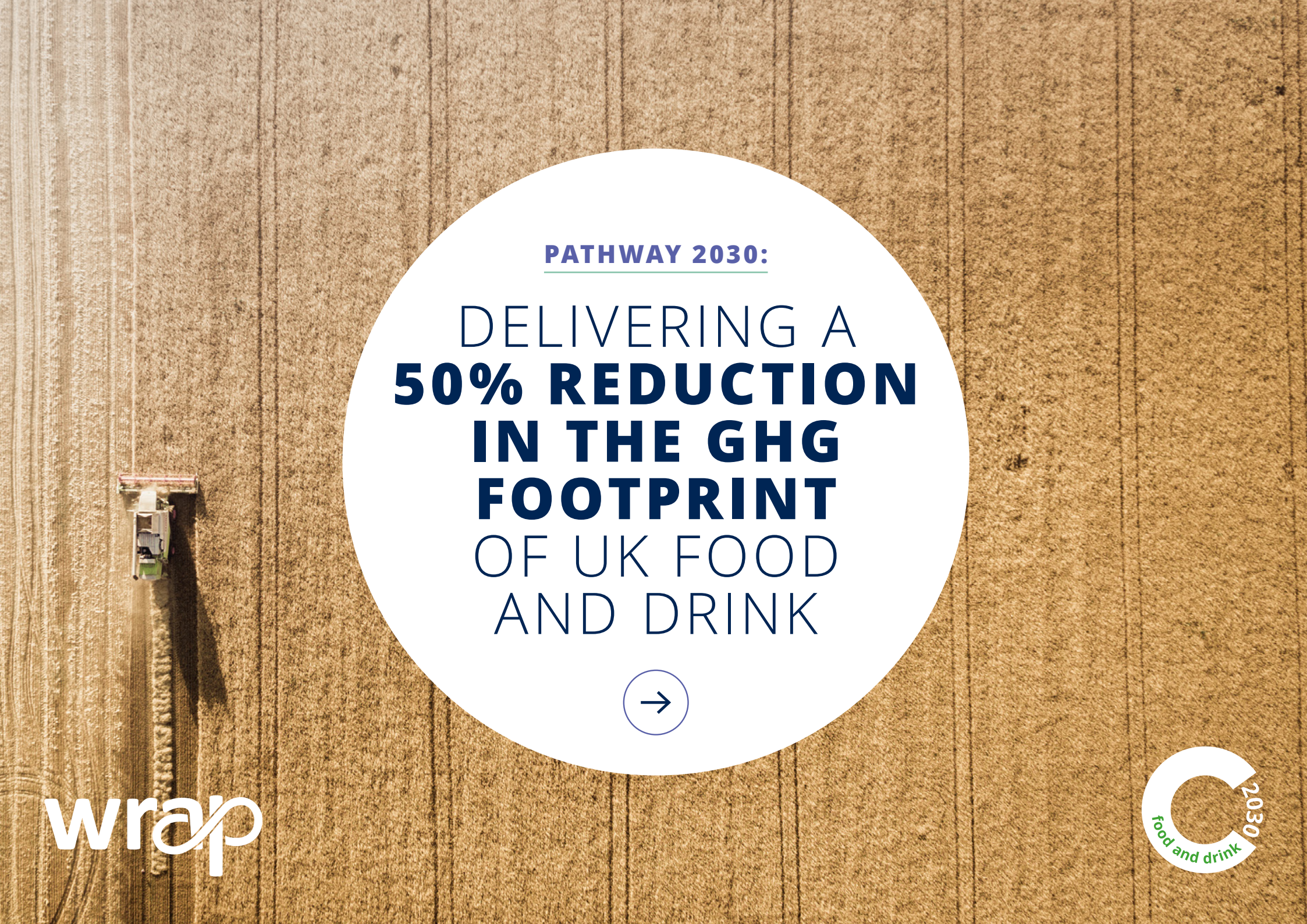


PATHWAY 2030:

DELIVERING A **50% REDUCTION IN THE GHG FOOTPRINT** OF UK FOOD AND DRINK

wrap

food and drink 2030

SUMMARY

THE CRITICAL ROLE OF FOOD AND DRINK

Food systems are major contributors to greenhouse gas (GHG) emissions, both in the UK and around the world – accounting for around one-third of total emissions. That means that stakeholders within those systems – stakeholders who together make up the food and drink sector – have a critical role to play in tackling climate change and ensuring a net zero future.

Organisations across the UK food system are recognising that they have a responsibility in reducing GHG emissions, for instance by signing up to the **Courtauld Commitment 2030** (Courtauld 2030) and dedicating themselves to achieving the collective target of reducing emissions by 50% by 2030 (from 2015).

*Please note: This is a summary version of the research findings. The full report, UK Food System GHG Emissions, can be found **here**.

Setting targets is the first step. It is important that we now collectively accelerate action in meeting them. A new GHG emissions model for the UK food and drink system has been developed to help focus this action.

For the first time, the research gives a clear picture of the GHG emissions associated with the UK food system*:

- How food system GHG emissions have changed from 2015 to 2019.
- Where GHG emissions 'hotspots' remain in the UK food system (including in supply chains overseas).
- Priority areas for action in the short term to help achieve the targeted reduction by 2030.

> Courtauld 2030 has a target to deliver a 50% absolute reduction in GHG emissions associated with food and drink consumed in the UK by 2030 (against a 2015 baseline)

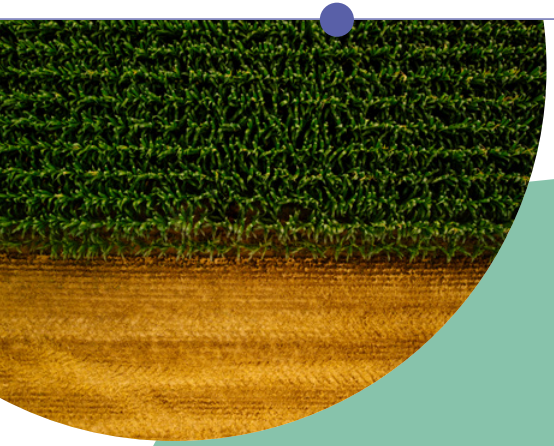
WHERE THE UK FOOD AND DRINK SECTOR NEEDS TO ACT MOST URGENTLY

WRAP's landmark report, **UK Food System GHG Emissions**, highlights the critical role that the food system has to play in reducing GHG emissions, and shows where organisations in the sector can focus their efforts most effectively.

In particular, it sets out five priority actions that organisations in the food and drink sector need to take most urgently, if the UK is to meet its target of net zero emissions.

This new research follows on from WRAP's earlier report **Net Zero: why resource efficiency holds the answers** (March 2021), in which we unveiled new insights on how resource efficiency and resource sufficiency can cut greenhouse gas emissions.

1. Continuing to focus on decarbonising their operations – such as by using renewable energy, and low-carbon refrigerants, heat and transport.
2. Developing a better understanding of emissions throughout their wider supply chains.
3. Meeting their commitments to zero deforestation in their supply chains.
4. Taking action to reduce food waste. This is a 'win-win', bringing financial benefits as well as helping the environment. It is particularly important to prioritise the reduction of waste of the kinds of food – such as meat – which could have the greatest impact on reducing emissions.
5. Influencing consumer behaviours, especially in following dietary guidelines, and reducing food waste.



TACKLING CLIMATE CHANGE

THE FOOD AND DRINK SECTOR'S ROLE

The production and consumption of food has a huge effect on climate change, and it is important to raise awareness of this fact among all stakeholders in the food system; not just food and drink businesses but policymakers and governments as well.

In the UK, the total carbon footprint of the food and drink that we consume is equivalent to around 35% of our total GHG emissions (though not all of these emissions occur in the UK). Emissions occur at many different points in the food system.

CO_2e

35%

The equivalent of around 35% of total UK emissions come from the production and consumption of our food and drink

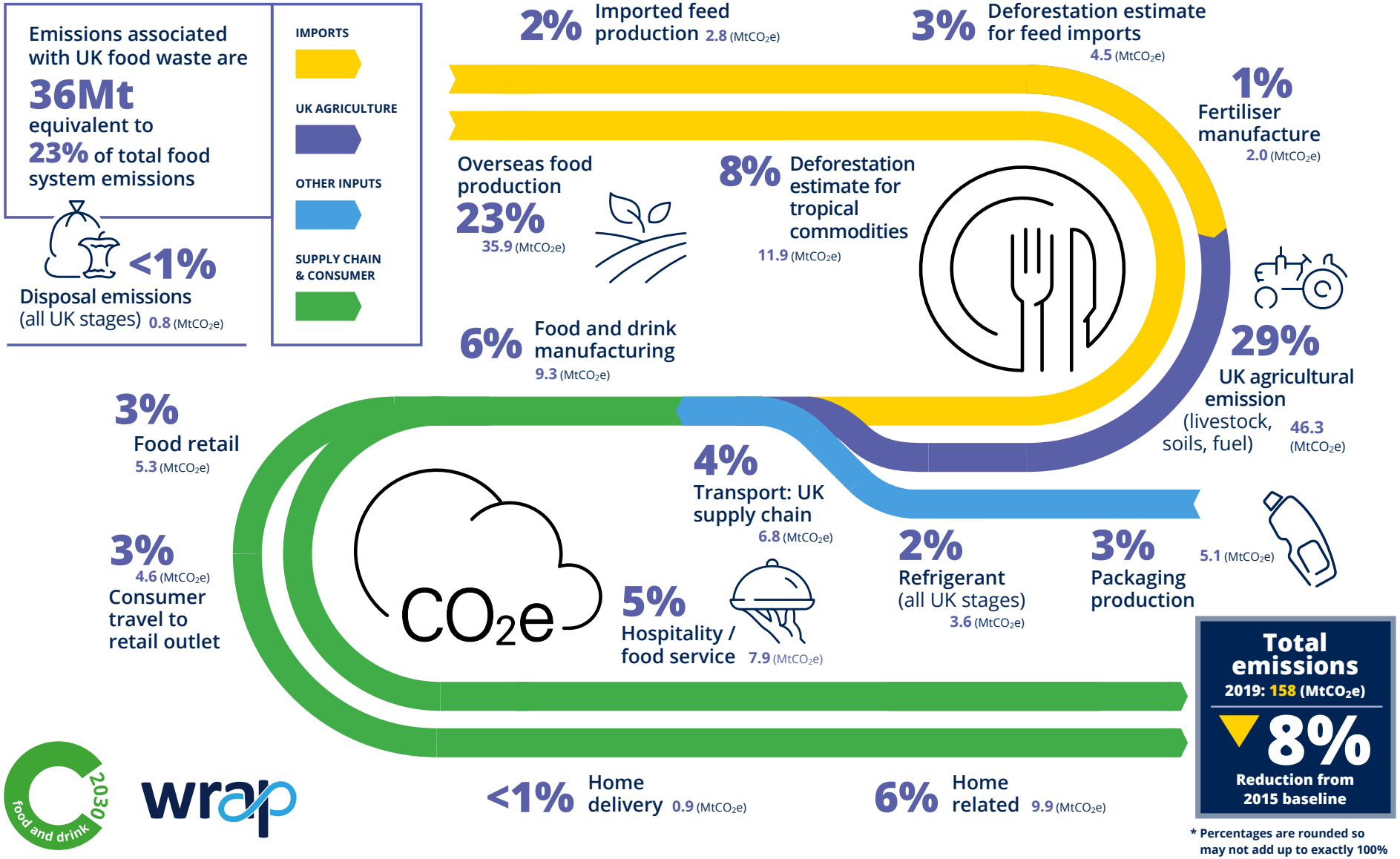
> WRAP has set out the tangible reductions that can be made simply by focussing on food and drink as key part of climate action. A 50% reduction in the years to 2030 is possible, but we need action as much as talk

Marcus Gover, CEO, WRAP

That means that the UK food and drink sector has an integral role to play in tackling climate change, by reducing emissions across the food system, and helping us reach the UK's target of net zero by 2050.

The infographic on the next page summarises where GHG emissions arise in the UK food system. Please see the full technical report, **UK Food System GHG Emissions**, for a full set of data sources, assumptions and limitations.

UK FOOD SYSTEM EMISSIONS FLOWS 2019



* Percentages are rounded so may not add up to exactly 100%

FOOD AND DRINK AND GHG EMISSIONS

MEETING A NEED FOR EVIDENCE

As an evidence-based organisation, at WRAP our aim is to provide accurate, wide-ranging information, to help organisations in the food and drink sector take targeted action to reduce GHG emissions.

In keeping with our approach of 'Target, Measure, Act,' we know that for the new Courtauld 2030 target to result in effective action, there is a need for robust evidence, showing:

- Where and how reductions can best be achieved.
- Where we should focus our efforts;
- Where we should push for a faster pace of change.
- Where we need to fill gaps in our understanding.

We also need a robust means of monitoring progress over time – to ensure that actions being taken are having the right effect.

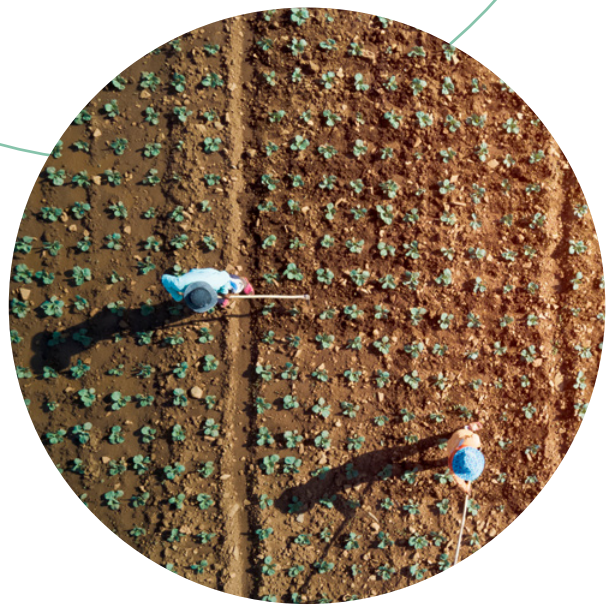
This means looking wider than has been possible before. To gain a true picture, we need to look at the entire food system: from farmers and other primary producers, to food processors, retailers, and citizens too. It is incumbent on the whole food supply chain to take action, and WRAP has an important role in bringing together organisations from across the sector, taking a whole-food-system approach.

WRAP's new report is the most up-to-date and comprehensive analysis of GHG emissions across the entire UK food system. Importantly, that also means looking beyond the UK's borders, to include overseas supply chains. To ensure that we don't just offshore our emissions, we need to consider the UK's wider carbon footprint – including the effect of food that is grown overseas for consumption in the UK.

> "This is the most up-to-date and comprehensive analysis of GHG emissions across the entire UK food system"

WRAP'S NEW RESEARCH:

A CLEARER, WIDER PICTURE



WRAP's new report – *UK Food System GHG Emissions: total food and drink consumption footprint and pathway to a 50% reduction by 2030* – sets out:

- The scale of the emissions reductions that have been achieved between 2015 and 2019.
- Where 'hotspots' still exist in GHG emissions across the UK food system.
- The action that urgently needs to be taken, if we are to meet the Courtauld 2030 target of a 50% reduction by 2030.

The report introduces a new GHG emissions model for the UK food system, bringing together emissions estimates from across the food and drink value chain. The model looks not just at the growing of food, but at the electricity, fuel, refrigerants, transport and packaging that are involved with processing that food and getting it to consumers. It considers not just UK agricultural products and ingredients, but products and ingredients that are grown overseas and transported to the UK.

Building this detailed picture at every stage means that, for the first time, we can consider the implications of individual changes across the whole food system. For example: what will the scale of emissions reductions be if industry commitments on renewable energy are met? How much effect would it have if organisations in the sector met their commitments on reducing deforestation? What would be the impact of meeting targets to halve food waste?

The report provides a valuable basis for targeted, collaborative action against the Courtauld 2030 targets, which also contributes to the UK's national action plan for bringing all GHG emissions to net zero by 2050.

Importantly, the new food system GHG model also provides a robust means of monitoring the UK's total food system emissions – an important metric highlighted in the **National Food Strategy**.

> "In 2019, total food system emissions were 158 $MtCO_2e$, a reduction of 8% from the 2015 baseline"

WRAP'S GROUND-BREAKING REPORT

KEY FINDINGS

WHERE WE ARE NOW

The infographic on **page 5** shows a detailed breakdown of food system emission flows – with further detail on changes over time, and uncertainties, outlined in the report.

The report shows that:

- There has been an absolute reduction of around 8% in GHG emissions associated with the UK's food and drink system between 2015 and 2019.
- Around 80% of this reduction is due to decarbonisation of the UK's electricity grid, which most affects the parts of the food supply chain that use significant amounts of electricity (such as food processing, food service, retail and households).
- GHG emissions associated with UK agriculture, although large in volume, have remained largely static in recent years.
- GHG emissions associated with overseas production are hard to quantify, but significant (more than one-third of the total – across food, ingredients and feed – including deforestation), and in combination have remained largely static in relative terms.
- Packaging emissions are low in comparison with the emissions associated with producing food, and have remained largely static.
- Transport emissions in the UK have moderately increased, but refrigerant emissions (including during transportation) have decreased, as a result of concerted industry action.
- Successful food waste prevention and diversion strategies are resulting in low and decreasing emissions associated with food waste management. Other research shows that these reductions are the tip of the iceberg in terms of the greenhouse gas emissions associated with food waste reduction.

CO_2e

8%

There has been an absolute reduction of around 8% in GHG emissions associated with the UK's food and drink system between 2015 and 2019.

THE PATHWAY TO A 50% REDUCTION

WRAP used this evidence to model, for the first time, the scale of GHG emissions reductions that could come from interventions across the food system, such as eliminating deforestation in supply chains, decarbonising energy and transport, shifting diets to adhere to national guidelines, and preventing food waste.

Though the food system is extremely complex and there are many uncertainties involved in estimates, WRAP's research shows that a 50% reduction by 2030 is indeed possible, largely through meeting existing policy, business and sector-level commitments and targets. However, urgent action needs to be taken to meet these commitments.

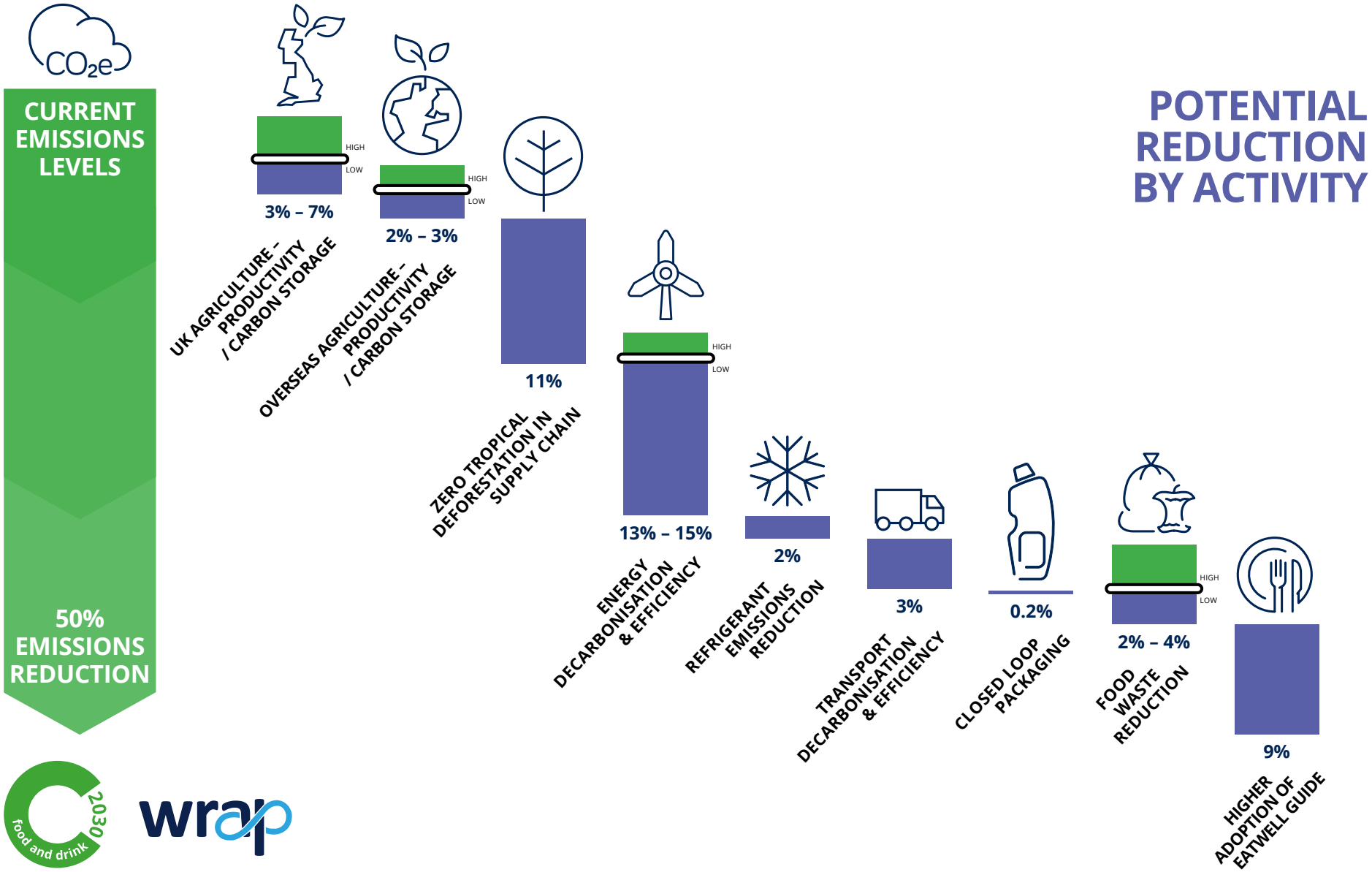
Achieving the 50% reduction requires:

- Fast progress on agricultural productivity and land management measures (such as peatland restoration, enhanced soil carbon storage and enhancing hedgerows) – e.g. in the UK this needs to be on a linear trajectory towards meeting **NFU Net Zero 2040** estimates, with a similar rate of progress across the EU as a minimum.
- Organisations meeting commitments to zero deforestation in their supply chains (particularly around tropical forest commodities such as palm oil, soy, cocoa, coffee, etc).
- Renewable energy commitments being met – and wider energy infrastructure delivering reduced emissions across the electricity grid.
- Significant progress on decarbonising heat.
- Progress in decarbonising transport, such as more widespread adoption of electric vehicles, better route planning and fuel efficiency for HGVs.
- At least halving UK food waste, and prioritising the type of waste prevention efforts that will have the most impact, which includes preventing waste from arising in the first place (rather than relying too heavily on diverting surplus food).
- More widespread adoption of government dietary recommendations, as set out in the **Eatwell Guide**, and more integrated messaging to consumers around food waste and consumption.

The infographic on the next page summarises how the 50% reduction by 2030 can be achieved. Please see the full technical report, **UK Food System GHG Emissions**, for a full set of data sources, assumptions and limitations.

> WRAP's research shows that a 50% reduction by 2030 is indeed possible, but only if action is taken urgently

A PATHWAY TO ACHIEVING 50% EMISSIONS REDUCTION BY 2030



THE COURTAULD 2030 COMMITMENT:

REDUCING EMISSIONS BY 50% BY 2030

Through the Courtauld Commitment, WRAP has brought together organisations from across UK food and drink to make the sector more sustainable.

The Courtauld Commitment is WRAP's flagship voluntary agreement for the industry and enables collaborative action across the entire UK food system, to help the sector achieve global environmental goals.

The most recent version of the Commitment – **Courtauld 2030** – sets a new and ambitious target of achieving a 50% reduction in the GHG emissions that are associated with food and drink consumed in the UK by 2030 (taking 2015 as a baseline).

This is a step-change in terms of ambition for emissions reduction in the sector. The new target is aligned to the Paris Agreement's 1.5°C pathway as adopted at COP 21, and the UN's Sustainable Development Goals around emissions reductions, as well as wider food industry targets – in particular the British Retail Consortium (BRC) and Food and Drink Federation (FDF) targets for getting to net zero by 2040.

Organisations from across the UK's food and drink sector have committed themselves to the Courtauld 2030 target. But in order to reach it, we need concerted and collaborative action across the food system.

WRAP has a crucial role in this, leading Courtauld 2030 and bringing the food and drink industry with us, monitoring and reporting on progress, and showing organisations in the sector where they can have the greatest impact. It's a model that can help deliver a net zero future for UK food and drink and, crucially, it can be applied to food systems around the world. To recalibrate the global food system we will need concerted action across the globe.

> "This is a model that can help deliver a net zero future for UK food and drink and, crucially, it can be applied to food systems around the world"

WRAP'S GROUND-BREAKING REPORT

URGENT ACTION

WRAP's new research shows that the 50% GHG reduction can be achieved, but only if organisations across the food system act urgently, in conjunction with the UK government, to:

Continue to focus on decarbonisation of operational emissions – through renewable energy, low carbon refrigerants, heat, transport, etc. Resources are available to help organisations to do this, such as from the UK Business Climate Hub, SME Climate Hub and WWF, as well as platforms such as Manufacture 2030. The Food and Drink Federation is also due to publish a Net Zero Handbook containing practical guidance in the areas of heat and transport decarbonisation.

Develop a better understanding of wider supply chain emissions
For many food and drink businesses, emissions linked to the production of purchased products and ingredients ('Scope 3') are the most significant contribution to their total GHG emissions, but are also the most difficult to address. Without proper measurement, it will be increasingly hard to know how to reduce these emissions. WRAP – through the Courtauld Commitment 2030 – has a programme of work focused on this challenge. This includes:

- Agreeing consistent measurement principles for Scope 3 accounting.
- Developing practical guidance tailored specifically to food and drink businesses.
- Working on the forward path for more systematic ways of collating data along the supply chain.
- Piloting supplier engagement approaches.

Meet their zero deforestation commitments in their supply chains
One of the most significant interventions in terms of scale of emissions reductions could be through ensuring that no tropical deforestation emissions are linked to UK food and drink supply chains. WWF has set out clear guidance for this, while initiatives working in support of this objective include the UK Sustainable Palm Oil Initiative, UK Sustainable Soya Initiative and UK Global Resources Initiative.

Act on food waste
This is a win-win, and efforts can be tailored to maximise contributions towards corporate net zero targets. Actions to prevent food waste can be taken rapidly and will pay early dividends, as well as providing wider bottom-line benefits. Not all food waste prevention is equal in terms of realising GHG emissions reductions: it is important to avoid food waste arising in the first place, and to prioritise efforts to avoid wasting types of food – such as meat – which could have the greatest impact on reducing emissions. **Meat in a Net Zero World** is the cross-industry vision to optimise productivity and minimise waste from farm to fork.

Influence consumer behaviours
Especially in following dietary guidelines, and reducing food waste. The food industry has a critical role to play, for example through:

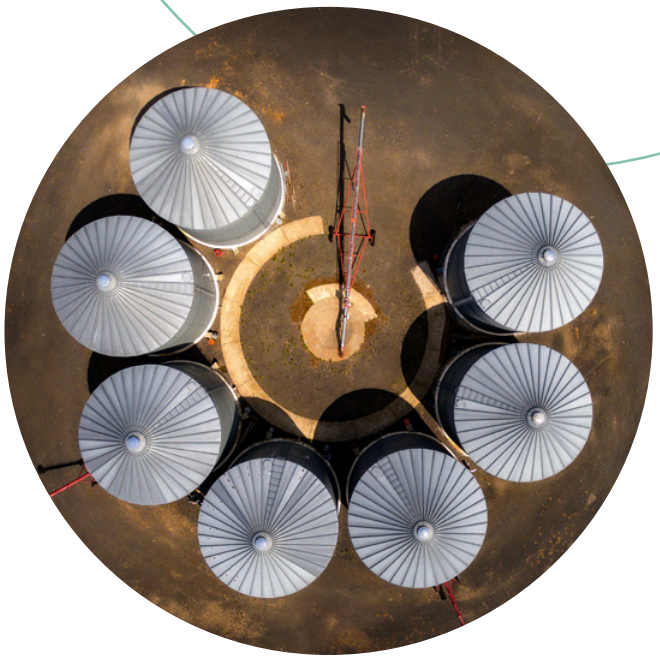
- Clear and consistent messaging.
- Product reformulation.
- Engaging consumers to promote sustainable, healthy diets.
- Providing clear information to enable consumers to make informed decisions around food choices.
- Helping consumers to buy and consume only as much food and drink as they need.
- Providing guidance to consumers on how to store, prepare and cook food as eco-efficiently as possible.

With WRAP's support and by working together, the UK food and drink sector can be instrumental in getting GHG emissions to net zero in the UK.

> Act on food waste: this is a win-win, and efforts can be tailored to maximise contributions towards corporate net zero targets

WRAP'S GROUND-BREAKING REPORT

POLICY MAKERS



WHERE POLICYMAKERS NEED TO ACT MOST URGENTLY

Policymakers also have an important role to play in enabling the UK food and drink industry to reduce its GHG emissions. This begins with an acknowledgment of the importance of the food system in tackling climate change, and the critical role it has in helping to reduce emissions to net zero.

This analysis suggests that priorities for UK policymakers are to:

1. Consider the UK's wider consumption footprint – to prevent simply offshoring our emissions.
2. Help UK farmers to accelerate progress in boosting agricultural productivity and adopting land management measures that maximise farmland carbon storage.
3. Further investigate how interventions could be targeted to best effect to reduce the UK's overseas footprint, as well as UK territorial emissions.
4. Specifically, strengthen efforts to halt deforestation in global supply chains.
5. Help the food and drink sector to accelerate progress in heat and transport decarbonisation.
6. Continue to focus on driving down food waste, for example through mandatory food waste reporting, reducing citizen food waste (both in and out of the home) and considering more ambitious reduction targets.
7. Help consumers to make informed choices around healthy, sustainable diets, such as through the Eatwell Guide.
8. Take forward work on improving the measurement of GHG emissions, to make it easier for organisations in the food and drink industry to monitor their progress in reducing emissions.

WRAP

OUR ROLE

If we are to reach our goal of a 50% reduction in GHG emissions in the UK food and drink sector, organisations throughout the food system need to work together. WRAP also has a key role to play, in realising the vision of Courtauld 2030.

Through our **new report**, we've given the UK food and drink industry valuable evidence, helping it to see the progress that has already been made, and the areas where urgent action still needs to be taken.

We hope that these findings will act as a further stimulus to the sector, to help deliver the 50% reduction, keeping the food and drink sector aligned to a 1.5°C pathway. And in the months and years to come, WRAP will continue to monitor progress towards the Courtauld goal, to ensure that actions that are taken are having the right effect.

Getting to a 50% reduction in emissions from the UK food system won't be easy. The scale of the challenge is significant, and the need to act is becoming increasingly urgent. We need to act in a concerted way, if we are to succeed. But already, organisations across the UK food system have shown their commitment and willingness to collaborate, by signing up to the Courtauld 2030 goals.

Together we can step up to our task, and reduce GHG emissions throughout the UK food system.

> "Together we can step up to our task, and reduce GHG emissions throughout the UK food system"

FIND OUT MORE

Read the full report
UK Food System GHG Emissions: total food and drink consumption footprint and pathway to a 50% reduction by 2030

The Courtauld Commitment 2030 is a voluntary agreement that enables collaborative action across the entire UK food chain to deliver farm-to-fork reductions in food waste, GHG emissions and water stress that will help the UK food and drink sector achieve global environmental goals.

Find out more about the
Courtauld Commitment 2030

WRAP
Company Registration No. 4125764
Charity No. 1159512

Second Floor, Blenheim Court, 19 George Street, Banbury, Oxon, OX16 5BH

WRAP works across six continents with governments, businesses and citizens to create a world where resources are sourced and used sustainably.

WRAP's mission is to accelerate to accelerate the move to a sustainable resource efficient economy through re-inventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through re-use and recycling. Find out more at **www.wrap.org**

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