

SETTING AND IMPLEMENTING SCIENCE-BASED TARGETS

Recommendations for food and beverage companies



Tractors on a sugar cane plantation, Mato Grosso do Sul, Brazil. Photo: Tatiana Cardeal

The food and beverage sector is both a significant driver of global climate change, and among the most adversely impacted by climate change. Food and beverage companies, therefore, have a major role in reducing global greenhouse gas (GHG) emissions and in ensuring that the long-term mitigation goal established in Paris at COP 21 is translated into action. This briefing highlights the need for food and beverage companies to set science-based emission reduction targets across their operations and supply chains. It emphasizes the importance of addressing emissions associated with the production of agricultural raw materials, which constitutes the largest part of the companies' GHG footprint. The briefing presents the main findings from an independent evaluation of the GHG reduction commitments made by General Mills and Kellogg, and sets out emerging good practice for food and beverage companies to establish and implement robust science-based GHG reduction targets.

Food and beverage companies should be at the forefront of fighting climate change

The food and beverage (F&B) industry is among the biggest contributors to climate change. Greenhouse gas emissions from the global food system, which includes emissions from direct agricultural production as well as emissions associated with deforestation and land use change, accounts for around 25 percent of total GHG emissions.¹ The emissions of the world's ten biggest food and beverage companies alone exceed 263.7 million tons per annum – with annual emissions exceeding that of Finland, Sweden, Denmark, and Norway combined.²

The food and beverage sector is also among those most at risk from climate change. Shifting weather patterns – including more frequent extreme weather events such as storms, floods, and drought – are causing crop failures, food price spikes and supply disruptions. This is hurting companies' bottom lines – and more importantly, hurting small-scale farmers and communities at the other end of the value chain, who bear the brunt of the risks associated with climate change.

These companies, therefore, should play a major role in mitigating global GHG emissions because of the magnitude of their agricultural emissions, the impact that climate change is having on their own businesses, and most importantly the impact on the farmers and agricultural workers producing their raw ingredients.

Science-based emissions reduction targets are needed for operational and supply chain emissions

The largest part of the GHG footprint of food and beverage companies stems from emissions associated with supply chains; in particular from the production of agricultural raw materials. 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 the 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 year. Yet, often these emissions, which are accounted as so-called 'Scope 3' emissions, go unaddressed in GHG reduction targets.³

Moreover, few F&B companies have an emissions reduction target that is science-based and aligned with the level of effort needed to avoid dangerous climate change. Strong scientific evidence shows that any global temperature rise at or above 1.5°C above pre-industrial levels would have catastrophic impacts on communities and ecosystems globally and would exacerbate the vulnerability of poor communities in developing countries. Yet many companies are not measuring their targets against this scientific threshold,⁴ despite the development of new methodologies for companies to do so.

The global climate agreement reached in Paris at COP 21 in 2015 set an ambitious goal to limit global temperatures well below 2°C and to pursue efforts to limit it to 1.5°C. It will be impossible to stay within either a 1.5°C or a 2°C target if agriculture does not contribute to emissions reductions. This means that the F&B companies need to adopt aggressive decarbonization pathways for reducing emissions across their operations and supply chains aligned with this global mitigation target, while at the same time expanding investments in adaptation.

Targets by General Mills and Kellogg show what is possible

In 2014, as part of the Behind the Brands campaign, Oxfam called out the world's 10 biggest food and beverage companies for standing on the sidelines of the global debate on tackling climate change and for not doing enough to cut their own carbon footprint. In May 2014, after more than 230,000 petitions from consumers demanding that F&B companies do more to tackle climate change, General Mills and Kellogg announced major new commitments, including goals

to set science-based emission reduction targets throughout their operations and a clear commitment to specifically reduce Scope 3 agricultural GHGs. As a result, in 2015, both companies set bold GHG reductions targets for their entire value chain.

General Mills set a target of 28 percent absolute reduction in GHG by 2025 across the entire value chain with an absolute cut in emissions of 41–72 percent by 2050 across the value chain (compared with 2010).⁵

Kellogg set a target to cut GHG emissions by 65 percent across its own operations and by 50 percent across its supply chain by 2050 (compared with 2015).⁶

To ensure accountability, Oxfam commissioned an independent evaluation of the progress these companies have made in fulfilling their commitments.⁷ The evaluation provides an assessment of whether the GHG reduction targets set by the companies are: in line with credible science-based target (SBT) methodologies; include upstream Scope 3 agricultural emissions; and whether the companies have the implementation plans and organizational processes in place to actually achieve these targets.

The assessment was conducted by Andrew Winston and Jeff Gowdy of Eco-Winston Strategies, and includes 33 questions/metrics in 10 categories. The findings of the evaluation are encouraging. Both General Mills and Kellogg have set targets based on currently available methods for setting SBTs and have put in place adequate plans to implement them.

The evaluation highlighted each company's unique strengths and weaknesses: General Mills' performance is relatively strong on supplier engagement, with a series of sub-commitments, by crop, to buy only from regions engaging in best practices and showing continuous improvement. That use of buying power is a strong lever for change. However, the data behind the SBTs was found to be lacking in terms of accuracy and completeness. Kellogg exceeds the industry standard when it comes to setting interim milestones and targets. Kellogg is clear about working with industry and NGOs to develop SBTs for agriculture and to revisit its goals as science evolves. However, the specific target on agricultural emissions needs to be strengthened. Kellogg's target applies to 75–80 percent of its suppliers. Over time, the longer term plan for these targets, and the execution plans, must move toward 100 percent of suppliers, or the targets will need to be adjusted to reflect the incomplete coverage.

While both General Mills and Kellogg exceed industry peers in setting ambitious climate mitigation targets and goals and have stepped off the sidelines of climate action, the current methods for setting SBTs represent the floor in terms of climate ambition. The agreement reached at COP 21 which adopted a long-term mitigation goal 'to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels' would entail more aggressive cuts in emissions, and current tools for setting SBTs do not appropriately capture decarbonization pathways for agriculture. Best practice would mean going even faster down the decarbonization path.

Importantly, climate science is constantly evolving, and estimates for the global carbon budget are likely to change over time. This reality of evolving climate science means that GHG reduction targets must be reassessed periodically.

Good practice for food and beverage companies

The independent evaluation highlighted a number of areas of good practice that can guide other F&B companies as they embark on the journey of setting and implementing science-based targets.

Recommendations for setting GHG reduction targets

- Targets should extend across the full value chain. A robust science-based target should include Scope 3 emissions; and for F&B companies, this has ramifications for how agricultural emissions from supply chains are factored into the target.
- Targets should be based on robust data. Currently, the data available on agricultural emissions are estimates based on emissions factors. Over time, best practice will need to include the collection of farm-level data, so that companies can establish benchmarks and truly track progress.
- Data on agricultural emissions needs to be comprehensive. Agricultural emissions targets should include all major commodities and address the major sources of emissions (including carbon stock losses from deforestation, methane emissions from livestock and rice and nitrous oxide emissions from fertilizer use). Agricultural emissions should also include emissions for the entire farm/supplier production (not just the total purchased or reaching the food processor, which would ignore waste.)
- Targets should comply with tested methodologies for SBT setting. The starting point for setting targets should be data from the global scientific community assembled by the UN's Intergovernmental Panel on Climate Change (IPCC) on the global carbon budget. That said, the SBT tools currently available, such as the Sectoral Decarbonization Approach⁸ and the '3 % Solution',⁹ do not appropriately reflect mitigation pathways for agriculture and need to be updated to reflect the new goal established at COP 21 that aims to limit temperature increases to 1.5°C.
- Targets should include or be aligned with other best practice goals on climate action. Targets should align with industry-leading climate action initiatives such as procurement of 100 percent renewable energy, achieving zero net deforestation in commodity supply chains and reducing short-lived climate pollutants.

Recommendations for implementing targets

- Establish plans to engage suppliers. Companies need to have processes to engage suppliers on measuring, reporting and reducing agricultural emissions and need to collaborate with suppliers to share best practices on low carbon agricultural approaches. They need to set aside human, technological and even financial capital to help to accelerate the change upstream in the supply chain.
- Ensure internal organizational accountability for targets. Senior leaders, including the CEO and board, need to commit to targets, with incentives for both executives and operational managers to achieve those targets.
- Invest in tools that enable regular measurement and reporting of emissions. Companies need to regularly measure and publicly report GHG emissions in operations and supply chains and invest in tools for tracking emissions at the supplier and farm levels.
- Establish interim goals and checkpoints. Given that climate science is evolving, companies need to set interim targets and checkpoints to periodically review and adjust targets.
- Be transparent. Companies need to establish processes to regularly report and communicate on progress made in achieving targets.

The long-term mitigation goal established in Paris at COP 21 sends a clear signal to the business community for decarbonization. Now more than ever, companies need to set ambitious climate targets to help translate this goal into reality. For food and beverage businesses, this means setting targets that meaningfully address agricultural emissions in

supply chains. Companies like General Mills and Kellogg have taken the initial steps to set a science-based emission reduction goal for their own operations and their suppliers. These companies can credibly use their leadership position to advocate for others in the industry to do the same, as they continue to strengthen and deepen the implementation of their own commitments. Alongside mitigation, F&B companies also need to prioritize investments in adaptation to enhance the productivity and food security of small-scale farmers in their supply chains, and to build the resilience of vulnerable communities impacted by climate change.

NOTES

- 1 CGIAR. 'Big Facts on Food Emissions'. Retrieved 20 April 2016 from <https://ccaafs.cgiar.org/bigfacts/#theme=food-emissions&subtheme=direct-agriculture>
- 2 Behind the Brands. 2014. 'Standing on the Sidelines: Why food and beverage companies must do more to tackle climate change'. Oxford: Oxfam. Retrieved 20 April 2016 from https://www.oxfam.org/sites/www.oxfam.org/files/bp186-standing-sidelines-big10-climate-emissions-200514-en_2.pdf
- 3 Scope 3 emissions are all indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions. Company responses to Carbon Disclosure Project (2013), <https://www.cdp.net/enUS/Results/Pages/responses.aspx>
- 4 Targets adopted by companies to reduce GHG emissions are considered 'science-based' if they are in line with the level of decarbonization required to keep global temperature increase below 2°C compared with pre-industrial temperatures, as described in the Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). (Applies to the 4th or 5th AR of IPCC as well as modelling of the IEA.). See <http://sciencebasedtargets.org/>
- 5 'General Mills makes new commitment on climate change'. Press release 31 August 2015. Retrieved 20 May 2016 from <http://blog.generalmills.com/2015/08/general-mills-makes-new-commitment-on-climate-change/>
- 6 'Kellogg Company Announces New, Ambitious Global Greenhouse Gas Emission Goals Across Manufacturing and Agricultural Supply Chains'. Press release 8 December 2015. Retrieved 20 May 2016 from <http://newsroom.kelloggcompany.com/2015-12-08-Kellogg-Company-Announces-New-Ambitious-Global-Greenhouse-Gas-Emission-Goals-Across-Manufacturing-and-Agricultural-Supply-Chains>
- 7 Winston Eco-Strategies. 2016. 'Evaluation of General Mills' and Kellogg's GHG Emissions Targets and Plans: Independent Assessment conducted by Winston Eco-Strategies for Oxfam's Behind the Brands Initiative'. Retrieved from
- 8 The Sectoral Decarbonization Approach (SDA) is a scientifically informed method for companies to set GHG reduction targets necessary to stay within a 2°C temperature rise above preindustrial levels. The method is based on the 2°C scenario, one of the International Energy Agency's detailed CO2 sector scenarios modeled in their 2014 Energy Technology Perspectives report 'Quick Guide to the Sectoral Decarbonization Approach. Retrieved 20 May 2016 from <http://sciencebasedtargets.org/wp-content/uploads/2015/05/A-Quick-Guide-to-the-Sectoral-Decarbonization-Approach.pdf>
- 9 Developed by WWF with CDP, McKinsey & Company and Point380, 'The 3% Solution' identifies how US-based corporations can set GHG reduction targets that lead to a collective cost saving of \$780bn between 2010 and 2020, while aligning targets with IPCC's 2-Degree Celsius pathway. Retrieved 20 May 2016 from <http://www.worldwildlife.org/projects/the-3-solution>

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