



# Sustainability in the food industry: progress and next steps

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# Sustainability in the food industry: progress and next steps

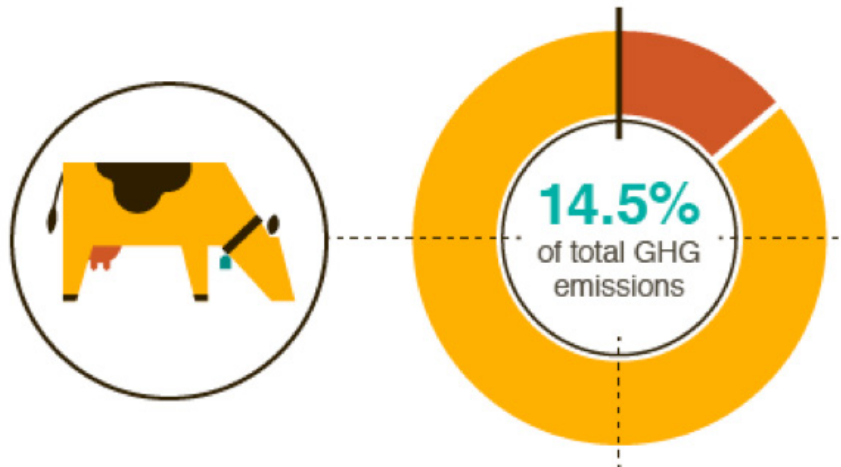
## 1 Introduction

The food and drink industry is facing an unprecedented set of challenges. The global population is expected to increase to 9 billion by 2050, resulting in a 60% increase in demand for food -- yet natural resources such as land, water and biodiversity are already under pressure. Rising temperatures and extreme weather events, the consequences of climate change, have already shown an ability to cause severe disruption to global food supplies, as has political instability.

Massive inequalities exist on a global scale between people who have access to sufficient, healthy and nutritious food and those who do not<sup>1</sup>.

But the food sector is, itself, a major contributor to these challenges. For instance, industrial livestock farming is responsible for 14.5% of total global greenhouse gas (GHG) emissions<sup>2</sup>, and agriculture is responsible for 75% of global deforestation<sup>3</sup>.

Livestock contributes **7,100 MtCO<sub>2</sub>e/year** or **14.5%** of total global GHG emissions.



Source: Gerber et al., 2013

**Big Facts**  
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Agriculture and  
Food Security



(Source: Gerber PJ, Steinfeld H, Henderson B, Mottet A, Opio C, Dijkman J, Falcucci A & Tempio G. 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. Rome, Italy: Food and Agriculture Organization of the United Nations (FAO).

<sup>1</sup> <http://www.fao.org/3/a-i6583e.pdf>

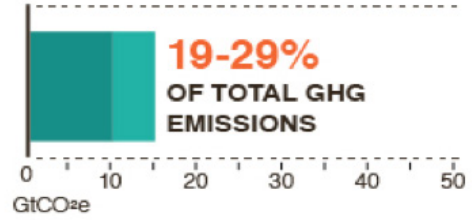
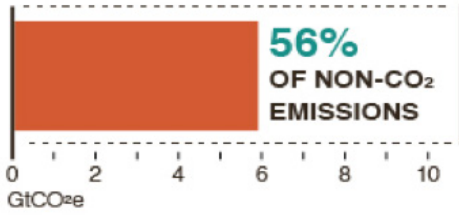
<sup>2</sup> Gerber PJ et al 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. Rome, Italy: Food and Agriculture Organization of the United Nations (FAO).

<sup>3</sup> [http://unfccc.int/files/cooperation\\_and\\_support/financial\\_mechanism/application/pdf/blaser.pdf](http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/blaser.pdf); [www.pnas.org/cgi/doi/10.1073/pnas.1116437108](http://www.pnas.org/cgi/doi/10.1073/pnas.1116437108)

Agriculture is the largest contributor of non-CO<sub>2</sub> GHGs.



Food systems emissions contribute **19-29% OF TOTAL GHG EMISSIONS.**



Source: US-EPA, 2011 II Vermeulen et al., 2012

**Big Facts**  
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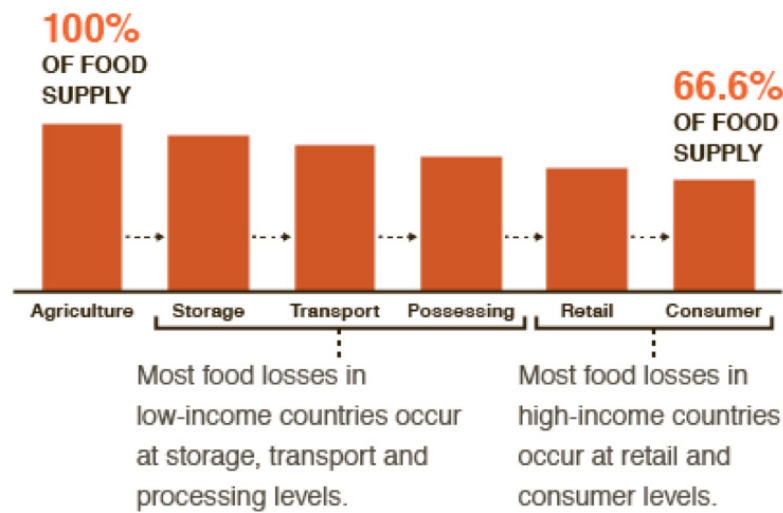


Source: [US-EPA] United States Environmental Protection Agency. 2011. Global anthropogenic non-CO<sub>2</sub> greenhouse gas emissions: 1990 – 2030 EPA 430-D-11-003. (Draft.) Office of Atmospheric Programs, Climate Change Division. Washington, DC: U.S. Environmental Protection Agency. (Available from <http://www.epa.gov/climatechange/EPAactivities/economics/nonco2projections.html>) Vermeulen SJ, Campbell BM, Ingram J SI. 2012. Climate change and food systems. Annual Review of Environmental Resources 37. (Available from <http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-020411-130608>)



The need to ensure consistent supply of raw materials promotes mono-cropping over mixed farming methods, contributing to soil degradation and reducing biodiversity. Global sourcing practices, too, are all too often extractive, paying little heed to the disastrous environmental, social and economic impacts for small scale farmers and their communities. Meanwhile, one third of all the food that is lost along the supply chain<sup>4</sup>.

About a third of all food produced is lost in the food supply chain.



Source: FAO, 2013

**Big Facts**  
[ccafs.cgiar.org/bigfacts](http://ccafs.cgiar.org/bigfacts)



Source: [FAO] Food and Agriculture Organization of the United Nations. 2013b. Food wastage footprint. Impacts on natural resources. Summary Report. Rome, Italy: FAO (Available from <http://www.fao.org/docrep/018/i3347e/i3347e.pdf>)

The last five years have seen an increase in efforts to improve the sustainability of the European food and drink sector, as the threats to its future viability have become ever more apparent and in the context of international commitments such as the Sustainable Development Goals in 2015 and the Paris Climate Agreement.

The aim of this paper is to highlight sustainability initiatives and good practices introduced by food companies to date, to identify barriers to more radical and accelerated action, and to outline the next steps for industry and other stakeholders in the food system.

<sup>4</sup> <http://www.fao.org/docrep/018/i3347e/i3347e.pdf>

## 2 Defining sustainability

The most commonly-cited definition of sustainable development was set out in 1987 by the Brundtland Commission, a high-level body convened by the United Nations to foster international cooperation for a more sustainable future:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>5</sup>



The Brundtland Report, *Our Common Future*, established three pillars of sustainability -- economic, environmental, and social -- which should be addressed simultaneously and in a global context.

While this definition and conceptualisation remain broadly relevant today, over the last 30 years unequal emphasis has been placed on economic sustainability, even as greater understanding has emerged of the environmental challenges faced by the world. The social aspect of sustainability has, however, gained importance and relevance since the publication of the UN Guidelines on Business and Human Rights in 2011<sup>6</sup>.

Among the general public, relatively few have a rounded appreciation of all three pillars of sustainability. Rather, there is a tendency to focus on individual environmental impacts of food and other consumer goods or on social and ethical issues. This disjointed understanding may be due to labelling that emphasises single sustainable attributes of products, often through logos of certification schemes -- a practice that is both easier for marketers and breaks down the complex issues to easy-to-understand chunks.

<sup>5</sup> <http://www.un-documents.net/our-common-future.pdf>

<sup>6</sup> [http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR\\_EN.pdf](http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf)

The lack of consensus over a detailed definition of sustainability has also meant many different ways of assessing sustainability have been devised. In the UK alone there are over 100 different tools for assessing farm sustainability, with farmers often undergoing multiple, over-lapping, time-consuming, and expensive assessments each year<sup>7</sup>.

The Sustainable Development Goals (SDGs)<sup>8</sup>, adopted by the United Nations in 2015, build on the Millennium Development Goals and provide a useful framework for understanding and acting upon the issues over a 15 year period.



While only around a third of the general population were familiar with the SDGs in 2015, according to a survey conducted by PwC, awareness amongst the business community was at 92%. The latter figure is crucial as the SDGs serve as a useful framework for food businesses to map aspirations and activities.

While they are intended to be seen as integrated and non-divisible, the indicators for goals 2, 5, 6, 12, 14 and 15 are monitored by the Food and Agriculture Organization of the United Nations (FAO) and are key for food and drink businesses. Goal 3 is also very pertinent to the sector, while goals 8, 9, 13 and 17 are relevant for companies across all industries<sup>10</sup>.

<sup>7</sup> <http://sustainablefoodtrust.org/wp-content/uploads/2013/04/Sustainability-Assessment.pdf>

<sup>8</sup> <https://sustainabledevelopment.un.org>

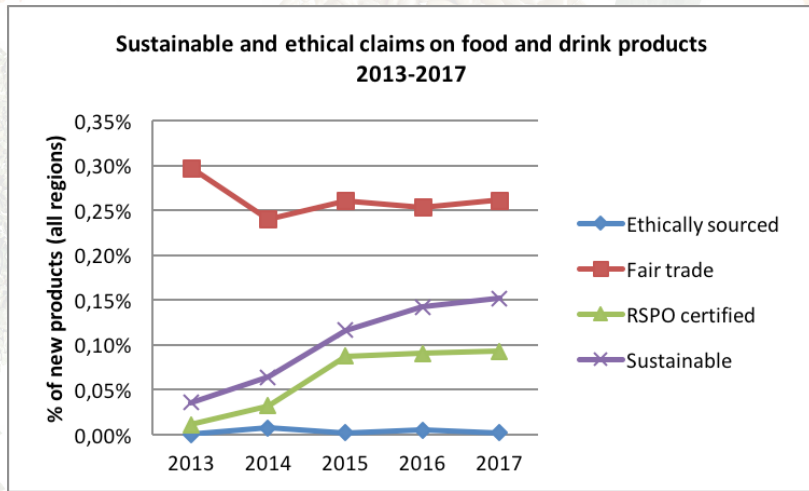
<sup>9</sup> Survey conducted in June-July 2015 and generated 986 responses from businesses and 2105 from citizens. [https://www.pwc.com/gx/en/sustainability/SDG/SDG%20Research\\_FINAL.pdf](https://www.pwc.com/gx/en/sustainability/SDG/SDG%20Research_FINAL.pdf)

<sup>10</sup> [https://www.just-food.com/analysis/why-are-food-companies-aligning-with-un-sustainable-development-goals\\_id138131.aspx](https://www.just-food.com/analysis/why-are-food-companies-aligning-with-un-sustainable-development-goals_id138131.aspx)

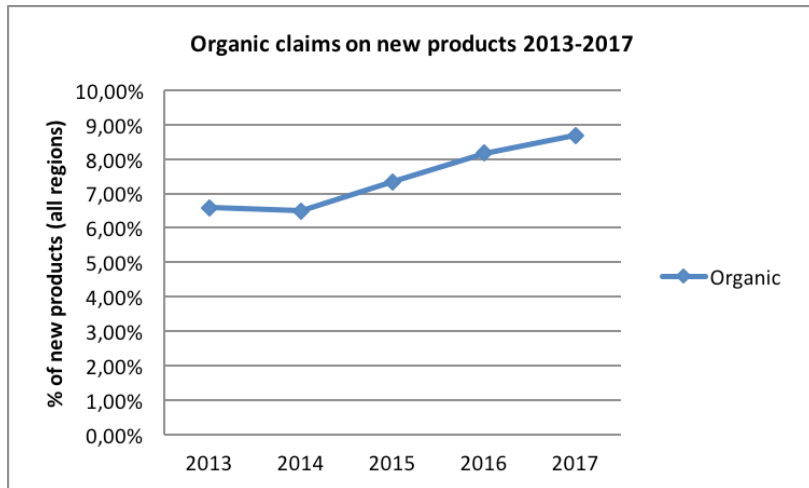
### 3 Food industry actions on sustainability

Despite relatively low awareness of the SDGs among the general population, many consumers are increasingly interested in sustainable and ethically sourced food and drink products -- and manufacturers are catering to the demand.

Data from Mintel's Global New Products Database indicated a marked increase in new products carrying almost all kinds of sustainable and ethical claims on their labels between 2013 and 2017.



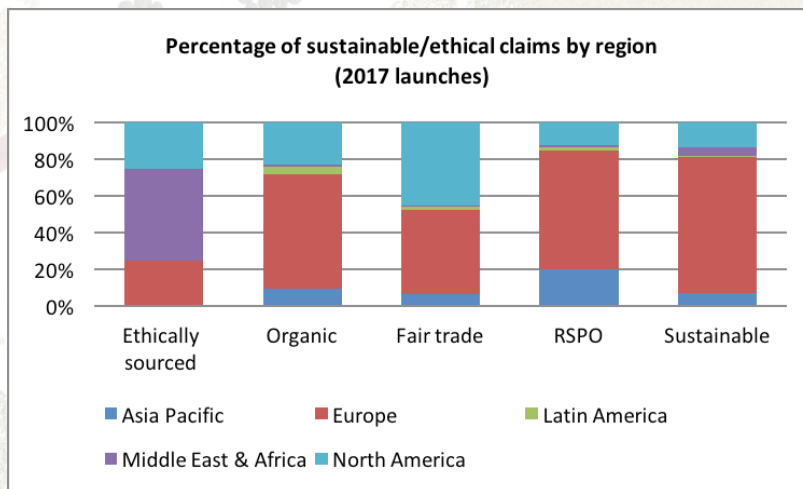
Source: Mintel's Global New Products Database



Source: Mintel's Global New Products Database

In 2017 Europe saw the highest number of new products making general sustainable, organic, RSPO (Roundtable on Sustainable Palm Oil), and fair trade claims, while the Middle East and Africa came out tops on ethically sourced claims.





Source: Mintel's Global New Products Database

Sustainability is also a factor in some of the key trends that are influencing product development – and, as a result, the ingredients sector. For instance, there is widespread belief that organically-grown product is better for the environment<sup>11</sup>, and awareness of the disproportionately high CO2 emissions from the livestock sector is driving interest in alternative protein sources, such as pulses and insects, and the trend towards meat-free diets<sup>12</sup>.

In terms of business practices, the latest report from Oxfam's Behind the Brands campaign shows a significant progress on environmental and sustainable issues by the 'Big 10' food and drink manufacturers between 2013 and 2016<sup>13, 14</sup>.

### Behind the Brands

Oxfam's Behind the Brands campaign evaluated publicly-available information on corporate policies, with a focus on seven themes.

- 1) Land both rights and access to land and sustainable use of it
- 2) Women farm workers and small-scale producers – in the supply chain
- 3) Farmers (small-scale) growing the commodities
- 4) Farm workers in the supply chain
- 5) Climate change commitments to reduce greenhouse gas emissions and deforestation in agricultural supply chains, and to help farmers adapt to climate change
- 6) Transparency at a corporate level
- 7) Water both rights and access to water resources and sustainable use of it

Scores for each theme (except transparency) were calculated using indicators grouped into four categories: awareness, knowledge, commitments, and supply chain management. The transparency theme was broader in scope and rewarded companies for their disclosure on corporate issues such as taxation.

<sup>11</sup> Emma Schofield, global food science analyst, Mintel. Powerpoint presentation on Sustainability: Ingredient Insight August 2017.

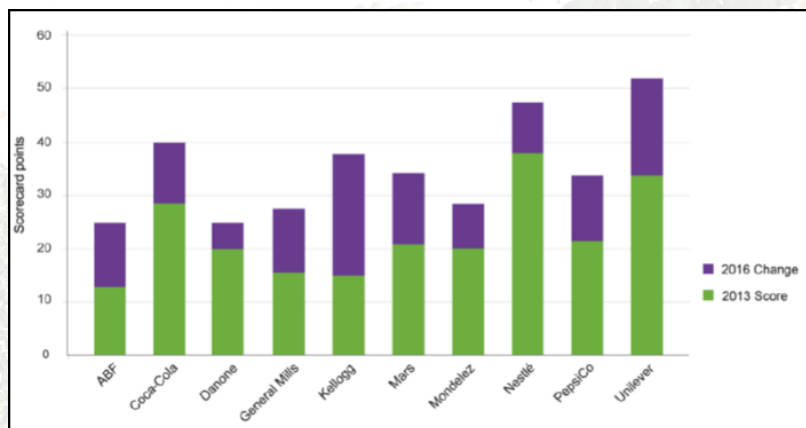
<sup>12</sup> The Sustainable Food Trust points out that consumers' adoption of meat-free diets on environmental grounds is misguided, as grass-fed ruminants play a central role in re-building soil fertility and carbon gain that off-sets the animals' methane emissions. Consequently, switching to eating meat and dairy from grass-fed, rather than industrially-reared, animals is more helpful (Patrick Holden, director of the Sustainable Food Trust, during the panel discussion Is the food industry doing enough to support sustainability? at FI Europe 2017).

<sup>13</sup> ABF, Coca Cola, Danone, General Mills, Kellogg, Mars, Mondelez, Nestlé, PepsiCo, Unilever.

<sup>14</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

Indexes such as Behind the Brands can be very helpful in driving a 'race to the top' between manufacturers on sustainability. Another index is the CDP Global Supply Chain Report<sup>15</sup>, based on data on climate, water and deforestation from 4872 companies supplying CDP's 89 member organisations, including major food companies.

### Behind the Brands overall score change by company 2013-2016



Source: Oxfam briefing paper: *The journey to sustainable food: a three-year update on the Behind the Brands campaign*

### CDP's A-list companies in the food and drink sector for tackling climate change, 2017

Manufacturers: Coca-Cola Europe, Nestlé, Diageo, Unilever

Ingredients suppliers: Firmenich, Givaudan, IFF, Symrise

### CDP's A-list companies in the food and drink sector on water use, 2017

Manufacturers: Anheuser Busch InBev, ABF, Conagra, Danone, Diageo, Kellogg, Unilever

Ingredients suppliers: BASF, Symrise, Firmenich

Some surveys conducted by FoodDrinkEurope, the EU umbrella trade association for food manufacturers, also indicate that companies are paying attention on issues such as food waste and climate change. Although they should not be taken as an indication of action by the industry as a whole, sustainability leaders are more likely to respond to such surveys than companies and member associations that are not yet engaged.

### Highlights from FoodDrinkEurope's 2014 survey on food waste

- 80% of respondents stressed they work to identify causes of waste and optimise production systems
- 80% were collaborating with other stakeholders to prevent and reduce food waste
- 60% had food waste as part of sustainability strategy
- 55% were training employees to prevent food waste, optimise production
- 48% were innovating new products from edible product leftovers
- 90% planned to continue tackling food waste in operations and along supply chain, in collaboration with stakeholders/partners

Source: FoodDrinkEurope report *Preventing food wastage in the food and drink sector*<sup>16</sup>

<sup>15</sup> <https://www.cdp.net/en/research/global-reports/global-supply-chain-report-2017>

<sup>16</sup> [http://www.fooddrinkeurope.eu/uploads/publications\\_documents/Preventing\\_food\\_wastage\\_in\\_the\\_food\\_and\\_drink\\_sector.pdf](http://www.fooddrinkeurope.eu/uploads/publications_documents/Preventing_food_wastage_in_the_food_and_drink_sector.pdf)

### Highlights from FoodDrinkEurope's 2015 survey on greenhouse gas emissions

- 86% of respondents were very concerned about impact of climate change on business
- 83% saw climate change as opportunity to promote more responsible food production system
- 95% had integrated climate change into business strategy
- 86% were working to address mitigation and adaptation to climate change in operations
- 90% were tackling GHG emissions beyond operations, across lifecycle of products

Source: FoodDrinkEurope report, *A time to act: climate action and the food and drink industry*<sup>17</sup>

FoodDrinkEurope provides examples of good practices by major manufacturing companies that are leading on sustainability -- such as Unilever and Nestle -- in its various sustainability reports<sup>16, 17</sup>. In January 2018 the association launched a 'living website' to document its members' commitments over the years to come.

FoodDrinkEurope also participates in several multi-stakeholder platforms convened by the European Commission to address businesses sustainability issues. These include the High level Multi-stakeholder Platform on the Implementation of the Sustainable Development Goals<sup>18</sup>, and the EU Platform on Food Losses and Food Waste<sup>19</sup>.

Six FoodDrinkEurope members have taken part in pilot tests of the Product Environmental Footprint (PEF) tool, a EU-wide, multi-criteria assessment of the environmental performance of a good or service throughout its life cycle<sup>20</sup>.

As for ingredients suppliers, case studies 1-4 below provide examples of frameworks and initiatives put in place by leading companies.



<sup>17</sup> <http://www.fooddrinkeurope.eu/publication/a-time-to-act-climate-action-and-the-food-and-drink-industry/>

<sup>18</sup> [https://ec.europa.eu/info/strategy/international-strategies/global-topics/sustainable-development-goals/multi-stakeholder-platform-sdgs\\_en](https://ec.europa.eu/info/strategy/international-strategies/global-topics/sustainable-development-goals/multi-stakeholder-platform-sdgs_en)

<sup>19</sup> [https://ec.europa.eu/food/safety/food\\_waste/eu\\_actions/eu-platform\\_en](https://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform_en)

<sup>20</sup> [http://www.fooddrinkeurope.eu/uploads/publications\\_documents/FoodDrinkEurope\\_Product\\_Environmental\\_Footprinting.pdf](http://www.fooddrinkeurope.eu/uploads/publications_documents/FoodDrinkEurope_Product_Environmental_Footprinting.pdf)

A number of collaborations have been launched (or are in development) through which companies from across the food and drink sector seek to deal collectively with certain issues or ingredients that impair the sector's sustainability. Some helpful practical tools have been developed through these collaborations (see table).

### Examples of collaborative initiatives and tools to improve sustainability in the food industry

Initiative	Description	Tools	Further information
European Food Sustainable Consumption and Production Roundtable	Promotes science-based, coherent approach to sustainable consumption and production. 12 member organisations. Co-chaired by European Commission and food supply chain partners, supported by the UNEP.	Environmental Assessment of Food and Drink Protocol (ENVI Food)	<a href="http://www.food-scp.eu">http://www.food-scp.eu</a>
Ethical Trading Initiative	Alliance of companies, trade unions and voluntary organisations working to improve lives of workers who make or grow consumer goods.	ETI Base Code of labour practice	<a href="https://www.ethicaltrade.org">https://www.ethicaltrade.org</a>
Roundtable on Sustainable Palm Oil (RSPO)	Not-for-profit organisation of 3000+ stakeholders from the palm oil supply chain. Mission to transform markets to make sustainable palm oil the norm.	Global standard and certification scheme for sustainable palm oil	<a href="https://rspo.org">https://rspo.org</a>
Sustainable Agriculture Initiative (SAI) Platform	Non-profit organisation to facilitate pre-competitive sharing of knowledge and best practices to support development and implementation of sustainable agriculture practices. 90 members from across food chain.	Farm Sustainability Assessment (FSA) 2.0 tool	<a href="http://www.saiplatform.org">http://www.saiplatform.org</a>
Food Reform for Sustainability and Health Program (FReSH)	Platform for the private sector to pursue accelerated food systems transformation in a pre-competitive space, with science, academia, policy-makers and civil society. Led by World Business Council for Sustainable Development and the EAT Foundation; 38 members.		<a href="http://www.wbcsd.org/Projects/FReSH">http://www.wbcsd.org/Projects/FReSH</a>
Sustainable Supply Chain Initiative	Under development by the Consumer Goods Forum to provide guidance on sustainable supply chain practices, including social sustainability issues such as decent working conditions and forced labour.		<a href="https://www.theconsumergoodsforum.com">https://www.theconsumergoodsforum.com</a>

## Case study 1:

### 'Growing Good' with California Almonds

California almonds are a healthy, in-demand, on-trend and multi-functional ingredient, with continuous improvement at the heart of the industry's sustainable farming practices.

The Almond Board of California has recently invested \$4.8 million toward next generation farming practices. It's the latest in their four-decade research legacy.



### Key milestones for the Almond Board of California include:

- Almond farmers have dramatically decreased their per-pound water use<sup>21</sup> – thanks in part to leading adaptation of micro-irrigation and demand-based irrigation<sup>22</sup>. Now they're researching the effects of flooding dormant orchards with excess storm water to recharge groundwater.
- The Almond Board funds more honey bee health research than any other crop group<sup>23</sup> and farmers have widely adopted Honey Bee Best Management Practices for bee-friendly almonds<sup>24</sup>.
- Lifecycle analysis research shows that about half of almond farming's carbon emissions are currently offset<sup>25</sup>. The Almond Board of California is working on ways to reduce that even further.

### Gold-level sustainability programme

The California Almond grower sustainability<sup>26</sup> programme was recently recognized with 'gold' equivalency when benchmarked along with state and federal regulations against the Sustainable Agriculture Initiative Platform (SAI Platform)'s Farm Sustainability Assessment programme.

To find out more about the California almond industry's commitment to sustainability visit [www.almonds.com/sustainability](http://www.almonds.com/sustainability)

<sup>21</sup> University of California, 2010. Food and Agriculture Organization of the United Nations, 2012. Almond Board of California, 1990-94, 2000-14.

<sup>22</sup> California Almond Sustainability Program. Aug. 2017.

<sup>23</sup> Gene Brandt. Vice President, American Beekeeping Federation.

<sup>24</sup> California Almond Sustainability Program. Aug. 2017.

<sup>25</sup> Alissa Kendall, et al. Life cycle-based assessment of energy use and greenhouse gas emissions in almond production. Part

<sup>26</sup> Sustainable almond farming utilises production practices that are economically viable and are based upon scientific research, common sense and a respect for the environment, neighbours and employees. The result is a plentiful, nutritious, safe food product.

## Case study 2:

### Sustainability along the red beet value chain

Diana Food -- part of Symrise's flavor division -- has integrated sustainability throughout the value chain of its key ingredients. Its objective is to minimise the impact of production, while maximising the value created. Through this approach, Diana Foods has reduced the quantity of beets required to make 1kg of red beet juice concentrate ingredient by 29%.

### Starting with the seeds

Red beet sustainability starts with the seeds. Diana liaises with seed suppliers to screen different varieties to ensure that its raw materials contain maximum levels of pigment.

### Building relationships with farmers

Next, Diana works closely with red beet farmers in Brittany, northern France, to establish ideal growing conditions. Agronomists advise the farmers on techniques to improve biodiversity. They also encourage them to work together, facilitating networks to discuss specific problems and potential solutions. For instance, with the help of an agronomist the farmers discovered that by making adjustments in irrigation and soil management they could curb a virus that was attacking crops. Other working groups have explored how best to store beets post harvest so as to eliminate waste, and high tech ways to ensure appropriate irrigation.

### R&D analysis

Diana's R&D team analyses the harvested red beets, providing data to inform collective decisions and enabling farmers to take advantage of Symrise's broader technological capabilities. The team ensures that every scrap of pigment is extracted from the beets -- and nothing is thrown away, as the pomace is returned to the farmers who feed it to their cattle. They also work to standardise the raw materials, so that the red beet juice concentrate provides a consistent level of pigment.

### Advising customers

Finally, Diana advises its customers on how to use its red beet juice concentrate for optimum, consistent results. By ensuring the ingredient is used in the right way, and at appropriate dosage, it prevents waste.

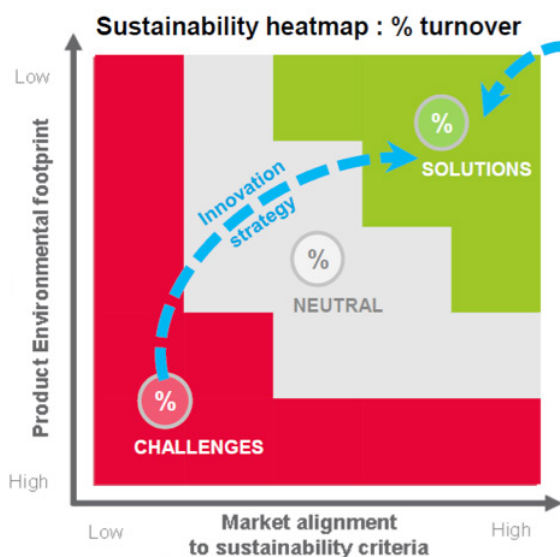
More about Diana Food: [www.diana-food.com/consumer-health/sustainability](http://www.diana-food.com/consumer-health/sustainability)

### Case study 3:

#### The SolvayWay and Sustainable Portfolio Management

At Solvay, sustainability drives the business strategy and daily operations. Its CSR approach, known as the SolvayWay, strives to translate the company's sustainable development ambitions into concrete actions. The SolvayWay is underscored by 49 practices that reflect 22 commitments to stakeholders. Managers assess their progress against this framework each year, identifying areas for improvement and drawing up action plans.

Solvay is one of 26 companies that launched the Food Reform for Sustainability and Health programme -- FReSH -- in 2017, under the leadership of the World Business Council for Sustainable Development and the EAT Foundation.



#### Sustainable Portfolio Management

Solvay's Sustainable Portfolio Management tool is a two-dimensional diagram used to map products' contribution to sustainability that helps drive innovation & differentiate the group solutions for customers. The vertical axis represents environmental footprint of manufacturing, assessed according to 19 indicators; the horizontal axis represents market alignment with sustainability criteria, assessed through 60 social and environmental questions.

Between the axes is Solvay's 'sustainability heatmap'. Products in the red zone present challenges, those in the grey zone neither have an impact nor offer solutions, while those in the green zone present solutions. The aim is to increase turnover from 'green' products and decrease turnover from 'red' products. In 2016 43% of sales were 'green' solutions (up from 33% in 2015), while just 8% were 'red' challenges.

#### Sustainable solutions to food challenges

Solvay leverages the multifunctional properties of ingredients to help address food sustainability issues and societal challenges strongly pulled by consumers along the food value chain. For instance, vanillin has several functions beyond its best-known use as a flavouring. It can improve mouthfeel of healthier (low fat, low sugar) products and can mask bitter-tasting proteins and sweeteners, contributing to healthier products; and it can improve shelf-life -- and reduce waste -- thanks to its antioxidant and anti-microbial

properties. What is more, only 3% of the world's vanillin comes from the vanilla bean plant; 97% is from synthetic or other natural sources, thus helping to address natural resource scarcity.

More about SolvayWay: [www.solvay.com/en/company/sustainability/video-acting%20for-more-future.html](http://www.solvay.com/en/company/sustainability/video-acting%20for-more-future.html)

More about SPM: [www.solvay.com/en/binaries/Solvay-SPM-Guide-154709.pdf](http://www.solvay.com/en/binaries/Solvay-SPM-Guide-154709.pdf)

## Case study 4:

### Symrise's corporate strategy

Sustainable growth is at the heart of Symrise's corporate strategy. By paying close attention to ecological and social conditions throughout the value chain, production efficiency and the needs of a growing world population, the flavours and fragrance firm is laying the foundations for a viable business long into the future. By dovetailing financial and non-financial indicators, it makes a clear and unequivocal business case for sustainability.

The Symrise Sustainability Board is made up of appointed officers from all divisions and corporate functions. Their job is to ensure the integration of sustainability principles and objectives throughout the company. In 2016 Symrise's sustainability infrastructure was further strengthened with the appointment of a Chief Sustainability Officer, reporting directly to the CEO.

### Symrise's sustainability agenda has four pillars:

- Footprint: minimising environmental footprint along the value chain
- Innovation: maximising positive social and environmental impacts of products
- Sourcing: maximising sustainability of supply chain and raw materials
- Care: improve well-being in stakeholder communities

Symrise is actively integrating the Sustainable Development Goals into its supply chain development.

### Examples and achievements

Symrise puts partnership working at the heart of its activities. For example, the company collaborates with Unilever and Save the Children in its vanilla sustainability programme in Madagascar. With this partnership, Symrise wants to help improve the livelihoods of vanilla farming communities in the Sava region.

To achieve its sustainability objectives, Symrise turned its attention to its portfolio of over 10,000 raw materials sourced from all over the world, ensuring that its sourcing promotes high environmental and social standards, sustainable production and the protection of biodiversity. For example, for its bergamot essential oil from Calabria, which the company utilises in a variety of applications such as fragrances and tea flavors, Symrise developed a procurement system that ensures the supply of materials and their good quality, and enables farmers to grow the fruit in a way that is both environmentally conscious and socially responsible. To do this, Symrise relies on good agricultural practice, social and educational projects, collaboration with local scientists and long-term partnerships with nongovernmental organisations dedicated to protecting nature and the environment.

Symrise publishes details of its sustainability record in its annual Corporate Report. In 2016 it achieved:

- 5.4% reduction in greenhouse gas emissions
- 17.2% reduction in chemical oxygen demand in wastewater
- Rating of 86% of main suppliers according to sustainability criteria
- Certification of 41 strategic supply chains
- 100% of palm oil from sources certified as 'mass balance' or 'segregated'

More information:

Corporate report 2016: sharing values, diversifying success, successfully diversifying [cr2016.symrise.com/sites/default/files/downloads/en/SYM\\_Corporate-Report\\_en\\_170314\\_safe.pdf](http://cr2016.symrise.com/sites/default/files/downloads/en/SYM_Corporate-Report_en_170314_safe.pdf)



## 4 Drivers of sustainability

What is driving the increased attention to sustainability in the food industry? Consumer demand for more sustainable and ethical products is certainly a factor, and companies are able to drive sales by highlighting commitments and good practice in product marketing. According to Mintel, for some consumers sustainability is becoming an expectation rather than a selling point and they will steer clear of any products that don't measure up. However not all consumers are equally switched-on or are willing or able to pay the premium that certified products command; the majority of purchasing decisions are still informed largely by price and taste considerations<sup>27</sup>.

Thinking of the general public only as consumers of food and drink products is to consider their purchasing decisions as the only means through which individuals can express their views of business practices. The UK's Food Ethics Council suggests referring to food citizens instead, a change in terminology that immediately provides people with more channels for potential influence<sup>28</sup>. In particular, digital information and social media mean citizens are more aware of food companies' activities. They can enter into direct dialogue with them and take part in advocacy over issues that concern them, often coordinated by campaign groups and NGOs.



It is perhaps for this reason that manufacturers are seen as leading the sustainability movement within the food chain. Their brand reputation -- and market share -- are at stake if they engage in unsustainable or unethical practices. While some retailers are also talking about sustainability, most stock a variety of competing products, some more sustainable than others, and no evidence was

found in research for this paper of preferential terms for sustainable products. As for ingredients suppliers, their products enable manufacturers to make sustainability claims or, conversely, expose them to criticism, but they are a step removed from the household brands that are in the direct line of citizen judgement.

<sup>27</sup> Emma Schofield, global food science analyst, Mintel. Powerpoint presentation on Sustainability: Ingredient Insight August 2017.

<sup>28</sup> <https://www.foodethicscouncil.org/our-work/food-citizenship.html>

Employees and investors of food and drink companies are also consuming citizens. Employees care increasingly about the sustainability record of the company they work for and can put pressure on their employers to change their practices -- or risk losing good people to competitors<sup>29</sup>. Likewise, some investors are starting to think more about sustainability as part of the business strategy; for example, Chr. Hansen has said that the audited examination of its entire ingredients portfolio against the SDGs was driven by investors who previously were interested primarily in risk<sup>30</sup>.

There is some recognition that sustainability makes good long-term business sense. However this recognition -- by Chr. Hansen's investors and pioneers such as Unilever CEO Paul Polman -- is not yet industry-wide.

"The SDGs offer the greatest economic opportunity of a lifetime. With an estimated investment of \$2-3 trillion a year, the potential value that can be unlocked for society will be immense. In some sectors it is estimated to be worth hundreds of billions, and even more in others. This is a very high payout for this global agenda and markets are already starting to react."

*Paul Polman, CEO of Unilever and co-founder of the Business & Sustainable Development Commission<sup>31</sup>*



<sup>29</sup> Interview with Dan Crossley, Food Ethics Council

<sup>30</sup> <https://www.foodnavigator.com/Article/2017/11/29/Investor-interest-in-UN-sustainability-goals-on-the-rise-Chr.-Hansen>

<sup>31</sup> <http://businesscommission.org/our-work/sustainable-development-isnt-just-doing-the-right-thing-its-good-business-sense>

## 5 Is the food industry doing enough?

It is difficult to get a measure of sustainability progress across the whole of the food industry. The evidence in section 3 above is based largely on initiatives by pioneers and big companies and should not be taken as representative. The European food industry is highly fragmented. It includes 285,000 small and medium enterprises (SMEs) that generate 48.3% of the sector's revenue between them and provide two-thirds of employment<sup>32</sup>. SMEs typically have smaller, more precarious margins, so are less able to absorb costs associated with new practices or to invest in initiatives that will yield returns only in the long-term.

The laudable efforts to date are the exception rather than the norm and must trickle down to other manufacturers and ingredients suppliers that are not yet taking action. While there is anecdotal evidence that manufacturers are putting pressure on their suppliers to improve their practices<sup>33</sup>, to date there has been no thorough analysis of sustainability throughout the food supply chain ingredient sector<sup>34</sup>.

Moreover, sustainability improvements so far have, by and large, been incremental. Several thought leaders have emphasised the need for more radical, accelerated action, and for companies to look at what actions are needed rather than what appears achievable. For instance, to reverse the effects of decades of excessive CO<sub>2</sub> emissions food and farming enterprises must not merely reduce emissions. They must strive to be zero carbon or even net positive<sup>35</sup>.

"We cannot meet commitments [on sustainability goals and improving population health] without higher ambitions for research and innovation in our food systems... We need to see transformative, breakthrough changes. Not just incremental changes."

Carlos Moedas, EU Commissioner for research, science and innovation<sup>36</sup>

"Regrettably [...] we are not yet seeing the scale and speed we need [...] The focus still tends to be on occasional corporate social responsibility (CSR), rather than embedding sustainability at the core of their business. They need to realise that the potential gains from working sustainably are huge, and that this approach needs to be more than a simple CSR exercise."

Paul Polman, CEO of Unilever and co-founder of the Business & Sustainable Development Commission<sup>37</sup>

"It's vital that food companies recognise the pivotal role they have in implementing the SDGs. Food businesses also need to acknowledge their immense reach and influence. They may employ thousands of people, but they reach many millions of people through their supply chains and their products. 2030 will be with us sooner than we think. It's time for food businesses to step up and be part of delivering the SDGs!"

Dan Crossley, executive director of the Food Ethics Council

"We need the biggest change in the food system since the industrial revolution."

Patrick Holden, founding director and chief executive of the Sustainable Food Trust<sup>38</sup>

<sup>32</sup> [http://www.fooddrinkeurope.eu/uploads/publications\\_documents/DataandTrends\\_Report\\_2017.pdf](http://www.fooddrinkeurope.eu/uploads/publications_documents/DataandTrends_Report_2017.pdf)

<sup>33</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

<sup>34</sup> The CDP Global Supply Chain report is a partial analysis of supply chain sustainability, but it covers the supply chains of its member companies only and concerns only the issue of carbon emissions. <https://www.cdp.net/en/research/global-reports/global-supply-chain-report-2017>

<sup>35</sup> [https://www.foodethicscouncil.org/uploads/180122\\_Food%20farming%20&%20climate%20change%20-%20Business%20Forum%20write-up\\_FINAL.pdf](https://www.foodethicscouncil.org/uploads/180122_Food%20farming%20&%20climate%20change%20-%20Business%20Forum%20write-up_FINAL.pdf)

<sup>36</sup> <https://www.foodnavigator.com/Article/2017/10/19/The-future-of-food-Europe-focuses-on-circular-economy-solutions>

<sup>37</sup> <http://businesscommission.org/our-work/sustainable-development-isnt-just-doing-the-right-thing-its-good-business-sense>

<sup>38</sup> Panel discussion *Is the food industry doing enough to support sustainability?* at FI Europe 2017

## 6 Next steps towards a sustainable food industry

A number of barriers to radical, accelerated action on sustainability throughout food sector as a whole have been identified. In order to move forward, there is a need for industry, and partners in other sectors, to seriously consider how these barriers might be overcome. This section summarises solutions that have been proposed to date.

### 1) Lack of business case.

A business's priority is, ultimately, to make money, yet under the current market-driven economic model there is often no business case for adopting more sustainable practices. The problem is that the costs of unsustainably produced food (on the environment, on producers' livelihoods, on public health, etc) are not included in the check-out price paid by the consumer. Adopting more sustainable practices means internalising these costs, so either the manufacturer must accept smaller margins or the price of the end product must rise. Sustainable companies are competing with unsustainable companies; if consumers are unwilling to pay more the sustainable companies will lose sales and, ultimately, market share<sup>39,40</sup>.

#### **Solution: Changing perceptions of value.**

Ultimately, a truly sustainable food system will be driven by consumer-citizens through the medium of the market. Retailers and manufacturers should make maximum use of marketing tools to build consumer-citizens' understanding and help them to appreciate that 'value' is not merely monetary but social and environmental too. To truly influence food choices, it may be necessary to choice-edit -- that is, removing the unsustainable options from product ranges or retail shelves<sup>41</sup>.

**Solution: Regulation.** Neoliberal national governments in Europe tend to see themselves as enabling the market and consumers and seek to avoid accusations of 'nannyism' by avoiding telling people what to eat and issuing voluntary guidance in lieu of hard regulation<sup>41</sup>. By introducing regulations or using their full arsenal of instruments -- such as, for example, introducing new taxes on unsustainable practices or tax breaks for sustainable practices -- they can level the playing field and empower companies to make changes without losing out. While voluntary schemes tend to be less burdensome for industry than regulation, there is an acknowledgement that regulation is not always the foe. Sometimes, when voluntary action is not forthcoming, it is the only way to instigate change across the board<sup>42</sup>.

<sup>39</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

<sup>40</sup> <http://sustainablefoodtrust.org/wp-content/uploads/2013/04/HCOF-Report-online-version-1.pdf>

<sup>41</sup> <https://www.foodethicscouncil.org/our-work/beyond-business-as-usual.html>

<sup>42</sup> Interview with Tove Larsson, FoodDrinkEurope

## 2) Short-term investments.

The SDGs are a 15 year plan to address global social, economic and environmental issues -- yet financial markets are not equipped to look so far ahead. Most publicly-traded companies publish, and are judged upon, quarterly financial results. While the system rewards short-term thinking, this can lead to extractive activities in countries that companies source from. For example, historically buyers and traders in the cocoa and palm oil industries have invested only in the crop itself so as to extract maximum value, with no thought for the impact on the land, ecosystems or local communities -- although this is now starting to change. There is a lack of financial incentive for investors to look to the long term<sup>43</sup>, particularly as the costs associated with transitioning to more sustainable practices can be considerable.

For example, shifting to regenerative agriculture is a long-term endeavour that yields returns over 10-15 years, but without a long-term relationship and guaranteed support from customers farmers are unable to bridge the costs.

**Solution: Changing investors' views.** Companies must encourage a sea-change in investors' attitudes away from the pursuit of quick financial gain. This means helping them to understand that, by taking a longer-term approach to business and investing in relationships, they can promote environmental protection, ensure fair distribution of value through the supply chain, and realise economic returns. One way of curbing short-term business views is to stop issuing financial results on a quarterly basis<sup>44</sup>.

Unilever abandoned quarterly reporting shortly after Paul Polman became CEO in 2009, in order to pursue a "long-term value-creation model, which is equitable, which is shared, which is sustainable"<sup>45</sup>. Polman has publicly stated that investors who are seeking short-term financial gain at the expense of long-term sustainability are not welcome at Unilever.



<sup>43</sup> <https://www.foodethicscouncil.org/our-work/beyond-business-as-usual.html>

<sup>44</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

<sup>45</sup> <https://www.forbes.com/sites/andyboynnton/2015/07/20/unilevers-paul-polman-ceos-cant-be-slaves-to-shareholders/#63a2d069561e>

### 3) SDGs are not business-friendly.

While the SDGs can provide a helpful framework for sustainable businesses, they are articulated in non-business language (even though the private sector played a role in drawing them up, alongside governments and civil society). The issues addressed by the SDGs seem far removed from most people's every day experiences. This means it is easy to broadly agree with them, but harder to see how they can be practically and actively integrated into day-to-day operations. What is more, the SDGs are not sector-specific, food companies may not easily identify those to which they can make the greatest contribution. Rather, there is a danger of cherry-picking the most accessible and trumpeting these easy achievements instead of making more fundamental changes to operations<sup>46,47</sup>.

**Solution: Re-framing the SDGs.** To encourage more businesses, and their investors, to incorporate the SDGs into their business models and contribute to implementation, the reasoning behind the goals must be translated into business-friendly language. They must be framed as necessary and good for business, rather than good for the planet and sustainable development<sup>48</sup>.

**Solution: Developing metrics.** While each of the SDGs has a set of indicators that are used for measuring general progress, there is also a need for open data and metrics for measuring business' contribution to implementation. These data and metrics must take into account the complexity and inter-connections between the goals and businesses' needs. This is one area in which partnerships between industry and academia could help bridge the knowledge gap<sup>49</sup>.

### 4) Limited knowledge and resources:

Competition is not necessarily bad, particularly when it is a 'race to the top' between companies seeking to be the most sustainable. But where the ultimate aim is a sustainable future for all and there is a need to find solutions quickly as possible, going it alone can be inefficient, as individual companies have limited knowledge and finite resources to develop solutions.

**Solution: Pre-competitive partnerships.** There are already some fine examples of pre-competitive cooperation between food companies over sustainability issues, such as the RSPO, FReSH, and the SAI Platform, but there is a pressing need for more<sup>50</sup>. By combining their knowledge and resources, companies can make more significant advances for the good of everyone than they can when working alone.

<sup>46</sup> [https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development\\_Business%20Forum%20write%20up\\_FINAL.pdf](https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development_Business%20Forum%20write%20up_FINAL.pdf)  
<sup>47</sup> [https://www.just-food.com/analysis/why-are-food-companies-aligning-with-un-sustainable-development-goals\\_id138131.aspx](https://www.just-food.com/analysis/why-are-food-companies-aligning-with-un-sustainable-development-goals_id138131.aspx)

<sup>48</sup> [https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development\\_Business%20Forum%20write%20up\\_FINAL.pdf](https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development_Business%20Forum%20write%20up_FINAL.pdf)  
<sup>49</sup> <https://www.foodsecurity.ac.uk/news/report-explores-role-uk-food-business-achieving-un-sustainable-development-goals/>

<sup>50</sup> [https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development\\_Business%20Forum%20write%20up\\_FINAL.pdf](https://www.foodethicscouncil.org/uploads/publications/150707%20Food%20and%20farming%20for%20development_Business%20Forum%20write%20up_FINAL.pdf)  
and [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

### 5) Lack of joined-up thinking.

There is a tendency to view the food industry as made up of a series of parts (farming, processing, manufacturing, distribution, retail, food service, etc), and to under-estimate the interconnections and influences between each stage in the supply chain. This makes it difficult to devise and implement joined-up sustainability solutions from field to fork<sup>51</sup>.

**Solution: Partnerships through the supply chain.** As noted above, long-term relationships with farmers and raw material suppliers are key to effective and ensuring long term supply arrangements that are in everyone's best interests. There is also scope to explore new business models that are grounded in sustainability and address power and remuneration imbalances inherent within the food supply chain, such as collaborative, farmer-owned business models<sup>52</sup>.

### 6) Complex global supply chains.

While manufacturers and their suppliers increasingly have traceability procedures in place for major food components (for food safety reasons even more than for sustainability), it is not always possible to trace back each and every minor ingredient. Consequently, suppliers that deal only in minor ingredients are unlikely to feel the same degree of pressure to adapt from their customers -- yet their sourcing of raw materials can still have major environmental and social impacts<sup>53</sup>.

**Solution: Tools for mapping supply chains.** Some tools and services already exist that can give food companies greater insight into sustainability their supply chains -- such as, for example, a software solution provided by SIM Supply Chain Information Management<sup>54</sup>. In addition, mapping supply chains for particular commodities and specialist raw materials is another area in which the food industry could benefit from partnerships with academia<sup>55</sup>.



<sup>51</sup> [https://www.foodethicscouncil.org/uploads/180122\\_Food%20farming%20&%20climate%20change%20-%20Business%20Forum%20write-up\\_FINAL.pdf](https://www.foodethicscouncil.org/uploads/180122_Food%20farming%20&%20climate%20change%20-%20Business%20Forum%20write-up_FINAL.pdf)

<sup>52</sup> [https://www.oxfam.org/sites/www.oxfam.org/files/file\\_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf](https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-journey-to-sustainable-food-btb-190416-en.pdf)

<sup>53</sup> <https://www.foodethicscouncil.org/uploads/2014%20SustainableFoodSupplyChainsReport.pdf>

<sup>54</sup> <https://www.simsupplychain.com/>

<sup>55</sup> <https://www.foodsecurity.ac.uk/news/report-explores-role-uk-food-business-achieving-un-sustainable-development-goals/>

## 7 Conclusion

The food and drink industry has made significant strides towards improving its sustainability in recent years, but progress has been led largely by pioneering manufacturers and ingredients suppliers that recognise the long-term business sense in environmental and social responsibility. To stimulate more radical, accelerated action, there is a need for new business models and practices to be adopted across the board, by companies large and small and throughout the food supply chain.

While the food industry has a vital role to play in improving its own sustainability record, it cannot effectively address the complex array of issues by working in isolation. Progress can be significantly enhanced by working in partnership.

- Cross-sector partnerships -- with governments, civil society and academia -- take executives outside of their existing networks, introducing them to new ideas and ways of working and allow all stakeholders to explore how they can support sustainability efforts.
- Pre-competitive partnerships, in which companies combine knowledge and resources, can enable the industry as a whole to move forward more quickly and efficiently than when companies work in isolation.
- Partnerships through the supply chain -- between manufacturers, ingredients suppliers, farmers and producers -- are key to long-term business approaches and new, collaborative business models that can redress power and value imbalances in the supply chain.

This paper does not pretend to provide a comprehensive roadmap to food industry sustainability, but by identifying barriers to progress and proposals for overcoming them, it is hoped that it will inspire more companies to change the way they operate for the common good.

### Methods and acknowledgements

This paper was informed in the first instance by the Sustainability Masterclass held during the Fi Conference at Food ingredients Europe in November 2017, including presentations by the ingredients companies featured in the case studies and a panel discussion entitled *Is the food industry doing enough to support sustainability?*. The information and opinions presented at the conference were supplemented by desk research to identify and draw upon reports from a variety of industry, government, civil society and media sources that have addressed various aspects of sustainability in the food supply chain. Finally, a small number of interviews were conducted with prominent figures dedicated to sustainable and ethical food and farming.

This paper was researched and written by Jess Halliday on behalf of UBM. The author thanks the following individuals for their contributions: Dan Crossley, executive director of the Food Ethics Council; Patrick Holden, founding director and chief executive of the Sustainable Food Trust; and Tove Larsson, director of environmental affairs at FoodDrinkEurope.

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