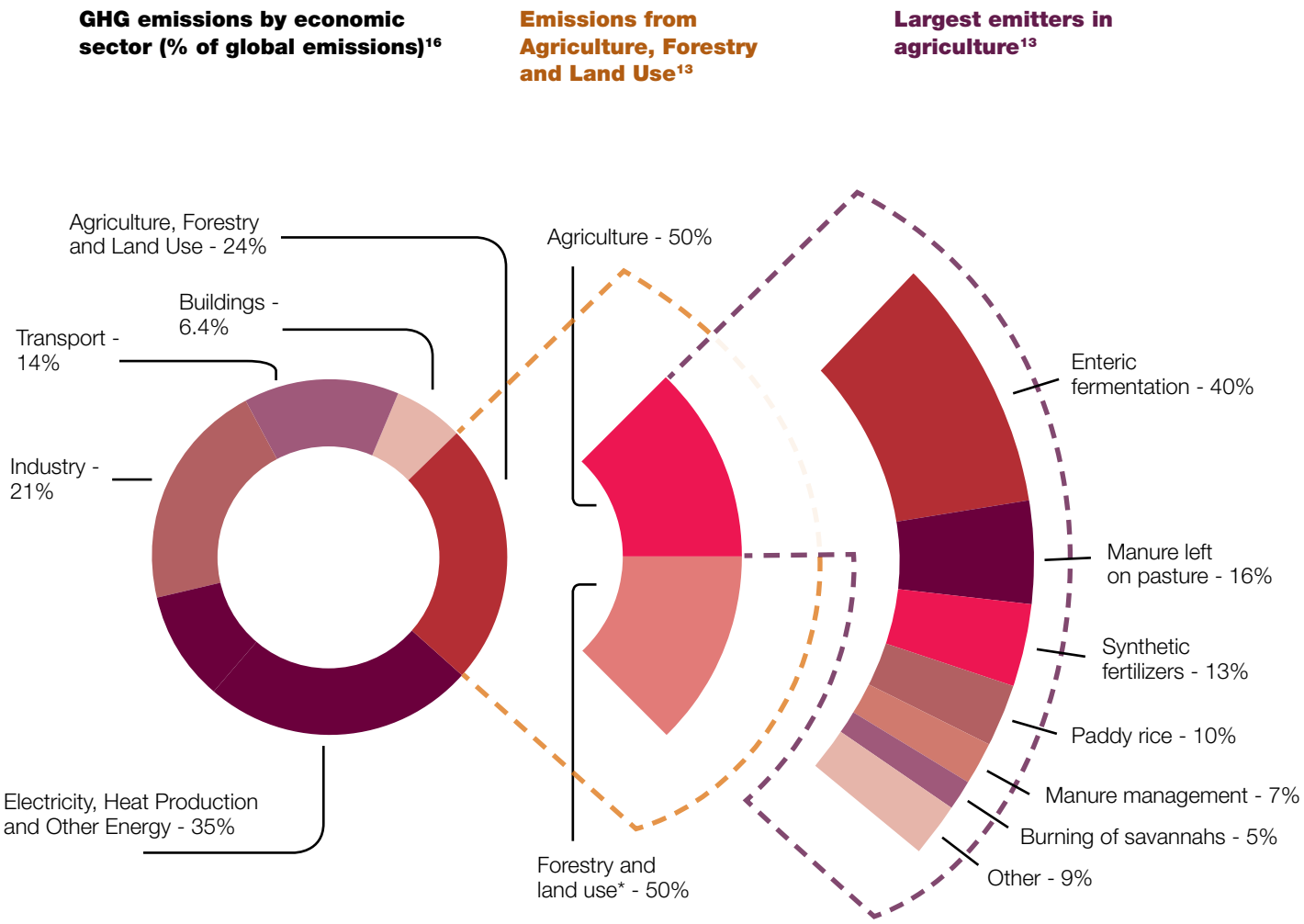
The financial risks and opportunities that the impacts of climate change impose on the Food, Beverage, and Tobacco industries are considerable and require companies to take comprehensive steps to be well positioned for future growth. Those that work to mitigate emissions and improve resource efficiency throughout their agricultural supply chains will enhance the resilience of their business now and in the future. By disclosing through CDP, companies communicate to investors that they recognize these risks as material and are preparing for a changing business environment.

Bruce M. Kahn, Ph.D.
Portfolio Manager
Sustainable Insight Capital Management

Agricultural emissions in context

The Intergovernmental Panel on Climate Change (IPCC) estimates that the agricultural sector (including land use change) is second only to the energy sector in terms of its global greenhouse gas (GHG) emissions. Agricultural emissions (from production of crops and livestock alone) amounted to more than 5.3bn metric tons of CO_2-equivalent in 2011, 10-14% of global GHG emissions, compared to 6.7bn metric tons from transport.[16]

Figure 2: The largest emitters in agriculture within the global context.[13 16]



*Forestry and land use comprises: forest conversion (38%), peat degradation (11%), biomass fires (1%)

16 IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

We need to grow 70% more food by 2050[18] to meet the demand from expected population increase and a newly-prosperous, urban middle class demanding a more affluent diet, in particular more meat products.[19]

If nothing changes, this higher level of food production will raise agricultural GHG emissions, leading to higher temperatures, water stress and higher levels of atmospheric ozone, which reduces agricultural productivity. Higher ozone levels are very likely already causing wheat and soybean crop yields to fall, by an estimated 10%.[20]

Climate change is expected to increase the frequency and severity of extreme weather events, with huge impacts on agricultural production and global agricultural supply chains.[21] KPMG estimates that the entire profit of food producers is at risk if the industry does not take steps to mitigate climate change.[22] These changes are already hitting businesses and communities hard. Meanwhile, as the Arab Spring uprisings showed, disrupted food supply chains can cause political and social instability.[23] To maintain agricultural production without contributing to climate change, GHG emissions must fall at the same time that agricultural production increases. This is possible if the right farming methods are used, for example encouraging soil carbon storage.[24]

Farmers depend on specific climate conditions, including temperature, rainfall, nutrient levels, soil moisture and water availability, to provide security of supply to FBT companies. This makes both industries extremely vulnerable to changes in climate, which are set to become more unpredictable, and it makes it critical that they don't just adapt to climate change but seek to limit it by cutting emissions.[17]

The drought in California has cost the agriculture sector $2.7bn so far. When Cargill Beef idled a slaughterhouse in Plainview, Texas, because of the US-wide drought of 2011-12, the region lost $1.1bn.[21]

In 2015 92% of companies in the sector – including some of the biggest global names such as Coca-Cola, Campbell Soup, The Hershey Company, Kellogg Company, PepsiCo, Nestlé, and Danone – are reporting substantive operational risk from physical climate change impacts such as changes in precipitation and temperature, up from 84% in 2012.[25] Nearly two thirds

A Lloyd's of London report on food system risk says that: "Sudden disruptions to the supply chain could reduce the global food supply and trigger a spike in food prices, leading to substantial knock-on effects for businesses and societies."[17]

of FBT companies report a risk of increased capital or operational costs, and more than half report a risk of reduction or disruption in production capacity as a result of climate change.

Companies taking a truly sustainable long-term approach to climate change focus on mitigation by cutting emissions throughout the value chain, including emissions from agriculture, while taking adaptation measures at the same time. However, many FBT companies use short-term strategies, such as adopting drought-resistant crops, commodities price hedging and sourcing diversification. These measures help the sector to adapt to climate change, but do not limit it by cutting emissions.

Some FBT companies claim that the reason for slow action on agricultural emissions is that it is a complex supply chain issue. But CDP data show that almost a third of those that disclosed also have their own agricultural production operations.

The risks and vulnerabilities highlighted provide huge incentives and opportunities to FBT companies to become more resilient to the physical impacts of climate change on their value chains. They can take a long term view and reduce emissions in their agricultural supply chains and in their own farm activities at the same time as taking measures to adapt, meaning these companies can implement mitigation activities at the farm level more easily.

Food production must increase by an estimated 70% by 2050.[18] This presents a challenge but also an opportunity for FBT companies globally.

17 http://www.lloyds.com/~/media/files/news%20and%20insight/risk%20insight/2015/food%20system%20shock/food%20system%20shock_june%202015.pdf#search='food system risk'
18 https://www.populationinstitute.org/resources/populationonline/issue/1/8/
19 http://www.ifad.org/rpr2011/report/e/rpr2011.pdf
20 http://www.bsr.org/en/our-insights/report-view/climate-change-implications-for-agriculture
21 http://fortune.com/2015/04/09/6-industries-hurt-the-most-by-the-california-drought/; http://bigstory.ap.org/article/feedlots-meatpackers-closing-fewer-us-cows;
22 KPMG (2012). Expect the Unexpected: building business value in a changing world.
23 http://necsi.edu/research/social/food_crises.pdf
24 http://www.fao.org/fileadmin/templates/solaw/files/thematic_reports/TR_04b_web.pdf

The potential financial implications of wide changes in temperature would be significant to Diageo, primarily in its agricultural supply chain. If we were to take no action, we would be faced with an inflexible supply chain unable to respond to shifts in agricultural supply, resulting in potential disruptions to production. The negative financial implications could be in the order of £40 to £50M in increased commodity costs and production disruptions.

Diageo (2014)

State of play: The forgotten 10%

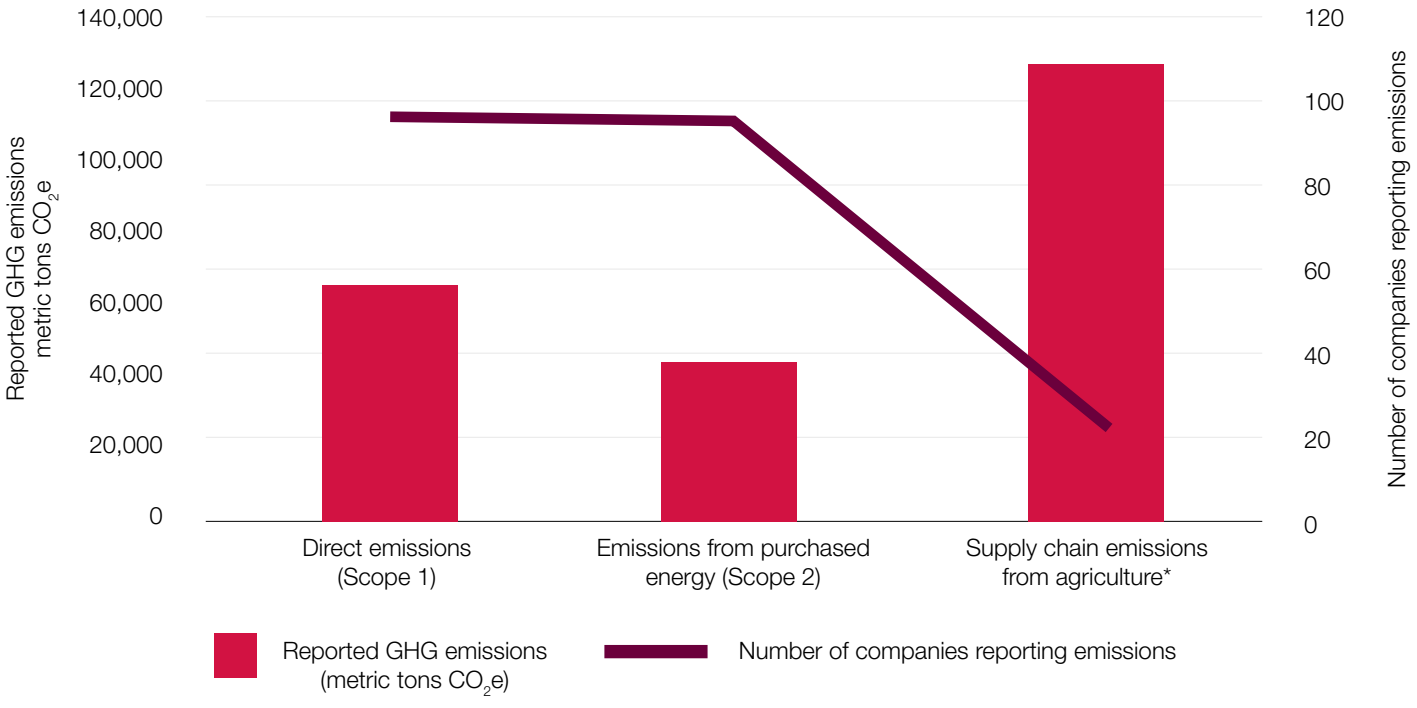
The largest impact of FBT companies on climate change is in agricultural production, with around 86%[26] of food-related man-made GHG emissions arising directly from agricultural activities rather than the rest of the supply chain.

Of the companies that responded through CDP, most are not reporting on their biggest impacts. Nearly all the FBT companies reported on their Scope 1 and Scope 2 emissions.[27] However, less than a quarter of them reported indirect emissions from agricultural production.[28] Given that the IPCC reports agricultural production causes around 10-14% of global GHG emissions,[16] this suggests at least 10% of global GHG emissions are unaccounted for, leaving businesses exposed to substantial risk.

Meanwhile, 82%[29] of the emissions-reducing activities that companies do carry out are focused on cutting emissions mainly in their own operations, rather than the supply chain. This is the case, even though agricultural production from just 22 companies were higher than the combined Scope 1 and 2 emissions reported by 96 companies, as Figure 3 shows.

And there is little sign of this changing. Although 97 FBT companies reported their climate change information through CDP in 2015, 60%[30] of companies targeted have yet to respond. Looking to the future, very few of the targets reported by FBT companies cover their agricultural emissions. This is part of a wider issue – for many FBT companies agricultural emissions are a supply chain issue and most have not yet set targets covering their supply chain. Thirteen companies have no targets at all.

Figure 3: Emissions reported by FBT companies.



*Reported agricultural GHG emissions are in the range of 108,755,112- 125,060,047 metric tons CO_2e based on extrapolations from CDP data.

26 http://www.nature.com/news/one-third-of-our-greenhouse-gas-emissions-come-from-agriculture-1.11708

27 Scope 1, 2 and 3 emissions definition:
- Scope 1: All direct GHG emissions.
- Scope 2: Indirect GHG emissions from buying purchased electricity, heat, steam or cooling.
- Scope 3: Other indirect emissions.

http://www.ghgprotocol.org/standards/corporate-standard

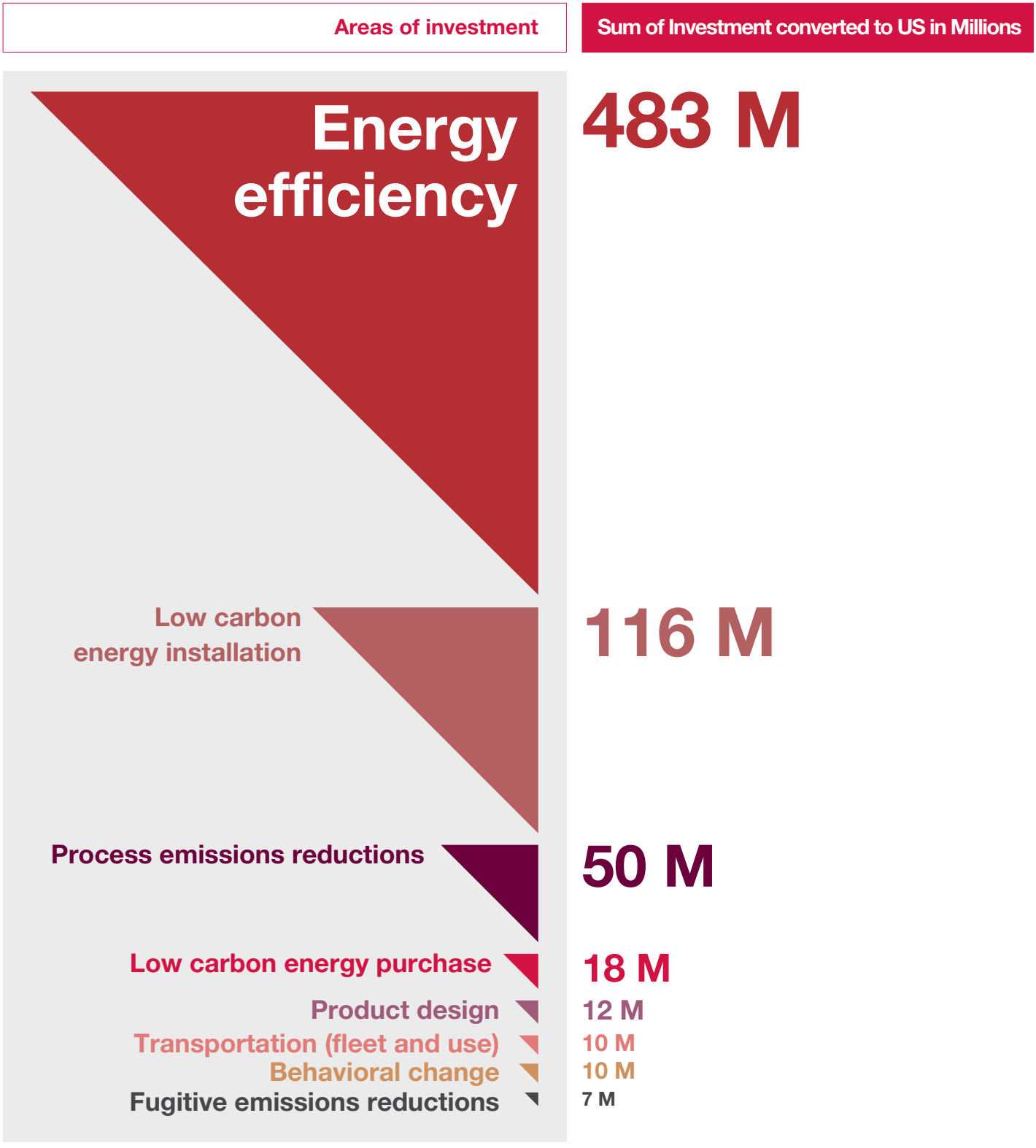
28 Twenty two FBT companies report that they include emissions from agricultural production in their Scope 3 emissions figure for "Purchased goods and services", and provide the proportion of emissions from "Purchased goods and services" attributed to agricultural production in question FBT1.6a.

29 Data based on 2015 data from the climate change questionnaire (496/602)

30 60% based on the total number of FBT companies requested to respond in 2015 but did not do so by 11 August 2015 (151/251).

Figure 4: Top investment areas in emissions reduction activities by FBT companies.

Companies are investing in the following activities, but only a few are investing in agricultural emissions reductions. The majority must shift investment focus to realize the significant opportunities in cutting emissions in this part of their value chain.



Barriers to accounting for and reducing agricultural emissions

There are certainly barriers to accounting for and reducing emissions. CDP investigated them in its report "Unearthed: Agricultural Emissions in the Corporate Supply Chain" (2011).

They include the fact that most FBT companies operate in many different countries and have complex agricultural supply chains.[31] In addition, accounting for emissions in agriculture is challanging, involving modelling processes to assess where emissions are coming from and how to manage them.[32]

And while there is climate change awareness on some individual farms, there is little to no culture of setting emissions reductions targets or accounting for this sort of information amongst farmers.[33] Scaling up existing knowledge and best practice is challenging as the business case is not always obvious to farmers; farming is a high risk activity and farmers will only be willing to run extra risks on behalf of "the environment" if the right incentives are in place.[34]

Signs of change are becoming more and more frequent, with companies overcoming these barriers aided by industry and supplier collaborations.

31 Trienekens, J., Wognum, N., Buelens, A.J.M., Van der Vorst, J. (2012): Transparency in complex dynamic food supply chains. Advanced Engineering Informatics (Impact Factor: 2.07), 26(1):55–65. doi:10.1016/j.aei.2011.07.007
32 https://ccafs.cgiar.org/blog/lower-cost-greenhouse-gas-emission-estimates-agriculture#.VaPVOXnbJet
33 https://www.cdp.net/CDPResults/CDP-2011-Agriculture-Report.pdf
34 http://www.gov.scot/Publications/2012/10/9121/6

Signs of progress

Despite the challenges, there has been some progress in recent years, particularly around disclosure, supplier engagement and industry collaborations. Some FBT companies have reported to CDP over the past two years that they account for their agricultural emissions, engage with suppliers, implement agricultural management practices[35] and identify physical risks from climate change. These are: Coca-Cola HBC AG, Dairy Crest Group, Danone, Kellogg Company, and Nestlé. The industry as a whole is realizing the importance of this also. In 2014, Brazilian companies took the initiative on this globally and worked with the GHG Protocol to publish the GHG Protocol agricultural guidance[36] to encourage suppliers to report emissions.[37]

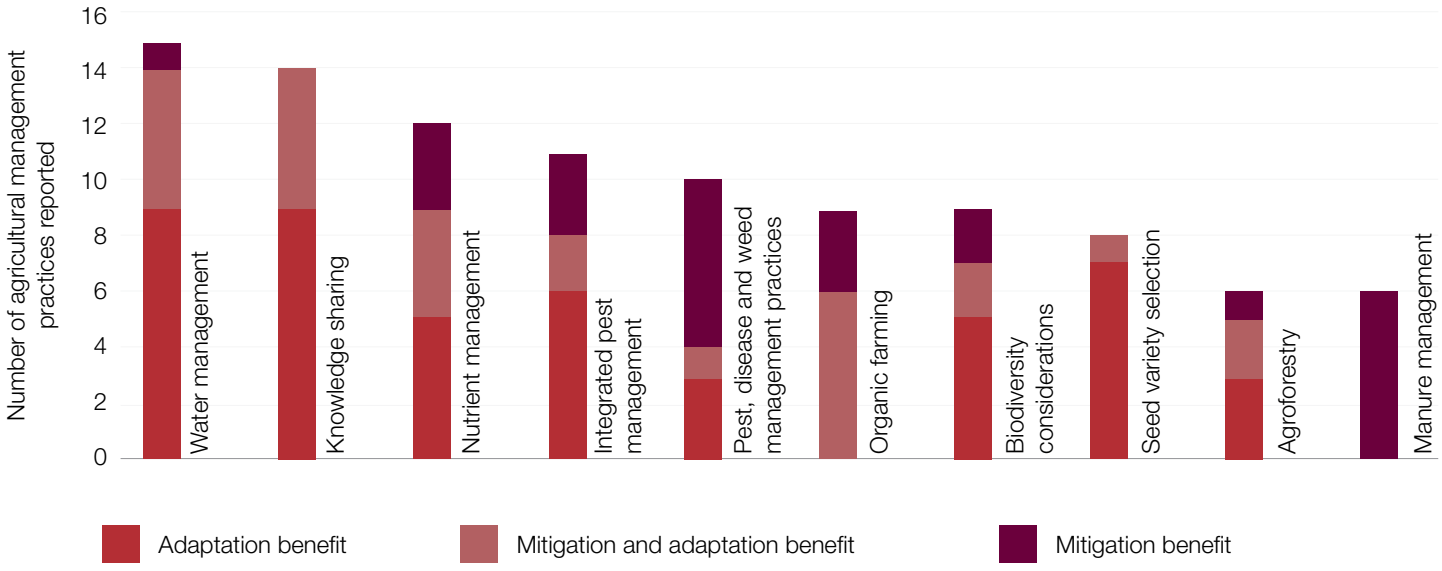
More companies are also reporting supply chain emissions and information on agricultural emissions. Between 2012 and 2015 the number of FBT companies that reported some indirect emissions from purchased goods and services more than doubled, from 20 to 50.[38] The majority of FBT companies reporting through CDP provided some information specific to their own and suppliers' agricultural activities in the FBT module in 2014 and 2015.[39]

Some FBT companies are going beyond just reporting their suppliers' emissions, with increasing numbers engaging with suppliers to plan reduction actions. In 2015, 73 companies reported engaging with suppliers on GHG emissions and climate change strategies, up from 64 companies in 2013. Ten of these companies are engaging with their suppliers through CDP's supply chain program. These are important steps as collaboration is crucial to ensuring long-term resilience.

75%

of FBT companies engage with suppliers on GHG emissions and climate change strategies.

Figure 5: Top 10 reported agricultural management practices and associated climate benefit.

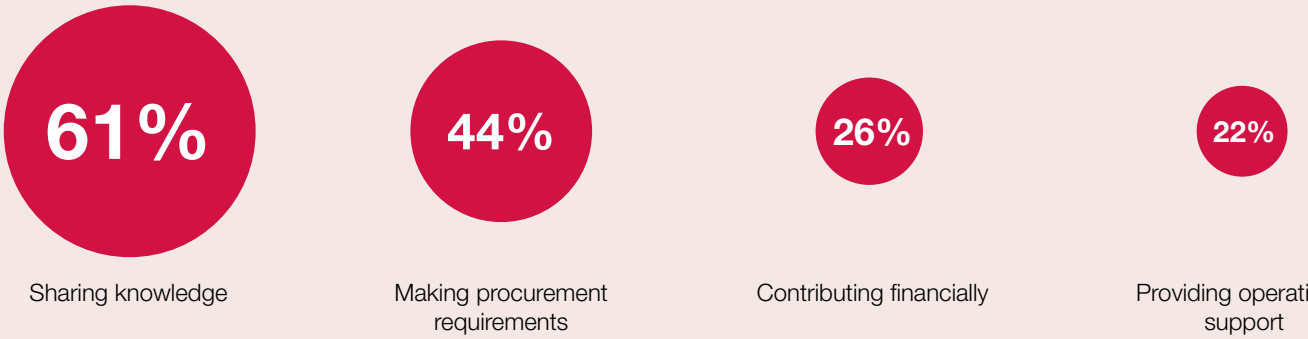


35 Agricultural management is a term used to describe the application of scientific research at the farm level in the daily actions and planning of farmers.
36 http://www.ghgprotocol.org/files/ghgp/GHG%20Protocol%20Agricultural%20Guidance%20(April%2026)_0.pdf
37 http://www.reuters.com/article/2014/05/29/carbon-agriculture-brazil-idUSL6N0OF3GK20140529
38 As explained in the previous section, only 22 companies out of these 50 report that they include emissions from agricultural production in their indirect emissions from purchased goods and services.
39 Data taken from: 71 responses in 2014, and 66 responses in 2015

Furthermore, 40% of FBT companies participate in agricultural management practices that cut emissions, or engage suppliers to adopt them, further encouraging collaboration.

FBT companies are using different approaches to influence suppliers to adopt these agricultural management practices that cut emissions. Research shows that knowledge sharing and financial support are two key motivators to drive behavioral change in farmers[34] so companies should aim to work with their supply chain using these for greatest impact.

Figure 6: How are FBT companies driving agricultural management practices in their supply chains? (% of 100 agricultural management practices that companies are driving in their supply chain.)



SABMiller has developed training programs for barley farmers to enable them to use irrigation and fertilizer application more effectively. As a result, there has been an average reduction of 16% in CO_2 [equivalent] emissions over the past four years.

SABMiller

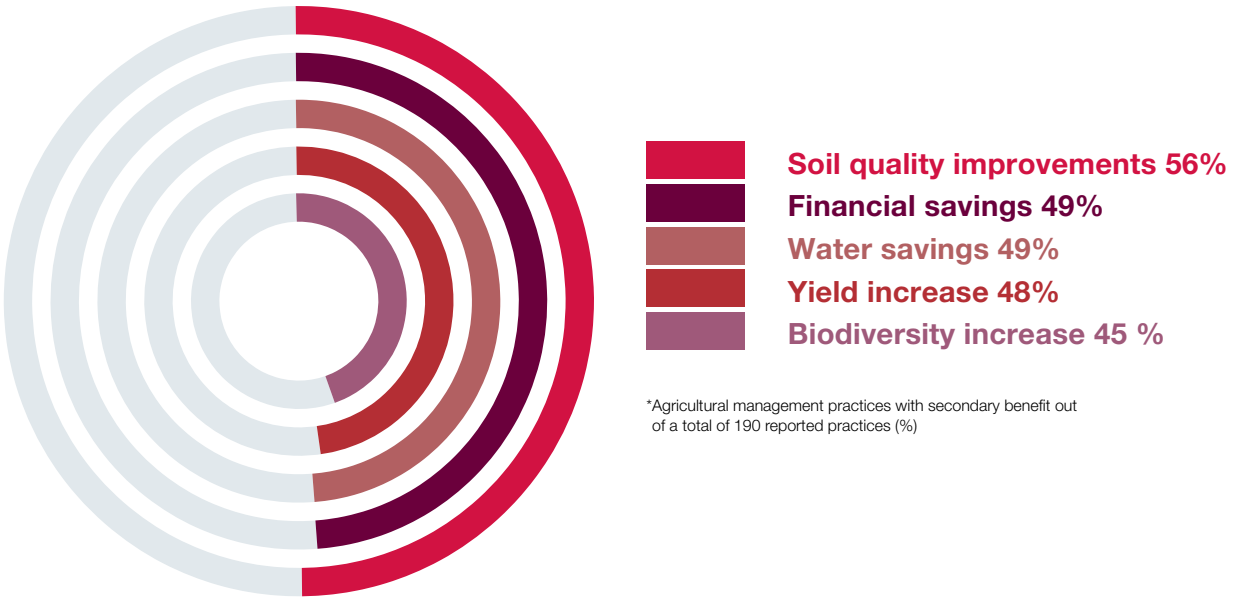
Dairy Crest Group developed a carbon footprint measurement tool for dairy farms and helped farmers to learn how to use it. Farmers now understand this reporting and have the tools available to do so.

Dairy Crest Group

Actions generally do not result in stand-alone benefits either. Companies implementing agricultural management practices, both in supply chain and in their own farm operations, often see benefits to their actions in several areas.

In fact, **83% of the practices reported have two or more benefits, with nearly half bringing financial benefits**[40] in their supply chain and own farm activities. Investments that FBT companies make in working with their agricultural suppliers will therefore have beneficial results for the company.

Figure 7: Agricultural management practices implemented by FBT companies to reduce emissions and/or adapt to climate change frequently had additional benefits.*



*Agricultural management practices with secondary benefit out of a total of 190 reported practices (%)

Molson Coors Brewing Company shares best practice with MillerCoors' wider grower base. From 2011 to 2012, its showcase farm saved 270m gallons of water by improving irrigation techniques, which also cut energy use by half by reducing the need to pump water. Energy costs fell from an average of $50 per acre to $20-$22 per acre.

Molson Coors

40 Data from 190 agricultural management practices reported in own farm and supply chain operations, looking at the following benefits: climate change mitigation and/or adaptation, cost savings, soil quality, water, yield and biodiversity.

Why should FBT companies cut GHG emissions in agriculture?

Brands need to act to ensure their business continuity – and that means cutting agricultural emissions hand in hand with adaptation in order to protect the industry's long-term viability. Keeping ahead of the fast moving regulatory changes and consumer attitudes is key.

Changing regulatory landscape

Even in the short term, there are significant risks, not least the threat of more regulation. Almost 90% of FBT companies recognize business risk from regulation related to climate change generally (since 1997, the number of climate change laws and policies has doubled every five years in 97 countries and the European Union[41]).

The policy landscape concerning agricultural emissions specifically is also changing. A new global climate change deal, due to be agreed in Paris in December 2015, will bring new pressures to bear. With the agriculture sector producing such a high proportion of the world's GHG emissions, it is likely to be targeted for significant climate change-related policy transformation in the future. French Agriculture Minister Stephane Le Foll recently suggested measures combining food security and carbon sequestration in soil, for example.[42]

In the US, the Department of Agriculture (USDA) is bringing in voluntary incentive-based initiatives to cut agricultural GHG emissions. Companies and farms taking advantage of these incentives would save an estimated 120m metric tons CO_2-equivalent per annum, the equivalent of removing 25 million cars from the road.[43]

Meanwhile, FBT companies are growing their operations in BRIC countries, with 42% of companies reporting direct emissions in these countries, which are among the leading emitters of agricultural emissions and therefore most likely to have a need to take action. China's Intended Nationally Determined Contribution (INDC) highlights the role agriculture must play in reducing emissions[44] (a change that will affect multinational companies operating in the country as well as domestic producers). Brazil and the US, in July 2015, agreed to co-operate on sustainable land use, while the EU is evaluating how best to treat agriculture as part of a review into the role of land-based emissions.

But there will also be significant opportunities from adopting climate-friendly practices. "Producers and food companies that embrace more stringent environmental and social standards… should be able to better position themselves in the face of evolving regulation and continue to grow to take advantage of this trend," says McKinsey.[45]

> *We are partnering with the World Business Council for Sustainable Development and other like-minded partners to ensure that the voice of business is well represented in the events leading up to Paris and at the COP21 meeting. We are engaging on the strategic topic of "Agriculture" to ensure that policy makers recognize that PepsiCo and our partners have tools and programs to help reduce impacts while increasing production.*
>
> **PepsiCo**

41 http://www.lse.ac.uk/GranthamInstitute/legislation/2015-global-climate-legislation-study-at-a-glance/
42 http://www.bloomberg.com/news/articles/2015-07-28/france-backs-soil-carbon-plan-ahead-of-climate-summit-le-foll
43 http://content.govdelivery.com/accounts/USDAOC/bulletins/100a234
44 http://www4.unfccc.int/submissions/INDC/Published%20Documents/China/1/China's%20INDC%20-%20on%2030%20June%202015.pdf
45 http://www.mckinsey.com/insights/Food_Agriculture/Pursuing_the_global_opportunity_in_food_and_agribusiness?cid=other-eml-alt-mip-mck-oth-1507

Reputational risk and opportunity

FBT companies are under increasing scrutiny from civil society and consumers because of the environmental and societal issues around food production. Many farm workers are among the world's poorest people who rely on agriculture for their livelihoods but struggle to change how they farm because of their poverty. They are also likely to be the most affected by climate change.[46]

NGOs such as Oxfam, in its Behind the Brands campaign, are focusing on brands' efforts to reduce emissions in their agricultural supply chains, along with other issues. The campaign is having some success – "In summer 2014 we got General Mills and Kellogg to commit to measure, publish and reduce emissions across their entire supply chains to help stop climate change".[47] An increasingly concerned, educated and connected global middle class are likely to demand responsible produce in the future,[31] creating both a risk and an opportunity for FBT companies.

> *Based in part on a media and competitive scan, we identified that climate change mitigation remains a central concern for stakeholders and consumers. Consumers are more likely to take purchasing decisions linked to the environmental impacts of what they buy.*
>
> **Nestlé**

Many FBT companies already report a substantive risk to their business from damage to their reputation or change in consumer behavior. At the same time, there are reputational benefits from efforts to tackle climate change, with an opportunity to increase sales of existing products or develop new products, as the success of companies that capitalize on this shows. In addition, finding new ways to reduce the use of resources such as land, water and energy is not only good for the environment but cuts costs and increases resilience as well.[48]

> *An increasing number of consumers would prefer to buy products which are sustainably sourced or protect the earth's natural resources… Unilever's experience is that brands whose purpose and products respond to these trends, which we call 'Sustainable Living brands', are delivering stronger and faster growth. These brands accounted for half the company's growth in 2014 and grew at twice the rate of the rest of the business.*
>
> **Unilever**

46 http://www.idrc.ca/EN/Resources/Publications/Pages/ArticleDetails.aspx?PublicationID=565
47 http://www.behindthebrands.org/en-gb/company-scorecard?year=2015
48 http://www.fao.org/post-2015-mdg/14-themes/sustainable-agriculture/en/

Collaboration is crucial and beneficial

But companies acting alone can only go so far. Collaboration will be crucial to ensuring long-term resilience and progress for the industry. It will provide scale to increase the impact of emissions-cutting efforts, knowledge-sharing and faster development of new technologies. However for collaboration to succeed, there must be changes across the value chain.

Supply chain collaborations

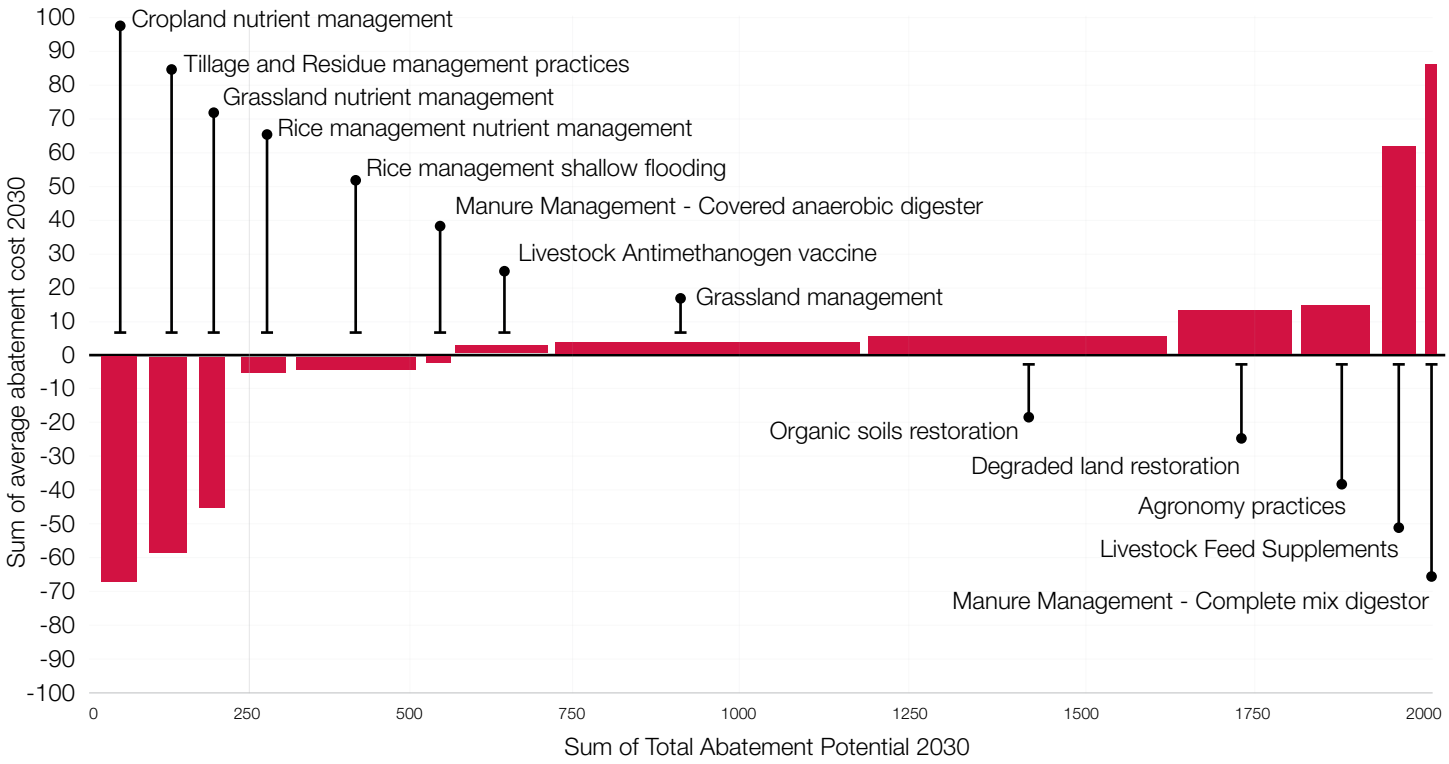
For example, systemic change to the industry can't happen without suppliers being a part of it. More than 75% of FBT companies engage with their suppliers already, so they can develop existing relationships further relatively quickly. Companies need to collaborate with suppliers in part because many of the challenges are local. A "one size fits all" approach will not work everywhere because of local differences in environmental and social factors. Co-operation throughout supply chains is necessary for companies and farmers to exchange knowledge and learn how well certain mitigation or farming techniques work in their supply chains and by how much they can cut emissions.

Food, beverage and tobacco supply chains often overlap, creating an opportunity for several companies to push for change. Data from CDP's supply chain program shows that suppliers asked to make changes by many customers perform better than those asked by one customer. They are also more likely to respond to multiple requests.[49]

In addition, as CDP's 2015 Supply Chain report shows, companies that engage with one or more of their suppliers, consumers, or other partners are more than twice as likely to see a financial return from their emissions reductions investments. They are almost twice as likely to cut emissions as those who do not engage with their value chain.[50]

As McKinsey's abatement curve for agriculture shows, measures including better crop rotations, reduced soil tillage and improved nutrient management can reduce agricultural emissions and save money.

Figure 8: Global GHG abatement Cost curve for the agricultural sector.[51]



49 https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report-2014.pdf, page 7 and 20
50 https://www.cdp.net/CDPResults/CDP-Supply-Chain-Report-2015.pdf, page 11
51 McKinsey & Company, Pathways to a Low-Carbon Economy: Global GHG Abatement Cost Curve v3.0 Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.

Livestock management to reduce methane emissions and grassland management are also comparatively low cost with reasonable GHG emission abatement potential to 2030.[51] In fact, over a third of FBT companies report lower costs as a result of carrying out agricultural management practices with climate change benefit, either in their own farm or with suppliers.

Industry collaborations

Collaboration with industry peers is also critical, with several global initiatives already working on sustainable agriculture, including The Beverage Industry Environmental Roundtable (BIER). As Paul Polman, CEO of Unilever said: "We need partnerships across the industry – ones that probably haven't happened before. If the consumer goods industry does not move to a more sustainable model, most of its pofits will be wiped out in 30 to 50 years, and if you are in food even earlier".[52]

In 2002, Heineken in the Netherlands, the Agrifirm and farmers in Flevoland (Netherlands) examined ways to encourage sustainable agricultural production. From this initiative, the Skylark Foundation was created in 2006, including farmers but also industrial partners... All participants are using the results of Skylark to convince Dutch policy makers to include the principles in Skylark into regulations.

Heineken

As a company dependent on a consistent supply of agricultural raw materials, Kellogg is exposed to both short term risks, such as extreme weather events, and long term risks, such as changing weather patterns… Our long term business strategy to address these risks includes working with industry associations and suppliers, including small holder and women farmers, to promote sustainable practices in agriculture and raw material sourcing.

Kellogg Company

52 http://www.kpmg.com/global/en/issuesandinsights/articlespublications/consumercurrents/pages/first-person-paul-polman.aspx

Recommendations: Shift focus to future-proof businesses

FBT businesses need to move beyond a focus on operational efficiency and energy management, and take a long-term approach to building resilience in partnership with suppliers, industry peers and governments.

Focus on reducing emissions in agricultural supply chains:

As the sector with the second-largest GHG emissions globally, agriculture faces increasingly tight regulatory requirements.

The industry needs to make a systemic shift in focus. The current emphasis that companies place on activities mostly related to energy and operational efficiency within their own operations fails to tackle the area in the FBT value chain with the largest GHG emissions. Only by including agricultural activities, in their own operations or their supply chains, will they address the high risks that climate change poses to FBT brands and play their part in reducing emissions from agriculture.

The sector must account for its agricultural emissions, set ambitious targets to reduce them and include them in the emissions figures reported to stakeholders. This will help companies to understand and tackle the biggest causes of GHG emissions in their FBT supply chains as well as carrying on implementing incremental changes.

Acting to cut emissions will also help to ensure business continuity and safeguard long-term value creation for companies, customers and investors.

Take a long term approach to building business resilience:

By contrast, the risks of inaction are significant for FBT brands, with companies already reporting substantive risks to their operations from physical climate change impacts, increased capital or operational costs, and reduction or disruption in production capacity. Investors and customers want to see that companies are aware of and managing these risks.

Companies should take a long-term view on resilience, and reduce emissions in their agricultural supply chains at the same time as taking measures to adapt. Short-term adaptation strategies do not tackle the core problem of the increasing emissions from agriculture that contribute to climate change and they fail to address broader issues of security of supply.

Collaboration is key:

Work with suppliers: CDP data show that with the right knowledge sharing and financial incentives, farmers can make changes that have large benefits downstream. Farmers can also share knowledge with companies that can be valuable to creating future strategy. Financial incentives for climate mitigation practices in the agricultural supply chain should be used by FBT companies and others in combination with the, sometimes substantial, investment in climate change adaptation.

Work with industry peers: Sector leaders must come together to cut emissions through collective action to stimulate change, create examples of best practice and encourage the entire sector to follow.

Work with policymakers and other stakeholders: At local, national and global level, consider the impact of the changing policy landscape on your business. In order to make changes, FBT companies must collaborate with governments, local authorities, research institutions and others to create incentives for change throughout the value chain.

With agricultural emissions responsible for 10-14% of global GHG emissions, the time to act is now.

We recognize that while we focus on the emissions from our owned operations, GHG emissions in our supply chain constitute a significant part of value chain, particularly in the agricultural supply chain. Longer term, the most important business decision we have made is exploring engagement models that will allow us to co-operatively work with our supply chain to improve environmental performance including reduction in GHG emissions.

Brown-Forman Corporation

Appendix:
FBT companies that responded through CDP in 2015

Organisation	Country	Public
A.G. Barr Plc	United Kingdom	Public
Ajinomoto Co.Inc.	Japan	Public
Altria Group, Inc.	USA	Public
Anheuser Busch InBev	Belgium	Public
Arca Continental, SAB de CV	Mexico	Not public
Archer Daniels Midland	USA	Public
Asahi Group Holdings, Ltd.	Japan	Public
Associated British Foods	United Kingdom	Public
*Barry Callebaut AG	Switzerland	Public
BRF S.A	Brazil	Public
British American Tobacco	United Kingdom	Public
Britvic	United Kingdom	Public
Brown-Forman Corporation	USA	Public
Bunge	USA	Public
C&C GROUP PLC	Ireland	Public
Campbell Soup Company	USA	Public
*Cargill	USA	Public
Carlsberg Breweries A/S	Denmark	Public
Cermaq Group ASA	Norway	Public
Charoen Pokphand Foods PCL	Thailand	Public
China Agri-Industries Holdings Ltd	China	Public
Chocoladefabriken Lindt & Sprüngli AG	Switzerland	Not public
CJ Cheiljedang	South Korea	Not public
Coca-Cola Enterprises, Inc.	USA	Public
Coca-Cola Femsa Sab-Ser l	Mexico	Not public
Coca-Cola HBC AG	Switzerland	Public
COCA-COLA İÇECEK A.Ş.	Turkey	Public
Coca-Cola West Co., Ltd.	Japan	Public
ConAgra Foods, Inc.	USA	Public
Constellation Brands, Inc.	USA	Public
Cranswick	United Kingdom	Public
Dairy Crest Group	United Kingdom	Public
Danone	France	Public
Dean Foods Company	USA	Public
Diageo Plc	United Kingdom	Public
Distell Group Ltd	South Africa	Public
Dr Pepper Snapple Group Inc	USA	Public
Farmer Brothers	USA	Not public
Femsa - Fomento Economico Mexicano	Mexico	Not public
General Mills Inc.	USA	Public
Greencore Group PLC	Ireland	Not public
Grupo Bimbo, S.A.B. de C.V.	Mexico	Public
Grupo Nutresa S.A.	Colombia	Not public
Heineken NV	Netherlands	Public
Hilton Food Group	United Kingdom	Public
Hormel Foods	USA	Public
Illovo Sugar Ltd	South Africa	Public
Imperial Tobacco Group	United Kingdom	Public
*IOI	Malaysia	Not public
*ITC Limited	India	Public
Japan Tobacco Inc.	Japan	Public
JBS S/A	Brazil	Public
Kellogg Company	USA	Public
Kernel Holding	Poland	Public
Kerry Group PLC	Ireland	Not public
Keurig Green Mountain	USA	Public

Organisation	Country	Public
Kikkoman Corporation	Japan	Public
Kirin Holdings Co Ltd	Japan	Public
Kraft Foods	USA	Public
Lerøy Seafood Group	Norway	Public
Maple Leaf Foods Inc.	Canada	Not public
Marfrig Global Foods S/A	Brazil	Public
Marine Harvest Group	Norway	Public
Mars	USA	Public
McCormick & Company, Incorporated	USA	Public
Mead Johnson Nutrition Company	USA	Public
*Minerva Foods	Brazil	Not public
Molson Coors Brewing Company	USA	Public
Mondelez International Inc	USA	Public
Nestlé	Switzerland	Public
NH Foods Ltd.	Japan	Not public
Nichirei Corporation	Japan	Not public
Oceana	South Africa	Public
Orion	South Korea	Not public
Orkla ASA	Norway	Public
PepsiCo, Inc.	USA	Public
Pernod Ricard	France	Public
Philip Morris International	USA	Public
PINAR SÜT MAMULLERİ SANAYİİ A.Ş.	Turkey	Not public
Pioneer Foods	South Africa	Public
RCL Foods Ltd	South Africa	Public
Remy Cointreau	France	Not public
Reynolds American Inc.	USA	Public
Royal Wessanen NV	Netherlands	Not public
SABMiller	United Kingdom	Public
Sapporo Holdings Limited	Japan	Public
Saputo Inc.	Canada	Public
Smithfield Foods, Inc.	USA	Public
SunOpta Inc.	Canada	Public
Suntory Beverage & Food	Japan	Public
Swedish Match	Sweden	Public
*Tata Global Beverages	India	Public
*Tate & Lyle	United Kingdom	Public
The Coca-Cola Company	USA	Public
The Hershey Company	USA	Public
The J.M. Smucker Company	USA	Public
Tiger Brands	South Africa	Public
Tongaat Hulett Ltd	South Africa	Public
Unilever plc	United Kingdom	Public
Uni-president Enterprises	Taiwan	Not public
Vilmorin & Cie	France	Not public
Vina Concha y Toro S A	Chile	Public
WhiteWave Foods	USA	Public
Wilmar International Limited	Singapore	Public

*Companies not included in the analysis for this report as they responded after July 5th 2015.

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