Plating Up Progress

PART 1

An investor briefing on the risks and opportunities for food retailers, caterers and restaurant chains in the transition to healthy and sustainable food systems

About Plating Up Progress

This report is an output of Plating Up Progress, a Food Climate Research Network (FCRN) and Food Foundation project. Plating Up Progress evolved from a workshop in 2016 to discuss how food sustainability and health metrics might be used by stakeholders such as investors in assessing food industry progress. The project has two main aims. Firstly, it aims to build a consensus on metrics and reporting mechanisms that can help stakeholders to assess food industry progress in contributing to the transition to sustainable and healthy diets. Secondly, it aims to build a consensus around these metrics and a coalition of stakeholders who can advance their uptake through appropriate reporting mechanisms.

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Executive summary

This briefing, the first of a two-part series, provides investors with an overview of the sustainability and nutrition-related risks and opportunities that exist within the food industry. Its specific focus is on food retailers, caterers and restaurant chains within the FTSE sub-sectors of Food Retailers & Wholesalers, and Restaurants & Bars.

Our food systems are responsible for approximately 30% of human-made greenhouse gas emissions[1], 70% of freshwater withdrawals[2], and are key drivers of both terrestrial and marine biodiversity loss[3,4,5]. We are experiencing the dual global nutritional challenges of obesity and hunger[6], poverty issues such as farmers' wages persist across the global food industry[7], and yet a third of the food that we produce is lost or wasted[8]. These challenges are complex and formidable, but not unsurmountable. 'Fixing food' is possible with a transition that involves the protection and restoration of natural habitats, widespread adoption of sustainable farming practices, tackling global food waste and, crucially, dietary shifts. We need to eat 'less and better' meat, more plant-based food, and less energy-dense, nutrient-poor food. Food retailers, caterers and restaurants are in a unique position to influence the required transitions in consumption and production, being both gatekeepers to our diets and the funnel through which most commercially produced food is channelled.

Investors have a key role to play in facilitating this transition by engaging with companies to set appropriate targets and to report on performance on these diverse but interrelated challenges. The physical risks of inaction (climate change, biodiversity loss, and the impacts on human health) are too significant to be ignored. The transition is, in some cases, already underway. Healthy and sustainable diets are receiving increased attention from policy makers and consumers, presenting both regulatory and market-based risks and opportunities within the food industry. Companies best prepared for these changes will most likely thrive; those stuck in unsustainable business models stand to lose. Investors need to increase expectations on companies to report more clearly on their progress towards the transition.

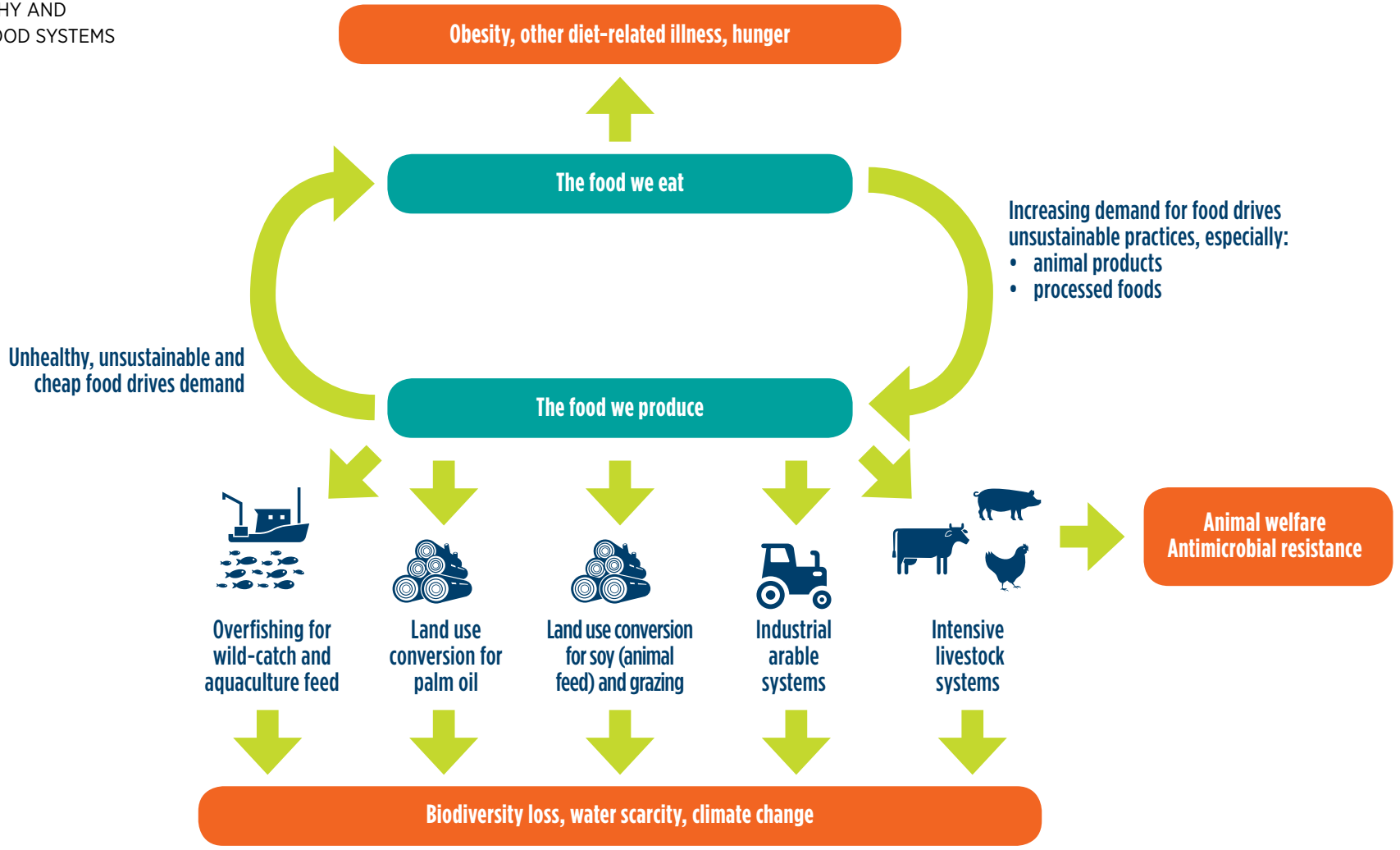
Our second report, to be released in September 2019, will provide an analysis of current disclosures by food retailers, caterers and restaurants in the UK. It will propose a set of metrics to fill current disclosure gaps, especially for the required dietary shifts, and make a 'call to action' for investors to increase expectations on companies to report against these metrics and to track their progress.

What are the key challenges?

Food systems are responsible for approximately 30% of human-made greenhouse gas emissions[1], 70% of freshwater withdrawals[2], and are key drivers of both terrestrial and marine biodiversity loss [3,4,5]. The livestock systems that contribute to many of these challenges also carry additional concerns around animal welfare and antimicrobial resistance. From a human perspective, we are experiencing the dual global nutritional challenges of obesity and hunger[6]. Many people working in the food industry struggle to earn a living wage, and human rights abuses persist across the global food system[7]. A third of the food that we produce is lost or wasted[8] but, if dietary shifts towards 'western diets' continue, demand for food could increase globally by a further 50% by 2050[9]. While progress is being made in some cases, the message is clear: we need an urgent transition towards healthy diets from sustainable food systems. See **Figure 1** for the key challenges; see **Figure 2** for how food production and consumption impacts planetary and human health.

FIGURE 1: EIGHT KEY ISSUES OF CONCERN

FIGURE 2: FOOD CONSUMPTION AND PRODUCTION COMBINE TO DRIVE UNHEALTHY AND UNSUSTAINABLE FOOD SYSTEMS



What does a sustainable and healthy food system look like?

A robust evidence base has emerged showing that the transition to healthy and sustainable food systems will require a combination of shifts towards sustainable food production, food waste reduction and, crucially, dietary changes[10, 11, 12]. Simply producing food more efficiently will not be enough. The projected global increase in demand for food, especially for Western diets, will outweigh potential production-side improvements[13, 14, 15]. **What we eat matters as much as how we produce it.**

Dietary changes will require much lower consumption of meat and dairy foods, higher consumption of vegetables and whole grains, and minimal consumption of processed foods that are high in fat, sugar or salt[16]. (see **Box 1**).

BOX 1: KEY DIETARY CHANGES NEEDED

- **'Less and better' consumption of animal products, especially within 'Western' diets**
- **'Better' means animal products that are consumed need to come from systems with:**
  - **o Sustainable animal feed inputs**
  - **o Positive impacts on biodiversity**
  - **o Sustainable water use**
  - **o High animal welfare**
  - **o Responsible antibiotic use**
- **Increase in consumption of plant-based foods, especially vegetables, pulses and legumes and fibre-rich plants**
- **Reduction in consumption of foods that are high in fat, sugar or salt, including processed meats.**

'Less and Better' meat, fish and dairy

From an environmental perspective, we need a dietary shift towards 'less and better' animal products. The need for 'less' is no longer seriously challenged – **a reduction of at least 70% in European countries and America** has been proposed[12]. Most of the focus has been on red meat, especially beef, due largely to cattle's high methane emissions. Poultry, however, also has significant environmental impacts through its dependency on animal feed, especially soy - a major driver of land use conversion resulting in loss of biodiversity-rich habitats and the carbon stored within them. Eating less beef but more chicken could "reduce methane emissions but, because all livestock consume high volumes of animal feed, shift the causes of carbon-rich habitat loss from beef to chicken. **the "livestock problem" is not just a "beef problem".**

Red meat versus white meat

Arguments have been put forward that well-managed grass-fed cattle systems have the potential to sequester carbon and to use land that is unsuitable for growing crops. However, the carbon sequestration is limited, reversible and highly context specific, and does not mean that these approaches can solve "the livestock problem" at current or projected volumes of meat output.

As discussed, a specific concern would be a scenario where consumption shifted from beef to poultry. This could simply shift the burden from cattle's methane emissions to poultry's need for animal feed. The impacts of the soy industry on natural habitats in South America already illustrate how this might play out.

Fish and seafood

With a growing human population, future demand for fish will probably need to be met by increased aquaculture production, which is (like the poultry industry) very dependent on external feed sources. Developing sustainable feed sources for aquaculture remains a key challenge.

Meat alternatives

In response to the heavy environmental costs of livestock production, the lab-based meat sector has emerged as a potential solution for alternative proteins. Although these present their own challenges, they could play an important role in our dietary shifts. Uncertainties remain around the actual environmental benefits of these alternatives, although **the general assumption is that they will have lower overall impacts on climate change, biodiversity loss and water use**[17, 18].

As an emerging industry, it is not yet clear how much healthier these alternatives will be compared to traditionally produced meat, fish or plants that are naturally protein-rich[19], or how far they will serve as truly sustainable alternatives when other issues such as affordability are considered[20]. It is important to remember that, in richer countries, protein deficiency is not really an issue, so we can consume less protein.

Less energy-dense, nutrient-poor food

Increasing consumption of **highly-processed foods that are high in fat, sugar or salt are important drivers of the obesity crisis**. High consumption levels of some animal products, specifically red meat and processed meat, has been linked to various cancers[21]. Processed foods also often contain palm oil, which remains a driver of deforestation, and leads to the loss of carbon-rich and biodiverse habitats. Reducing the amount of processed food we eat would reduce pressure on deforestation and biodiversity loss by reducing demand for palm oil. Importantly, replacing the palm oil (which is a high yield commodity) with another oil or fat could simply shift the land-use burden to another oil crop that needs even more land. A systems approach is needed where we consider demand for oils and fats across the board. Reducing demand for these processed foods in the first place could make a zero land conversion world more attainable.

More plant-based foods

The health impacts of our diets cannot just be attributed to unhealthy processed food. Recent research has estimated that, globally, 11 million deaths and 255 million disability-adjusted life years are attributed to poor diets[22]. Leading factors are high intake of salt, and **low intake of whole grains, nuts and seeds, and fruit and vegetables**. The health and nutrition case for increasing consumption of vegetables is incontrovertible. Plants have consistently lower climate change impacts. Legumes and pulses are also good sources of protein, with relatively low environmental impacts. While fruits can be high in sugar, they are rich in important micronutrients and dietary fibre.

Research has estimated that, globally, 11 million deaths and 255 million disability-adjusted life years are attributed to poor diets.

Protecting vulnerable habitats

The need to protect land and marine habitats that are vulnerable to demand for palm oil, soy, beef and seafood is vital, but hardly breaking news. Certification schemes such as the Roundtable for Sustainable Palm Oil (RSPO), while imperfect and not immune to criticism, aim to certify no loss of primary forest, and no clearance of high conservation value or high carbon stock habitats. The Roundtable for Responsible Soy (RTRS) is a more recent initiative and, with only 2% of soy currently certified, has not yet reached a critical mass to make a significant difference. Similar schemes exist for both wild-catch seafood and for aquaculture (such as the Marine Stewardship Council and the Aquaculture Stewardship Council).Notwithstanding the limitations and criticisms of current schemes, the need to avoid further land conversion and marine biodiversity loss is both non-negotiable and urgent. **Reducing overall demand for commodities such as palm oil and soy would make it more achievable**, and speaks again to the need for dietary changes.

Improving farming practices

Land degradation is becoming increasingly recognised as a global problem, with **20% of cropland showing declining trends in productivity**[23]. Some estimates suggest that, if soil degradation continues, we could have no more than 60 harvests left[24].

Whilst uncertainty remains around the most definitively sustainable farming practices, methodologies and frameworks such as SAFA (Sustainability Assessment of Food & Agriculture), LEAF (Linking Environment And Farming, leafuk.org), certification schemes such as organic and monitoring systems like Cool Farm Tool (coolfarmtool.org) are all examples of on-farm practices.

Managing water

Improvements in water management are vital at a farm level, across the food value chain, and especially in regions where water scarcity is an issue. Whilst livestock can be particularly water-intensive and is therefore an ongoing issue, this is also true of some horticulture systems that rely on irrigation rather than rainfall. This means that, while eating less meat can reduce water requirements in food systems, there is also a **need for better water management across all farming systems.**

Food waste

Food waste and losses occur across the value chain, making it a cross-cutting issue for both consumption and production. **1.3 billion tonnes are wasted each year, at a value of around $1 trillion**, and contributing 8% of global greenhouse gas emissions: all stakeholders need to act, from farmers to processors, retailers, caterers and consumers[24].

TAKE-AWAY MESSAGE :
Healthy and sustainable food systems require dietary shifts, habitat protection, sustainable food production and reductions in food waste.

A key role for food retailers, caterers and restaurant chains

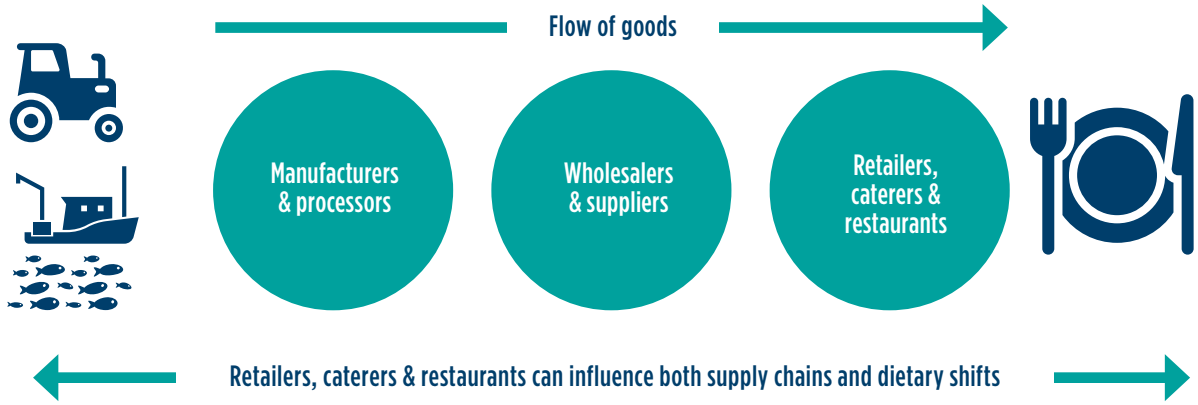
"Fixing food" will require action from companies across the value chain, although the risks and opportunities will vary, for example, between protein producers and processed food manufacturers.

Food retailers, caterers and restaurants are in a unique position to influence both consumption and production shifts, and can act as a litmus test for progress across the industry. They are both the gatekeepers to our diets and the funnel through which most commercially produced food is channelled.

Put simply, the shifts in our diets need to happen in these sectors (see **Figure 3**). Whilst other companies such, as food manufacturers, can also influence both consumption and production, the connection with customers is more immediate and direct with retailers, caterers and restaurants.

In the next section of this report we identify the risks and opportunities that relate to these sectors. In our second report we assess disclosure levels across the largest UK food retailers, caterers and restaurant chains to identify where disclosure gaps, risks and opportunities exist in reality. See the Appendix for the major UK food retailers, caterers and restaurant chains that will be included in our second report.

FIGURE 3: RETAILERS, CATERERS & RESTAURANTS ARE UNIQUELY PLACED TO INFLUENCE DIETARY SHIFTS & SUSTAINABLE FOOD PRODUCTION



"Food retailers, caterers and restaurants are in a unique position to influence both consumption and production shifts."

So what? Risks and opportunities for investors

The case for change is clear, but why does this matter to investors?

Initiatives have emerged to address specific risks and opportunities in various food industry sectors, such as:

- **Access To Nutrition Initiative (ATNI)**
- **Farm Animal Investment Risk and Return (FAIRR)**
- **CDP (Carbon, Forests, Water)**
- **Business Benchmark on Farm Animal Welfare (BBFAW)**

Less work has been done to look at risks and opportunities in a systemic and interconnected way, how solving one problem can inadvertently create others, and the crucial role of dietary shifts.

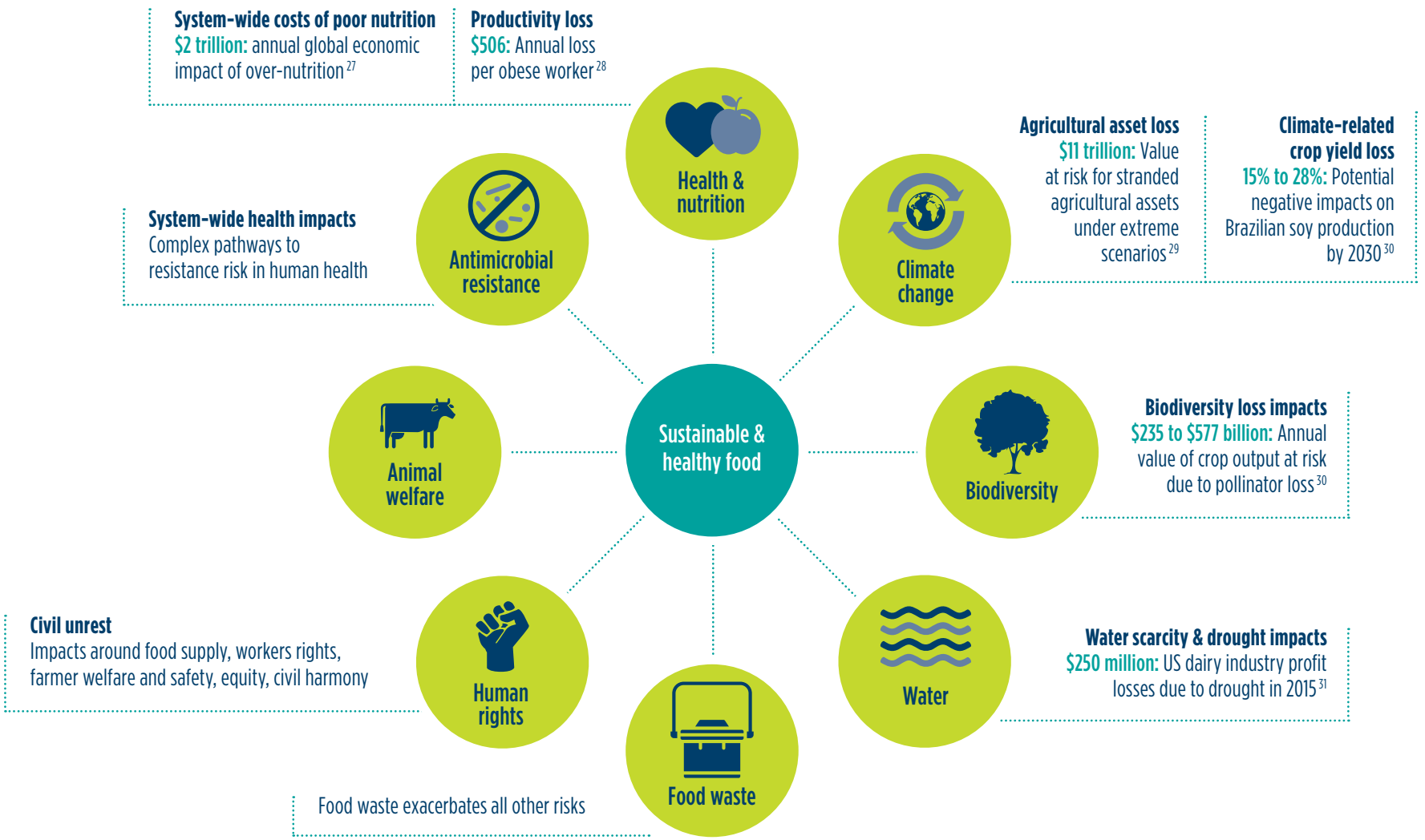
In this section we outline the key risks and opportunities at both a system-wide level and for food retailers, caterers and restaurants.

System-wide risks

System-wide risks exist and extend beyond the food industry itself (see **Figure 4** for just some of the system-wide impacts of not 'fixing food'.). The physical risks to society from climate change, water scarcity, biodiversity loss, and the societal costs of an unhealthy food system, will impact the wider economy as well as individual food companies (for example, flood damage from extreme weather events and rising costs for health services from poor diets). Tipping points in earth systems could be reached through land conversion in the Amazon, for example, and these impacts would be seen far beyond the food industry[26]. This means that other sectors will be affected and impacts could be felt across portfolios and funds. Investors who adopt passive strategies and are invested across whole markets could be especially exposed to these system-wide risks.

TAKE-AWAY MESSAGE :
What we eat and how we produce food contributes to system-wide risks. Inaction is not an option.

FIGURE 4: SOME OF THE WIDER SYSTEM RISKS THAT IMPACT BEYOND RETAILERS, CATERERS AND RESTAURANTS



Risks and opportunities for food retailers, caterers and restaurant chains

Because food retailers, caterers and restaurants represent the meeting point between the food we eat and the food we produce, they are potentially at the sharp end of regulatory or market-driven changes that affect food supply, prices and demand for new products.

Physical risks

The physical risks to these sectors mainly concern food supply and price volatility. Whilst these impacts would be felt directly and immediately by the food producers themselves, a ripple effect will also occur down the value chain[32], providing additional (and as yet poorly understood) risk. Downstream food businesses such as retailers can currently change suppliers and avoid direct sourcing issues, but over time the opportunity to change suppliers could be reduced as food productivity and prices become more volatile. To put physical risks into perspective, one UK supermarket's risk analysis found that only 5% of their fresh product range will not be affected by climate change[33]. Mitigating these risks involves a clear understanding of supply chain dependency, working with suppliers to improve resilience, and transitioning away from foods that are creating the risk in the first place.

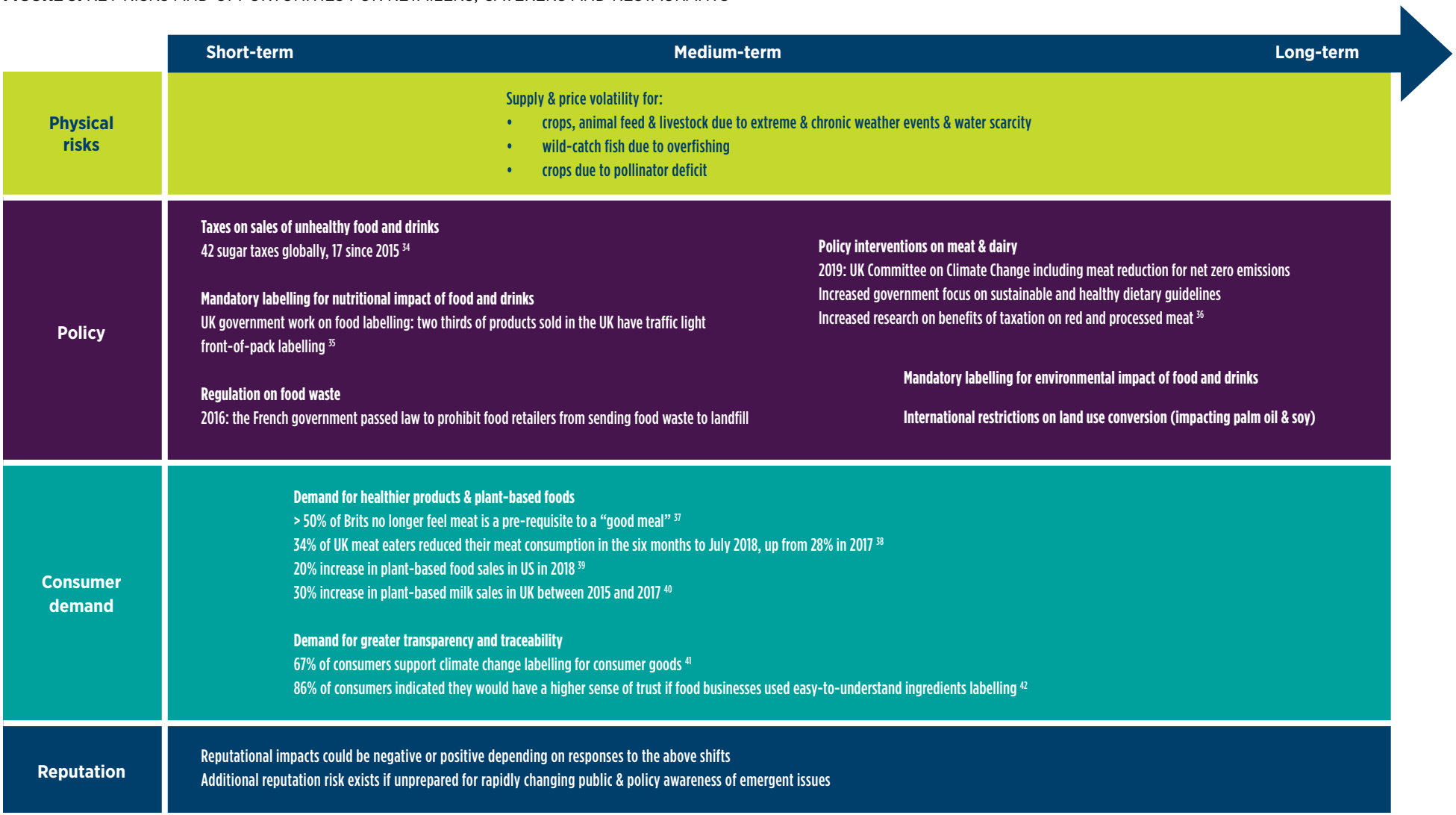
Transitional risks and opportunities

Based on workshop discussions with investors, we have identified the main transitional risks and opportunities relating to changes in **regulation**, trends in **consumer demand**, and **reputation**. High revenue dependency on sales of foods that are both unhealthy and environmentally damaging exposes businesses to risk from both regulation and changes in consumer demand. Poor supply chain management and traceability leaves businesses open to risks from demand for food transparency (be it consumer-driven or regulatory). Opportunities exist where revenues are more aligned with healthy and sustainable food, and where supply chain management is strong. Likewise, companies with diversified product ranges or menu options are more likely to be able to adapt to shifts in regulation or consumer preferences.

Figure 5 shows the main risks and opportunities for food retailers, caterers and restaurants.

"The main transitional risks and opportunities relate to changes in regulation, trends in consumer demand, and reputation."

FIGURE 5: KEY RISKS AND OPPORTUNITIES FOR RETAILERS, CATERERS AND RESTAURANTS



Policy interventions on health and sustainability issues

To date, regulatory interventions have largely focused on health outcomes, for example standards and targets on levels of salt, saturated fat or sugar in products. Sugar in particular has been targeted by fiscal interventions: the UK Soft Drinks Industry Levy has led to significant reformulations by drinks manufacturers and retailers. Voluntary programs are also often seen as warning shots for future regulatory change, and these policies may be extended to other products and broadened to include other health-related issues. Investor interest is strengthening, with Schroders' recent report on sugar showing how investors are re-appraising company performance against sugar regulation. In the UK, the 2019 ShareAction campaign on sugar and childhood obesity is shining a light on UK-operating retailers and food manufacturers. Food-related environmental taxes are currently less advanced, although policies around food waste are emerging. Livestock taxes, for example, represent more of a medium-term risk, as interventions to address the environmental impacts of livestock enter the political discourse. Retailers, caterers and restaurants most able to prepare for and respond to these changes will be better placed to capitalise on opportunities and mitigate risks.

Growth in demand for healthy and sustainable food

The increase in demand for healthier and more sustainable products in the UK has seen growth in reduced calorie snacks[43]. The UK market for ethical products grew to more than **£81.3 billion in 2017**, with demand for sustainable fish growing by nearly **37% in 2016**[44]. In Ireland, Just Eat sales of vegan meals reportedly increased by **987% in 2017** alone[45]. UK-based fast-casual chain **Leon saw record growth in revenue of nearly 25% in 2018**, with 64% of its sales being vegetarian and 55% vegan[46]. US retail data showed a **20% increase in sales of plant-based foods**, compared to a 2% increase in sales of all food categories in 2018[39]. Whilst coming from a low base, these trends represent significant market growth areas for food businesses that are able to capitalise on the opportunity.

Increased investment in plant-based foods

Investment in plant-based meat alternatives in the US market totalled $673 million in 2018[47]; cell-based meat alternatives saw a **capital investment increase of 169% between 2017 and 2018**[48]. Plant-based foods company **Beyond Meat saw a 215% increase in revenue during Q1 2019** compared to 2018, driven largely by growth in retail and foodservice sectors[49]. Traditional meat producers have begun diversifying into slaughter-free products and meat-alternative trends are also emerging in Asian markets[40]. While these trends are still relatively new, retailers, caterers and restaurants that are able to develop, market and sell healthier and sustainable options are better positioned to capitalise on the opportunities. Those with less flexibility in their product offerings will likely find themselves losing market share over time.

Reputation in a rapidly changing world

Reputations can be enhanced or damaged depending on a company's ability or failure to meet customers' expectations, respond to regulatory changes, or fulfil previous commitments. Industry league tables, increasingly vocal celebrities and documentaries that expose both health and environmental impacts of our food system can all influence civil society's perception of companies and have a positive or negative impact on reputations. Supply chain management is vital if companies are to mitigate these risks. Failure by individual companies to meet industry-wide targets on voluntary commitments such as sugar reduction can also negatively impact reputation through media exposure (for example, newspapers highlighting companies failing to meet sugar reduction targets in the UK,[50]). Similar risks can exist for failure to meet environmental goals such as zero deforestation targets, if publicly announced commitments are not followed up by improved performance[51].

Modelling risks and opportunities

The level of dependency by an individual company on revenues from unhealthy and/or unsustainable foods determines their level of exposure to the risks outlined in Figure 5. In turn, the extent to which they have opportunity to shift their business in favour of healthy food produced through sustainable systems also varies (see **Figure 6**).

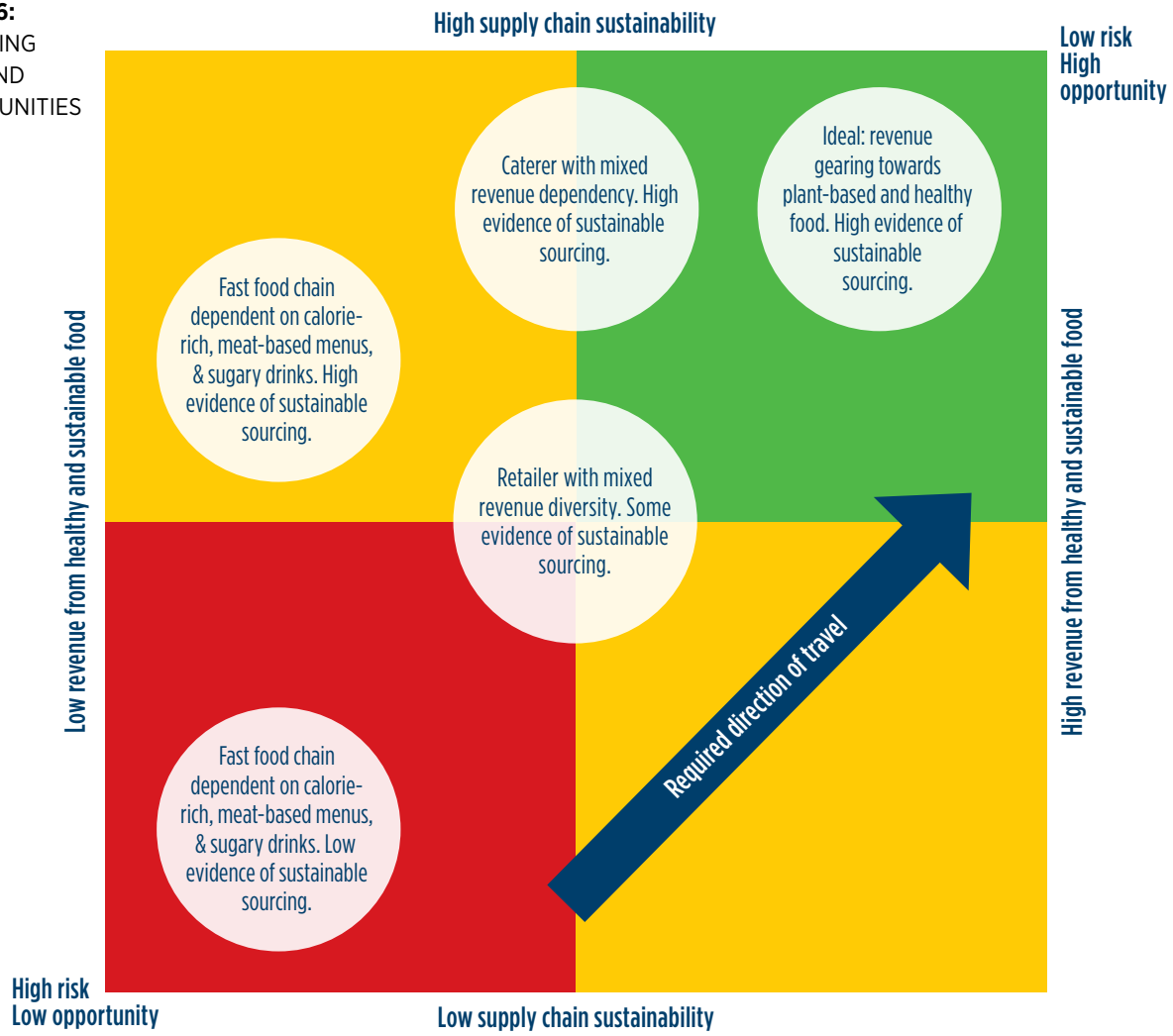
Ideally companies should pursue two paths:

1. diversification of revenue dependence towards healthier and more sustainable products
2. improvement of supply chain sustainability of the products sold

Improving performance on both dimensions is the ideal response (see **Figure 6** with examples of potential relative positions of food retailers, caterers and restaurants). The transition will not always be easy, and short-term obstacles will exist for some, but greater opportunities exist for food businesses that are on that transition pathway.

Retailers, caterers or restaurant chains that are heavily dependent on unhealthy or unsustainable foods are open to policy interventions and consumer trends that might make those products unpopular or less profitable. Weak evidence of supply chain sustainability leaves businesses vulnerable to similar risks. Additional reputational risk can occur if that company is seen to be lagging behind its peers across these issues. On the flip side, a company with clear targets to reduce business dependency on such products, and to manage its supply chain sustainability, is better placed for the transition to sustainable and healthy food systems.

FIGURE 6: MODELLING RISKS AND OPPORTUNITIES



In order to transition to healthy diets from sustainable food systems, there are key shifts that we will need to see in retailers, caterers and restaurants. See **Table 2** for the required transition to sustainable and heathy food in these sectors.

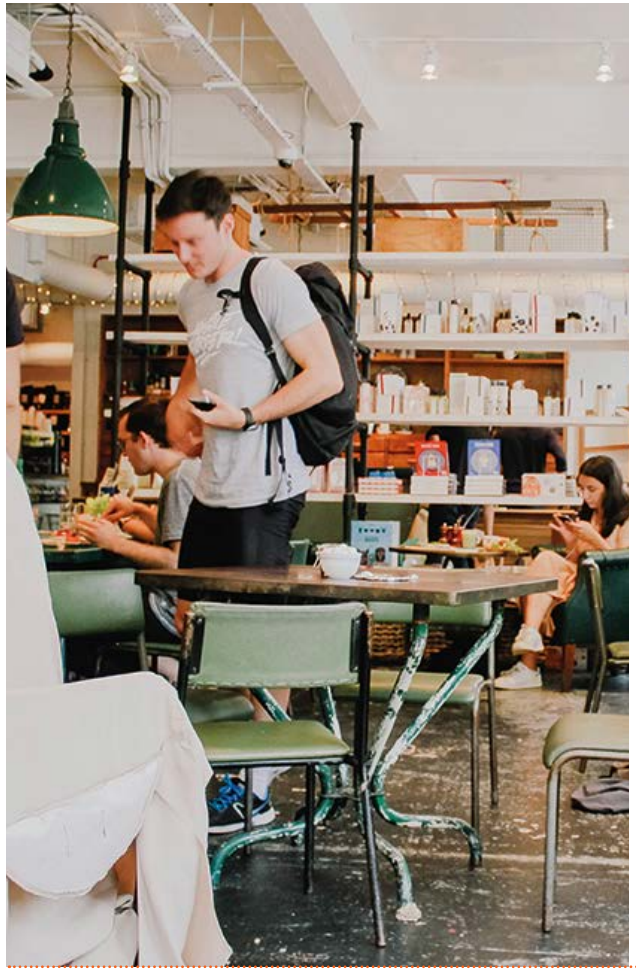


TABLE 2: THE FOOD RETAILERS', CATERERS' & RESTAURANTS' TRANSITION TO SUSTAINABLE AND HEALTHY FOOD

	Product portfolio & sales	Supply chain
	Shift away from animal products	Suppliers of animal products should: • reduce GHG emissions • not contribute to land use conversion (either directly or indirectly through feed) • reduce water use • have high animal welfare standards • involve minimal use of antibiotics • be sourced from sustainable fisheries
	Shift away from processed foods: • high in fats, salt and sugar • processed red meats	Processed and branded foods should: • reduce content of fat, salt and sugar • use sustainable palm oil, if palm oil is used at all
	Shift towards: • fruits and vegetables • protein-rich vegetables and alternative proteins • foods rich in fibre	Plant-based production should: • reduce GHG emissions from energy & transport • use recognised sustainable farming practices (eg. organic, integrated pest management) • reduce water use
Cross-cutting issues	Human rights across the value chain Reduction in food waste in direct operations & in the supply chain. Facilitate reductions in food waste for customers Pricing & promotions that allow affordability for all Responsible marketing of food from both a health and sustainability perspective	

What needs to happen next?

Food has a vital role to play in mitigating environmental impacts including climate change and maintaining the earth systems upon which we rely. The food we eat is also making us ill, with significant economic consequences for society. Time is not on our side and we cannot cherry pick which of these challenges we tackle. Importantly, we know that solving these diverse problems will require both changes in our diets and in the ways in which we produce food. Food retailers, caterers and restaurants are uniquely placed to influence both. Food businesses that are best prepared for the transition to sustainable and healthy food will most likely thrive. Those dependent on business models rooted in the current system could be most at risk. The transition may be bumpy for some, but inaction is not an option.

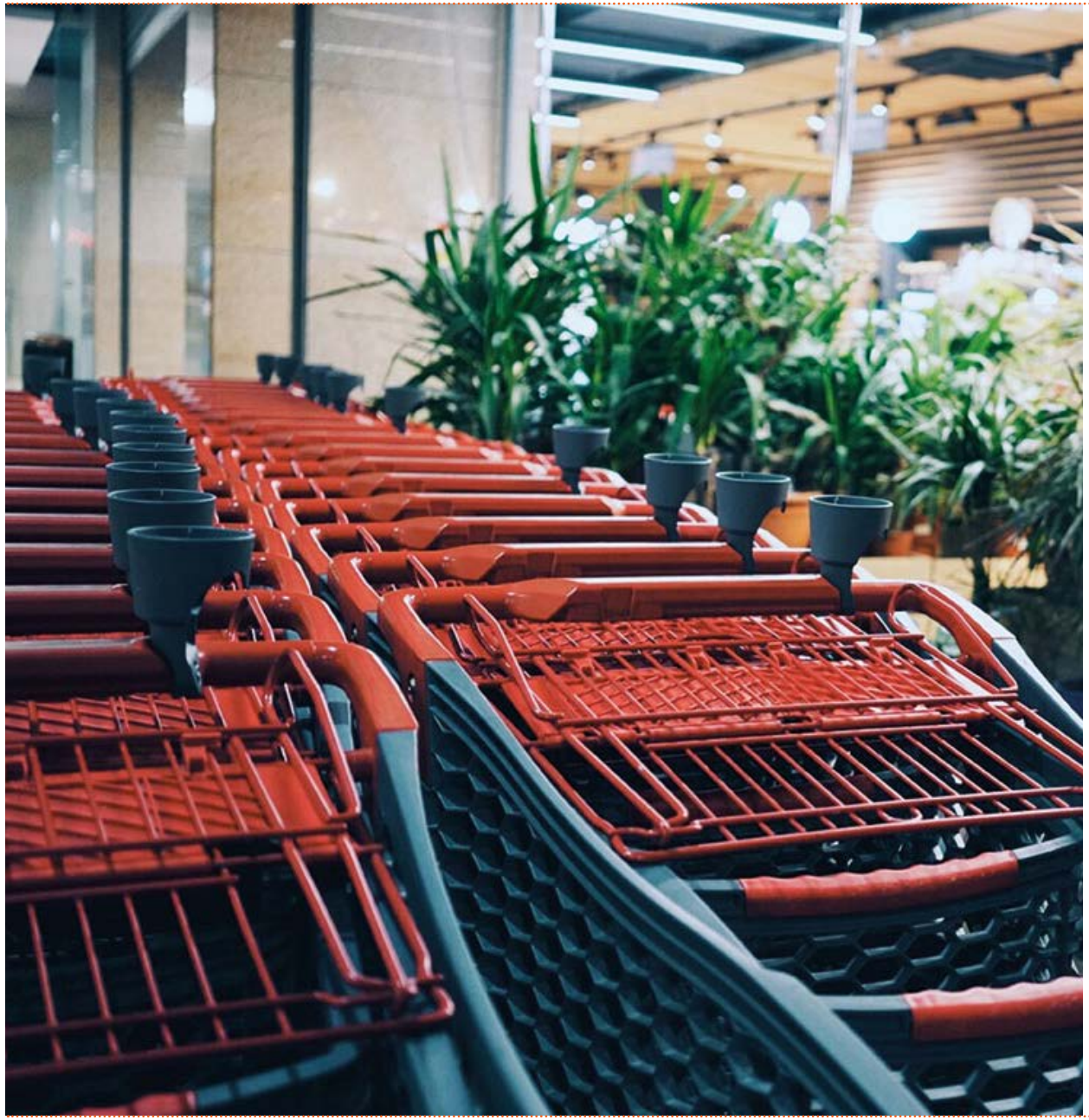
In this report we have focused mainly on food system challenges that relate to environmental and health impacts, whilst acknowledging cross-sector issues such as human rights and food waste. It is imperative that:

- businesses set targets that relate to dietary shifts, as well as supply chain sustainability
- businesses regularly report on, and track, progress against these targets in a consistent and comparable way
- investors build these metrics into their risk assessments and engage with businesses on setting ambitious targets that accelerate change.

Plating Up Progress

PART 2

Our next report will take a closer look at the existing disclosure mechanisms and, using the UK as a test case, provide an analysis of how well food retailers, caterers and restaurants are currently reporting in line with the recommendations made in **Table 2**. We will be identifying where disclosure gaps exist and making a call to action for investors and banks to engage with businesses to set clear targets that fill these gaps.



Appendix

Major food retailers, caterers and restaurant chains operating in the UK

Food retailers	Ownership
Tesco Plc	Plc
J Sainsbury Plc	Plc
Asda Group Ltd (Wal-Mart Stores Inc)	Plc (Walmart Inc)
WM Morrison Supermarkets	Plc
Iceland Foods Ltd	Private
Waitrose	Employee owned partnership
Coop	Cooperative
Marks & Spencer Plc	Plc
Ocado Plc	Plc
Aldi south group	Private
Lidl UK GmbH	Private

Caterers & Restaurants	Ownership
Mitchells & Butlers	Plc
McDonalds	Plc
Greene King	Plc
JD Wetherspoon	Plc
Whitbread	Plc
Compass Group	Plc
YUM! Brands	Plc
Dominos Pizza	Plc
Greggs Plc	Plc
SSP	Plc
The Restaurant Group	Plc
Restaurant Brands International	Plc
Sodexo	Plc
Aramark	Plc
ISS Facilities Services	Plc
Young's	Plc
Elior	Plc

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