



# Closing the climate gap 2021

**An annual report on progress towards  
sustainable consumer lifestyles in the UK**

Ethical Consumer Research Association | October 2021

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# 1. Introduction

It is widely recognised that the next ten years will be critical in turning around global carbon emissions. As one of Ethical Consumer's contributions to this process, we plan to produce an annual report on progress towards sustainable consumer lifestyles in the UK. This 2021 report should therefore be the first in a series.

It aims to track the gap between our current combined consumption emissions and where they need to be by 2030, and to discuss how well consumers, companies and the Government are working together to achieve these goals. A second key aim of the project is to produce a simplified list of key actions for consumers, companies and governments.

There are three main reasons we are doing this research, which are covered in the next three points below.

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## 1.1

### Communicating to consumers

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Although, in the past, we have mainly focused on projects that aim to make businesses more sustainable through consumer pressure, we are increasingly being asked about consumer actions specifically to address climate breakdown. We have also noticed that there is a gap in consumer engagement between the highly complex 200-page reports issued by government committees and the occasionally inexact scientific advice generated by green celebrity bloggers.

We have therefore embarked on a project that is trying to identify 'science-based targets' for ordinary consumers, and to create a space where people can reflect and discuss what more needs to be done. Central to our approach is the idea of five simple 'Report Cards' that graphically represent key information in one place. Transforming whole societies to sustainable patterns is a complex process, and avoiding information overload is one key way not to lose a consumer audience.

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## 1.2

### Individual action is only part of the story

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At Ethical Consumer, we have long recognised that the decisions that consumers make, and around climate change particularly, are so dependent on the frameworks that government and companies provide that it is not particularly helpful to look at consumer choices or personal carbon footprints in isolation.<sup>1</sup>

Our Climate Gap reports are therefore designed to feature key consumer actions alongside what companies and governments need to do in each specific area. This can give consumers a sense that they are part of something bigger as well as highlighting some key political campaigns that might be worth supporting.

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## 1.3

### An annual check on progress is important

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As part of our work to get companies to take climate change seriously, we are expecting them to develop science-based targets for carbon reduction of their own and to report annually on how they are doing. Others are focusing on getting governments and other institutions to do the same thing. If we, as consumers or citizens, expect this of others, then there is a certain sense in applying the same logic to our own collective 'lifestyle' impacts. Although, as we see below, many others are also performing annual checks on progress, looking at it from a consumer perspective can bring new insights – such as our new 'Consumer Goods' impact area research (see below).

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## 1.4

### How this report is arranged

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This report is focused on the four 'impact areas' that we calculated to be the most important ones for consumers to reduce carbon impacts. Each impact area has a 'Report Card' which summarises the key issues on one page. The four areas are:

- Food
- Heating
- Transport
- Selected Consumer Goods

In addition, there is a 'Summary Report Card' which further distils information from each of the four cards into a single view.

The report is also published in short form in issue 193 of Ethical Consumer magazine.

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<sup>1</sup> We first wrote on this in EC27 in January 1994.

## The Climate Change Committee and our research

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The Climate Change Committee (CCC) was set up under the Climate Change Act 2008 to advise UK governments on decarbonisation<sup>2</sup>. It is an independent body comprised mainly of economists and environmental experts and its main role is to report to Parliament annually on progress made in reducing greenhouse gas emissions. It is a bit like SAGE, the group of scientific advisors that has become well known during the pandemic, in that they both issue politely exasperated reports about the need to take urgent action in key areas.

The CCC's 200-page reports have provided most of the data for three of the impact areas we are examining for this report: Food, Transport and Heating. A core element in this project is therefore trying to convert their work into something more digestible for ordinary consumers. For the fourth impact area, Consumer Goods, we have conducted our own research and extrapolated targets and campaigns from elsewhere.

We talk more about the CCC's reports and controversies with its approach in section 4 of this report, on page 21.

## There are many roads up the mountain

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There is, however, no single route to decarbonisation. We are using the 'Balanced Scenario' (see page 21) produced by the CCC for many of our targets, because it is comprehensive, based on thorough up-to-date research, and gives consumers an idea of the direction we need to be headed in. It is for this reason that we are describing this report as containing 'science-based targets' for consumers. However, there are plenty of arguments to be had with the CCC's scenario – in particular that it does not cut fast enough – and we discuss some of these in more detail in section 4.1 below. At the moment, however, while we are still such a long way from meeting even these targets, we felt that it makes sense to be using these in the first instance.

The CCC's Balanced Scenario is based around plans for decarbonisation by 2050. Where the CCC has publicly available interim goals for 2030, we have used these to assess whether we are going fast enough. Where it doesn't, we have just measured how well we are doing against linear annual cuts from now until 2030.

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2 Both UK and Scottish

## 2.

# Our Key Findings

### 2.1

#### We're not moving fast enough

The colour coding on the Summary Table opposite shows that across two impact areas, Heating and Transport, carbon reduction is not moving quickly enough (orange).<sup>3</sup> For the other two areas, Food and Consumer Goods, it appears to be moving in the wrong direction and impacts are increasing (red). Indeed, for the eight target areas we looked at and for which year on year data was available, none of these appeared to be moving fast enough.

This finding is both the most important and least important at the same time – most because it is the key question we are seeking to answer, least because we are scarcely alone in making it.<sup>4</sup> Indeed, a key role of the CCC itself (as we see below) is to perform this role. Others coming up with the same conclusions recently include Climate Tracker, the Green Alliance, and the Tony Blair Institute to name but three.<sup>5</sup>

### 2.2

#### A sustainable lifestyle is not scary

The sustainable future mapped out by the CCC for 2030 currently looks like it only requires quite modest changes to the way we live now. The summary table on page 9 lists all 12 actions consumers need to take to help make this target. Many of the main elements are starting to become familiar: cars and heating will need to be electrified, and we'll need to reduce meat, dairy and other consumption to some degree. We're planning to publish some more work on further prioritising consumer actions later this year.

Obviously, for those who are able to go beyond these targets, it does make sense to do so, not least to balance out those who won't or who are unable.

<sup>3</sup> We took the decision not to include pandemic-induced aviation reductions in these figures, as they are likely to give a false impression of longer-term trends.

<sup>4</sup> [https://green-alliance.org.uk/Net\\_zero\\_policy\\_tracker\\_September\\_2021.php](https://green-alliance.org.uk/Net_zero_policy_tracker_September_2021.php) [www.theguardian.com/science/2021/sep/15/governments-falling-short-paris-climate-pledges-study](http://www.theguardian.com/science/2021/sep/15/governments-falling-short-paris-climate-pledges-study) <https://institute.global/policy/planes-homes-and-automobiles-role-behaviour-change-delivering-net-zero>

<sup>5</sup> How bad are bananas? Mike Berners-Lee, Revised 2020 edition p194



## The necessary political engagement work looks harder

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It is the political work we need to do as citizens that looks harder than the consumer actions. The low-carbon lifestyle expert Mike Berners-Lee, when asked about the degree to which individuals should think about balancing the need to cut their own emissions with the need to take political action, suggested a roughly 60% to 40% split in favour of prioritising political action.

It looks like UK citizens, campaigners and companies urgently need to build broad coalitions across all of the key impact areas identified in this report, exemplified by the Eating Better Alliance (an alliance of over 60 civil society organisations).<sup>6</sup> We are proposing some more work for consumers in this area in 'Next Steps' at section 7 too.

## The data available to track progress is of variable quality

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The quality of the data in this area is sometimes quite poor. For example, for 2 of the 12 areas we are trying to track (meat consumption and carbon footprints of consumer goods), the most recent available year-on-year figures published by the government are 2018-2019 and 2017-2018 respectively.<sup>7</sup>

In order to create positive motivations to take action, feedback loops showing what impact we are collectively having (or not) are important.

When you compare the time delays in publishing data for consumer markets with some of the information that financial markets can use, which are updated many times a second, it gives a sense of how skewed our economies have become towards meeting financial goals above all others.

One of our key initial contributions to this debate is therefore to ask the government to consider working to address this area particularly. A dashboard of monthly-updated figures online would be a much-needed tool in this critical moment of climate emergency.

<sup>6</sup> [www.eating-better.org/who-we-are/who-we-work-with.html](http://www.eating-better.org/who-we-are/who-we-work-with.html)

<sup>7</sup> Some of the data on consumer goods is of variable quality, with alarming amounts in "miscellaneous", "government spending" or "other" categories.

## **Governments should also make it mandatory for companies to report on their supply chain emissions**

One additional demand emerging from this whole report, and that we would like to highlight, is to ask governments to make it mandatory for all companies to report on their supply chain emissions by 2025. Although regulators are beginning to require companies to report on their own direct emissions, they are not yet requiring companies to do so for their supply chains. This is despite the evidence that often 80% of the emissions of consumer goods manufacture occurs here.<sup>8</sup> It is hard to see how we can be sure that we are collectively on target on carbon reduction, particularly around the consumer goods impacts, without this happening.

<sup>8</sup> World Economic Forum, 2022, Net-Zero Challenge: The supply chain opportunity insight report. See also Appendix 1.



## 2.6

## Summary Report Card

SUMMARY REPORT CARD 2021 (c. 75% of total consumer emissions)	Food (26%)	Heating (14%)	Transport (25%)	Selected Consumer Goods (10%)
<b>Consumer-related actions needed by 2030 in the CCC's 'Balanced Scenario' (from a 2019 baseline)</b>	c. 15% CO2e reduction	c. 23% CO2e reduction	c. 17% CO2e reduction	c. 40% CO2e reduction
<b>What reductions were achieved in the most recent year's figures?</b>	0% reduction	1% reduction	0% reduction	0.3% reduction
<b>The current climate gap. What is still needed?</b>	15% still to reduce	22% still to reduce	17% still to reduce	41% still to reduce
<b>Are we moving fast enough?</b>	No	No	No	No
<b>What does government need to do?</b>	Use public procurement. Rebalance agricultural policy.	Subsidise solutions. Provide clear framework.	Halt airport expansion. Electric car purchase subsidies.	Require companies to report on their supply chain emissions.
<b>What do companies need to do?</b>	Better impact labelling. More plant options on menus.	Develop creative funding instruments. Address the skills gaps.	Replace business travel with online working.	Report annually on supply chain emissions.
<b>What do consumers need to do?</b>	Reduce meat and dairy consumption by 20%. Reduce food waste.	Insulate. Do smarter heating. Choose heat pumps where possible.	Choose electric vehicles. Reduce air and road travel where possible.	Increase repair and buying second hand. Choose sustainable brands.
<b>Where are consumer intentions?</b>	29-39% willing	19-50% willing	24-35% willing	28-70% willing

## Key to tables:

c. = circa or approximately  
CCC = Climate Change Committee

Going in the wrong  
direction

Not moving  
fast enough

On  
target

No year on year  
data available

# 3.

# The Climate Gap Report Cards

## 3.1

## Food Report Card

FOOD REPORT CARD 2021 (c. 26% total emissions)	Meat consumption	Dairy Consumption	Food waste
<b>Consumer-related emissions reductions needed by 2030 in the CCC's 'Balanced Scenario' (from a 2019 baseline)</b>	20% reduction	20% reduction	34% reduction
<b>Where are we in the most recent figures?</b>	c.1,045g of meat per person per week (2018-2019)	c.2,713g of dairy per person per week (2018-2019)	c.8 million tonnes (2018)
<b>The current climate gap. What is still needed?</b>	20% still to reduce	20% still to reduce	34% still to reduce
<b>What were the figures in the previous year?</b>	Unknown	c. 2673g per person per week	Unknown
<b>Are we moving fast enough?</b>	Unknown	No	Unknown
<b>What does government need to do?</b>	Use public procurement. Rebalance agricultural policy. Assess future trade deals.	Use public procurement. Rebalance agricultural policy.	Mandate reporting for companies. Government funding for food waste prevention.
<b>What do companies need to do?</b>	Better carbon labelling. More plant options on menus. More investment in alternatives.	Better carbon labelling. More plant options on menus. More investment in alternatives.	Reduce supply chain waste.
<b>What do consumers need to do?</b>	Reduce meat consumption by 20%.	Reduce dairy consumption by 20%.	Reduce food waste.
<b>Where are consumer intentions?</b>	39% willing	29% willing	66% making an effort

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Estimates of emissions from our food differ wildly. DEFRA estimates food and drink consumed in the UK at about 13% of our emissions but says that this excludes land use change like deforestation.<sup>9</sup> WRAP estimates it to be 21%.<sup>10</sup> A 2010 assessment by Cranfield University put it at 30% with land use change.

There are two big reasons for the disagreement. Firstly, emissions differ wildly depending on how you produce the food. Secondly, nobody is sure how to count the emissions of land use, partly because it depends on what the land would have been if you hadn't farmed it.

When you are aiming for deep decarbonisation then land opportunity costs loom larger because you have to use every resource to its maximum potential. And land can absorb carbon through restoration of ecosystems, or through biomass with carbon capture and storage (BECCS). Taking this into account can double the effective emissions of food.<sup>11</sup>

## 3.2(a)

## Meat and dairy

UK diet	Tonnes CO2e per year
High meat eaters	2.6
Medium meat eaters	2
Low meat eaters	1.7
Vegetarians	1.39
Vegans	1

By far the biggest way that consumers can reduce the greenhouse gas and land impacts of their food is reducing their consumption of products from ruminant animals (cows, sheep and goats), due to their methane impact and the land impact of grazing. Above is one estimate of UK diets, which includes an estimate of emissions from actual land use change, although not the full opportunity costs of land use.<sup>12</sup>

The CCC's Balanced Scenario includes a 20% reduction in meat and dairy consumption by 2030 and a further 15% meat reduction by 2050.

- <sup>9</sup> DEFRA, 2021, Data download consumption emissions 1997-2018; BEIS, 2019, Greenhouse Gas Emissions National Statistics
- <sup>10</sup> WRAP, 2021, Net zero: why resource efficiency holds the answers
- <sup>11</sup> Poore and Nemecek, 2018, Reducing food's environmental impacts through producers and consumers, Science Vol. 360, Issue 6392, pp. 987-992 DOI: 10.1126/science.aaq0216
- <sup>12</sup> Scarborough et al. (2014). Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK. Climatic Change. 125. 10.1007/s10584-014-1169-1.

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### 3.2(b)

#### Food waste

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WRAP estimates that food waste makes up 3.6% of our emissions, because it has to be replaced with further production.<sup>13</sup> Householders account for about 70% of that.<sup>14</sup> The CCC includes a 50% cut in food waste on 2007 levels by 2030.

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### 3.2(c)

#### Other reductions

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Emissions from agriculture can be further reduced through changing production methods – for example, using cover crops to reduce emissions from soil, and anaerobic digestion to reduce those from manure. These are part of the CCC’s scenarios, but it is not clear how consumers can help with them, so we aren’t tracking them at this stage.

The CCC’s scenarios also involve significant restoration of forests and peatlands within the UK. Land plays a huge role in any decarbonisation scenario for both supplying biomass and absorbing carbon.

**13** WRAP, 2021, Net zero: why resource efficiency holds the answers

**14** WRAP, 2011, The water and carbon footprint of household food and drink waste in the UK

## Heating Report Card

HEATING REPORT CARD 2021 (c14% total emissions)	Home insulation installations	Heat pumps installed	Overall emissions from heating
<b>Consumer-related actions needed by 2030 in the CCC's 'Balanced Scenario' (from a 2019 baseline)</b>	14 million total installations (cumulative)	1.1 million installations per year	23% reduction
<b>Where are we in the most recent figures?</b>	197,000 (cumulative installations from 2019)	36,000 (2020)	87 million tonnes (2019)
<b>The current climate gap. What is still needed?</b>	13.8 million installations	1.06 million installations per year	19 million tonnes reduction (23%)
<b>What were the figures in the previous year?</b>	100,000 cumulative installations (2019)	33,000 installed	88 million tonnes CO <sub>2</sub> e reduction
<b>Are we moving fast enough?</b>	No	No	No
<b>What does government need to do?</b>	Subsidise. Provide clear and consistent framework. Mandate and enforce quality standards.	Subsidise. Provide clear and consistent framework. Mandate and enforce quality standards.	Subsidise. Provide clear and consistent framework. Mandate and enforce quality standards.
<b>What do companies need to do?</b>	Insulate commercial buildings. Develop creative funding instruments. Address the skills gaps,	Install heat pumps in commercial buildings. Develop creative funding instruments. Address the skills gaps.	Reduce demand through smarter heating.
<b>What do consumers need to do?</b>	Insulate your home.	Get a heat pump if suitable for your home.	Reduce demand through smarter heating.
<b>Where are consumer intentions?</b>	44% had three or more types of insulation already installed	19% likely to choose heat pump	50% willing to reduce how much they heat their home.

### Key to tables:

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Going in the wrong direction

Not moving fast enough

On target

No year on year data available

## 3.4

### Heating Report Card narrative

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Heating accounts for around 14% of our emissions. About 77% of that is from homes, 14% from commercial buildings and 9% from public buildings.<sup>15</sup>

The first priority with heating is reduction through insulation and behaviour change. The CCC includes an overall 12% in its Balanced Scenario, but some houses achieve much more – in the extreme cases more than 50%.

Achieving the 12% involves: insulation of 3 million cavity walls, 11 million lofts, 3 million solid walls and 3 million floors, including some top-ups of existing insulation. Cuts from behavioural measures contribute around 3% of the 12% reduction – more than a fifth of the total. This comes from multi-zone control (heating only portions of the house), some other smarter management using real-time displays, and low-flow shower heads.

## 3.4 (a)

### Fuelling our heating

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Once we've reduced as much as possible, we then need to heat our homes, while ditching our gas boilers.

There is general agreement that the limited supply of biomass should not be used for heating but is best reserved for other sectors. Biomass is like gold dust in a decarbonised world. Not only can you make fuels from it that are basically identical to fossil fuels, with all of those handy features that made us dependent on them in the first place – easy to store, high energy density, but you can also use it as a 'net negative' if you preserve it in buildings or burn it in a centralised point with carbon capture and storage (BECCS). Thus, you really want to save it for the places where you can make the best use of its potential. In the CCC's scenarios, some is used as back up for the electricity grid for when the wind doesn't blow, some in industry, some in the more awkward parts of the transport sector, and some as wood in construction.

Another option for more sustainable heating is direct electric heating, which can be used in desperate cases, but if everyone used it then it would raise peak electricity demand too much. Low-carbon district heating (powered, for example, by waste heat from industrial facilities) can be used where there are suitable source of heat – it covers 18% of homes in the CCC Balanced Scenario by 2050 – but it's limited.

That leaves just two options for most of our heating: heat pumps or hydrogen. Significant use of hydrogen is still a way off, and the CCC estimates that once all costs are taken into account, it is unlikely to be cheaper than heat pumps anyway. Thus only 11% of the houses in its Balanced Scenario use hydrogen in 2050<sup>16</sup>. All its scenarios are strongly heat pump led.

In its Balanced Scenario 1.1 million heat pumps are being installed every year by 2030.

<sup>15</sup> CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Buildings

<sup>16</sup> CCC, December 2020, The Sixth Carbon Budget, the UK's path to net zero.

TRANSPORT REPORT CARD 2021 (c 25% total emissions)	Annual emissions from cars	Annual emissions from aviation	Electric car registrations
<b>Consumer-related actions needed by 2030 in the CCC's 'Balanced Scenario' (from a 2019 baseline)</b>	c.40% reduction	c.13% reduction	97% of registrations by 2030
<b>Where are we in the most recent figures?</b>	74.7 million tonnes CO2e (2019)	38 million tonnes CO2e (2019)	6.5% (2020)
<b>The current climate gap. What is still needed?</b>	40% reduction (30 million tonnes)	13% reduction (4.94 million tonnes)	93.5% of registrations
<b>What were the figures from the previous year?</b>	75.1 million tonnes	38 million tonnes	3.5% of registrations
<b>Are we moving fast enough?</b>	No	No	No
<b>What does government need to do?</b>	Decarbonise electricity supply. Sense check road building. Support walking, cycling and public transport.	Halt airport expansion. Frequent-flyer levy. Encourage efficiency gains. Aviation tax reform.	EV purchase subsidies. Support rapid rollout of charging infrastructure. Mandatory zero-emission sales targets.
<b>What do companies need to do?</b>	Sell more electric vehicles. Continue innovating on decarbonising HGVs. Reduce distance travelled.	Replace business travel with online working. Increase plane efficiency. Develop sustainable aviation fuel.	Switch to electric cars and vans. Invest in charging infrastructure.
<b>What do consumers need to do?</b>	Electrify. Reduce distance travelled. Switch to lower carbon travel where possible.	Reduce flying if possible.	Replace cars with a fully electric vehicle as soon as possible.
<b>Where are consumer intentions?</b>	35% willing to reduce car travel	30% will fly less after pandemic	24% plan to buy an EV or a (much less good) PEHV in next five years

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## Transport Report Card Narrative

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Transport, including goods transport, accounts for about a quarter of our emissions. Of this, about 40% is cars, 24% flights, 12% vans, 11% HGVs, 9% shipping and 4% trains and buses.

Decarbonising transport involves a mixture of reducing travel, switching modes (e.g. from planes to trains), improving vehicle efficiency, and switching fuel. Most vehicles can be electrified, but for those that are too heavy or go too far or too fast, there is hydrogen, biomass or synthetic fuels.

The CCC Balanced Scenario includes:

- Battery-electric vehicles replace all sales of conventional cars, vans, motorbikes and plug-in hybrids by 2032.
- Some efficiency gains – e.g. the fuel efficiency of aviation improves at 1.4% per annum, compared to a 0.7% improvement in the baseline year.
- Behaviour change is modest. In the balanced scenario there is no absolute reduction in car or aviation travel, although growth is slower than that anticipated by the Department for Transport. In none of its scenarios is there a huge reduction.

The CCC's justification for not modelling a larger reduction in aviation is partly that the UK Climate Assembly, a citizens' group chosen to be representative of the population, was reluctant to reduce aviation significantly.

While surface transport and shipping emissions fall towards zero by 2050, the CCC's scenarios leave significant ongoing carbon emissions from aviation. There is a 40% reduction on 2018 levels in the Balanced Scenario. The rest has to be cancelled with land-based net negative technologies.

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### 3.6 (a)

#### Actions required by consumers

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- Replace your car with an electric as soon as it makes practical sense to do so.<sup>17</sup>
- Any travel reduction you can make will help.

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### 3.6 (b)

#### Actions required by government

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The CCC advises:

- Sales of new fossil fuel cars, vans and motorbikes should be banned by 2032.
- There needs to be a rapid rollout of charging infrastructure.
- The electricity network and smart charging systems must be upgraded to deal with the electric load.

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### 3.6 (c)

#### Actions required by businesses

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The CCC advises:

- Continued work on improving efficiency.
- It is too early to tell which zero-carbon HGV technologies will emerge as market-leaders: manufacturers must continue developing electric and hydrogen fuel cell HGVs.

SELECTED CONSUMER GOODS REPORT CARD 2021 (c10% of total)	Carbon footprints of clothing, furniture and electrical goods	Producer carbon reduction	Consumer repair & re-use
<b>Consumer-related actions needed by 2030 in the CCC's 'Balanced Scenario' (from a 2019 baseline)</b>	40% carbon reduction	100% supply chain emissions reporting by 2025	40% increase in rates of repair and buying second hand
<b>Where are we in the most recent figures?</b>	26.7 million tonnes CO2e (2018)	37% reporting (2021)	26% second-hand; 30% repaired (2021)
<b>The current climate gap. What is still needed?</b>	40.3%	63% need to report	40%
<b>What were the figures from the previous year?</b>	26.6 million tonnes CO2e	Unknown	Unknown
<b>Are we moving fast enough?</b>	No	Unknown	Unknown
<b>What does government need to do?</b>	Require companies to report annually on their supply chain emissions.	Require companies to report annually on their supply chain emissions.	Extend repairability obligations.
<b>What do companies need to do?</b>	Decarbonise supply chains. Design lower impact product lines.	Report annually on supply chain emissions. Reduce emissions in line with Paris Agreement.	Design for repairability. Price spare parts fairly.
<b>What do consumers need to do?</b>	Try to reduce overall levels of consumption where possible.	Choose brands reporting on carbon in their supply chains.	Choose second-hand products and repair where possible.
<b>Where are consumer intentions?</b>	70% have some willingness to reduce overall consumption.	28% buying from ethical companies in 2020.	49% willing to buy more second-hand. 42% will repair clothes.

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No year on year data available

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## 3.8

### Selected Consumer Goods Report Card short narrative

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As we mentioned above, the CCC does not collect much data on the impact of consumer goods because much of product manufacturing takes place overseas. This means that it doesn't state a clear target for reduction in the same way as it does for other areas. The approach we are therefore taking is to apply the CCC's overall UK targets for carbon reduction – 40% by 2030 – to imported emissions.

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## 3.8 (a)

### Carbon footprints of consumer goods

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Estimates of our consumption emissions are released annually by DEFRA using data from the University of Leeds. Partly because of its complexity, this information is released each year in May with a year lag. Because of this, the most recent available information looks at the impact of our purchases for 2018. The categories into which goods are broken down are slightly weird, but we have avoided those that we are covering in other areas of this report (like food) and chosen those that seem to have the most impact. These are clothing and footwear, furniture and household products, and electrical goods. For more detail see section 5.1 below.

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## 3.8 (b)

### Producer carbon disclosure

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Another way of measuring the carbon impact of the consumer goods we buy in the UK would be to add up the reported carbon emissions of all the companies that manufacture them and apportion them to their UK sales.

Unfortunately, proper carbon reporting by companies, including their supply chain emissions, is still in its infancy. It is very important that companies start reporting on the emissions of their supply chain, or they will not be able to demonstrate to others that they are tackling them effectively.

Because of this, this dataset initially just looks at whether they are properly reporting emissions at all. We have set a target for 100% reporting by 2025. In the event this is reached, we can move to tracking the decline (if any) in the collective reported emissions between then and 2030.

For this first report, we have looked at carbon reporting rates for 40 companies – the biggest in each of the following sectors: clothing, furniture, electrical and white goods. The detailed results appear in Appendix 1.

## Rates of repair and buying second-hand

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Because we do not know what companies are doing about their emissions (due to lack of reporting), the only action consumers can take that will currently guarantee emissions reductions is to reduce the number of new items they are purchasing.

We therefore thought that the third dataset in this action area might try to track whether any reduction might be occurring by looking at indicators like buying second hand and rates of repair.

We decided to use a consumer survey to ask a representative sample of people to tell us how many of each type of item they had bought new that year and how many they had bought second hand or repaired.

## 4.

# The Climate Change Committee and its reports

As mentioned in the introduction, the Climate Change Committee was set up under the Climate Change Act 2008 to advise UK governments on emissions targets. It is an independent body comprised mainly of economists and environmental experts, and its main role is to report to Parliament annually on progress made in reducing greenhouse gas emissions.

In order for the CCC to create targets and track progress, it has modelled a range of scenarios where different events result in different outcomes. It issued its Sixth Budget Report in December 2020. The CCC is the obvious source for targets and performance data on ‘territorial emissions’,<sup>18</sup> as its budgets provide the most comprehensive overview of the way that consumer choices interact with all the other changes that need to occur on the UK’s route to net zero emissions. There are various other decarbonisation scenarios in existence, but none that are so detailed, up-to-date, and comprehensive, with mathematically modelled targets based on information about what can be achieved at each stage.

Behavioural change is one element in its scenarios, and its behavioural modelling and recommendations were based partly on the recommendations of the UK Climate Assembly – a citizens’ group chosen to be representative of the population, which reported in September 2020.

The CCC’s scenarios are as follows:

- **Balanced** – it’s main scenario, assuming a balance of technologies and behavioural change.
- **Widespread Engagement** – more optimistic on behaviour change.
- **Widespread Innovation** – more optimistic on technology development.
- **Headwinds** – less optimistic on behaviour, greater use of hydrogen and carbon capture and storage (CCS).
- **Tailwinds** – wildly optimistic on both behaviour & technology.

Based on its Balanced Scenario, the CCC sets annual targets for certain indicators, against which it reports progress each year to parliament.

Despite some controversies with its ‘balanced pathway’ scenario (see below), we are using targets from it for our own report. We were not able to get enough detail on their ‘widespread engagement’ scenario from the CCC in time to use it for this report, but most of the 2030 targets do not appear to be too dissimilar anyway.

## Controversial areas within the CCC's approach and its Balanced Scenario

There are three particularly controversial areas within the CCC's approach and its Balanced Scenario. The first is its choice of carbon budget. CCC argues that its budget is sufficient for the UK to meet its obligations under the Paris agreement. However, others disagree, arguing that it involves the UK taking too much of the international carbon budget compared to developing countries.

The organisation Carbon Tracker for example, which looks at government actions and targets globally, says the following:

“We rate the UK's 2030 domestic emissions reduction target of at least 68% below 1990 levels as “Insufficient” when compared to its fair-share emissions allocation. The “Insufficient” rating indicates that the UK's fair-share target in 2030 needs substantial improvement to be consistent with the Paris Agreement's 1.5°C temperature limit. Given that its domestic target is Paris compatible, these improvements need to, at least partially, come in the form of additional financial support for emissions reductions achieved in developing countries. If all countries followed the UK's approach, warming would reach up to 3°C.”<sup>19</sup>

The second criticism is related: the CCC's budget relies considerably upon land-based net-negative technologies, such as Biomass with Carbon Capture and Storage (BECCS), in order to cancel out emissions.

BECCS is relied on by most decarbonisation scenarios, in which emissions invariably overshoot the carbon budget in the next few decades, and then are sucked out of the atmosphere again by BECCS in the second half of the century.<sup>20</sup> However, land-based net negative technologies like BECCS require a lot of land, raise complex governance issues, and may have damaging impacts on biodiversity. Very large-scale deployment might steer the world closer to other planetary boundaries like those associated with freshwater use and soil health.<sup>21</sup>

The CCC's Balanced Scenario removals for 2050 are mainly from BECCS, and are over 100 million tonnes CO<sub>2</sub>e/year which is not insignificant (our current total consumption emissions are about 700 million).<sup>22</sup>

<sup>19</sup> <https://climateactiontracker.org/countries/uk/>

<sup>20</sup> <https://www.carbonbrief.org/world-can-limit-global-warming-to-onepointfive-without-beccs>

<sup>21</sup> Fajardy et al, January 2019, BECCS deployment: a reality check, Imperial College Grantham Institute briefing paper no 28

<sup>22</sup> CCC, December 2020, The Sixth Carbon Budget, the UK's path to net zero.



A third related controversial area is the CCC's choices of where to allow 'residual emissions' (which need to be cancelled out with 'net negatives') and where to demand behaviour change. The CCC allows a considerable amount of residual emissions in aviation, while assuming a reasonable – though not huge – amount of dietary change. The UK government has intimated that it is unhappy about the dietary change,<sup>23</sup> while others such as George Monbiot argue that it isn't ambitious enough, and that lab-grown food will shortly be able to replace farmed food on a grand scale, lowering emissions much further.<sup>24</sup>

Questions have also been raised about how equitable it is to allocate so much of our net-negative capacity to aviation when it is largely rich people who fly. The argument on CCC's side is that it is following the recommendations of the UK Climate Assembly in this, which has some democratic weight behind it. The Assembly was very reluctant to significantly reduce aviation.

## 4.2

### Targets for non-territorial (consumption) emissions

The CCC does not currently deal with non-territorial consumption emissions in any detail because it views them as largely out of our control. It hopes that other (producer) countries will manage down their own emissions in line with the Paris agreement. In its own slightly more complex language, it says:

**"If UK territorial emissions are reduced to Net Zero and UK trading partners reduce their emissions in line with the Paris Agreement, then we estimate that UK consumption emissions would be around 90% below 1990 levels in 2050 ... around 50% of the UK's imported emissions are from territories due to be covered by Net Zero targets."**<sup>25</sup>

This approach appears to suggest that there is no space at all for consumer agency here, which is not consistent with its view in other areas. This is partly why we have introduced our own impact area calculations for this report on Consumer Goods.

<sup>23</sup> <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

<sup>24</sup> <https://www.theguardian.com/commentisfree/2020/jan/08/lab-grown-food-destroy-farming-save-planet>

<sup>25</sup> CCC, December 2020, The Sixth Carbon Budget, the UK's path to net zero, pp. 415

# 5.

## Our Consumer Goods impact area and primary research

As we mentioned above, the CCC does not collect data on the impact of consumer goods because much product manufacturing takes place overseas. This means that it doesn't state a clear target for reduction in the same way as it does for other areas.

The approach we are therefore taking is to apply the CCC's main UK targets to imported emissions. The CCC's scenarios include an interim target (on the way to net zero by 2050) of a 40% cut on 2019 levels by 2030. We are therefore suggesting that this is a reasonable target to aim for in the consumer goods area too. Other groups working in this area are also using targets that don't look too different. For example, WRAP's Textiles 2030 initiative is looking for a 50% reduction by 2030.<sup>26</sup>

### 5.1

#### Carbon footprints of consumer goods

Estimates of our consumption emissions are released annually by DEFRA using data from the University of Leeds. They are calculated using top down economic input-output models. These models start by looking at the whole economy globally, and then use economic tables that track financial flows between sectors to assign all emissions to different industries on the basis of spend. This can create emissions estimates for industries or sectors (though not for individual products).

Partly because of its complexity, this information is released each year in May with a year lag. Because of this, the most recent available information looks at the impact of our purchases for 2018. The categories into which goods are broken down are slightly weird, but we have avoided those that we are covering in other areas of this report (like food) and chosen the others which seem to have the most impact. These are clothing and footwear, furniture and household products and electrical goods. The full breakdown appears at Appendix 2. We have chosen to base our calculations on the following DEFRA datasets:

	1000 tonnes CO2e	
	2017	2018
<b>Clothing</b>	8648	8622
<b>Footwear</b>	2448	2336
<b>Furnishings, carpets etc.</b>	6790	6848
<b>Household textiles</b>	2510	2266
<b>Household appliances</b>	800	896
<b>Telephone and telefax equipment</b>	365	367
<b>Audio-visual, photo and info processing equipment</b>	5101	5415
	26,662	26,750

Our calculations show a 0.3% increase in tonnes CO2e across these impact areas year-on-year.

Because of the time delay in this dataset, and the need to sense check all our datasets by comparing them to other measurements, we looked around for other measures we could compare them too. Unable to find any, we decided to conduct our own primary research.

## 5.2

### Producer carbon disclosure

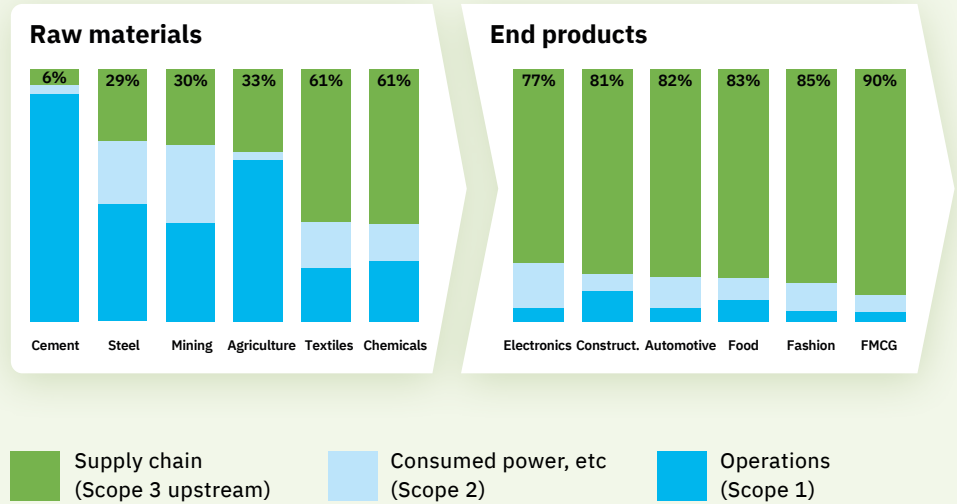
Another way of measuring the carbon impact of the consumer goods we buy in the UK would be to add up the reported carbon emissions of all the companies that manufacture them and apportion them to their UK sales. This way, if companies were reducing their manufacturing emissions in line with Paris targets, we might see a fall over time and use this to sense check the DEFRA data.

The table below shows the very high proportion of emissions for some key consumer sectors that occur in the supply chain (Scope 3 upstream).<sup>27</sup>

<sup>27</sup> World Economic Forum, 2021, Net-Zero Challenge: The supply chain opportunity insight report,

**Emission split in Scopes 1, 2 and 3 upstream for selected industries (CO2e, 2019)**

**Note:** Top companies selected based on number of reported Scope 3 upstream categories and industry fit; FMCG = fast-moving consumer goods  
**Source:** CDP, BCG



Unfortunately, proper carbon reporting by companies, which reveals figures for their supply chain emissions, is still in its infancy. We can't wait until 2030 for them to begin doing this, by which time it may be too late. Therefore we have set a target for 100% reporting by 2025. At this point we can move to tracking the decline (if any) in the collective reported emissions between then and 2030.

Because of this, this dataset looking at company performance initially just looks at whether they are properly reporting emissions at all. For the first report we have performed this research for 40 companies, the biggest in each of the following sectors: clothing, furniture, electrical and white goods. However, because of concentration in these industries and the presence of giant global brands, we estimate that we should be capturing at least 50% of sales in most of these markets with this selection.

Scope 3 reporting	Reporting scope 3	Not reporting scope 3
<b>Clothing</b>	2	8
<b>Furniture</b>	2	8
<b>Electrical</b>	8	2
<b>White goods</b>	1	6
<b>Global apparel</b>	2	1
	15	25

Appendix 1 contains the detailed findings in this dataset.

## Rates of repair and buying second hand

Because we do not know what companies are doing about their emissions (due to lack of reporting), the only action consumers can take that will currently guarantee emissions reductions in these areas is to reduce the number of new items they are purchasing. We therefore thought that the third dataset in this action area might try to track whether any reduction might be occurring.

Although this might be visible in economic sales data already tracked by the government, it is unlikely that rising or falling sales values would be reliable indicators of actual goods purchased because of changes in price. We reasoned that this could be better tracked by looking at proxy indicators like buying second hand or rates of repair.

Although we could have looked at sales from second-hand shops (which Ethical Consumer already does for its annual Ethical Markets Report)<sup>28</sup>, much of this activity now also takes place on peer-to-peer platforms like eBay, Preloved or indeed Depop. With repair, though some of this happens commercially, most probably is done DIY.

We therefore decided to use a consumer survey to ask a representative sample of people how many of each type of item they had bought new that year and how many they had bought second hand or repaired. Asking the same questions year-on-year might give us some sense of whether these activities were increasing or decreasing.

The results we had were as follows and have been averaged out across all three areas for use on our Report Cards.

Average Second-hand compared to new	%	Average repaired compared to new	%
<b>Clothes</b>	25	<b>Clothes</b>	19.2
<b>Furniture</b>	33	<b>Furniture</b>	37.3
<b>Electricals</b>	21	<b>Electricals</b>	32.4
	26		30

We set a 40% increase target for this too. Although this will not, on its own, lead to a 40% reduction in the carbon impact of consumption, it will make a contribution, and hedge against producers failing to meet their own 40% target.

## Actions required by government

One of the key demands emerging from this whole report is for governments to make it mandatory for companies to report on their supply chain emissions by 2025. Although regulators everywhere (including in the UK) are beginning to require companies to report on their own direct emissions, it has not yet become required for companies to do so for their supply chains. This is despite the evidence (above) that often 80% of the emissions of consumer goods occur here. It is hard to see how we can be sure that we are collectively on target on carbon reduction without this happening.

In addition to the above, many people are talking about asking governments to support carbon pricing at a more international level. This has the advantage of impacting all product supply chains simultaneously. However, it absolutely must be part of a much bigger array of policies: it is a very blunt instrument, and is unable to target specific sectors, meaning that the price rarely ends up being set high enough to get the changes required in one area because it would have unacceptable effects in another.<sup>29</sup> A carbon price can never be an alternative to other policies. It also has the disadvantage that, without mitigating steps being taken, it can have the greatest impact on the poorest people. We are not currently including it on our lists of recommended actions for these reasons.

<sup>29</sup> <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2021/05/The-Challenges-and-Prospects-for-Carbon-Pricing-in-Europe-NG-168.pdf>

# 6.

## The wider actions for government, companies and consumers

### 6.1

#### For government

What are the most important actions that governments need to take to address the climate crisis? This is arguably one of the hottest political questions of our time. For many, nothing short of a wholesale retreat from neoliberalism will create the necessary conditions for sustainability globally.<sup>30</sup> For others, global treaties and carbon taxes are most critical.<sup>31</sup>

While we do discuss these kinds of issues elsewhere in Ethical Consumer's research, the purpose of looking at actions for government in this report is to focus specifically on actions that will make the necessary choices practical for consumers in each of our four action areas, and therefore likely to be widely enough adopted to achieve the desired carbon reductions.

Conveniently, the CCC exists to advise the government and its action list is extensive. Indeed its 2021 'Joint Recommendations' documents contains more than 200 separate recommendations to 13 government departments, other government agencies and devolved governments.

Because of our desire to provide a simple overview, we've listed no more than three recommendations in each of the 12 areas we are looking at. In our summary Report Card we are limiting ourselves to just 8 of these 36. There are a couple of guiding principles that we have applied, which we have learned from our more than 30 years of studying ethical consumer behaviour.

As we have shown in our Ethical Consumer Markets Reports over the years, in order for ethical choices to become mainstream quickly, i.e. adopted by more than 70% of people, they need to be either:

- (a) unavoidable (i.e. poor choices are 'edited' out) or
- (b) cheaper, better and more easily available than the less sustainable choices.

Even so, cutting the hundreds of recommendations available down to 36 is more of an art than a science. Because of this, we plan to do more work on this area once this report is published. At our 2021 'Ethical Consumer Week' for example, we held four workshops asking specialist and ordinary consumers specifically whether we've honed in on the right actions in each case. It is also possible that in 2022 we can do more work in this area, and create some kind of priority list for campaigns to support in the same way we plan to identify priority lifestyle actions for consumers to focus on later.

30 <https://www.theguardian.com/commentisfree/2019/mar/18/ending-climate-change-end-capitalism>

31 <https://www.weforum.org/agenda/2021/06/addressing-climate-change-through-carbon-taxes/>



Another learning from our Ethical Consumer Markets Reports is that the adoption of ethical standards by large multinational companies can be another really important way of helping make ethical products widely adopted quickly. They help achieve this by making ethical products sufficiently widely available, and with a high enough quality and low enough price. Company action can also make progress possible when governments are dragging their feet.

Although the CCC exists primarily to advise government, it does sometimes publish recommendations for companies too.<sup>32</sup> In addition, in some of the impact areas, coherent civil society coalitions already exist and have created explicit lists of actions for companies as well as lists of actions for government and consumers. The role of the Eating Better Alliance in the food sector is one of the best examples, and also provides a model for how other sectors could do the same.<sup>33</sup>

In the consumer goods action area, there were fewer previously published policy positions. More detail about those we did select appears in the text accompanying the Consumer Goods Report Card.

In each Report Card, we have also included a final line looking at surveys that have explored willingness of consumers to take action in each impact area, not least because there is already much published survey work exploring almost all of these issues. We have included this information partly to help identify the areas most in need of additional 'engagement' work or incentives. A first impression is that installing heat pumps looks like the least popular action. Flying less and reducing dairy consumption, perhaps unsurprisingly, also appear to score lower than others.

32 <https://www.theccc.org.uk/publication/the-role-of-business-in-delivering-the-uks-net-zero-ambition/>  
33 [www.eating-better.org/better-by-half-overview.html](http://www.eating-better.org/better-by-half-overview.html)

As mentioned above, this report is intended to be the first in a series produced annually between now and 2030. It is therefore the start of a process rather than the end.

Over the coming year, we plan to publish some follow-up work prioritising consumer actions, as well as on prioritising potential campaigns to support in 2022.

We very much welcome feedback: please tell us if you know of some data that we missed, or if you disagree with the whole approach.

We are also seeking partners who think they may be able to bring some resources to next year's version to make it even better, particularly, but not exclusively, around the primary research we are undertaking. Partners could also help in increasing the report's reach.

To contact us with feedback, etc., email [enquiries@ethicalconsumer.org](mailto:enquiries@ethicalconsumer.org) with 'Climate Gap Report' in the subject line.

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## 7.1

### Acknowledgements

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We would like to express gratitude to the following people and organisations who gave help or advice to this project. None of them are responsible for, or necessarily aligned with, any of the content or opinions expressed in this document.

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**Rob Harrison, Josie Wexler**

Ethical Consumer Research Association, October 2021

# 8.

# Notes and Sources for the Report Cards

To avoid using footnotes on the tables themselves the columns are labelled A to E and the rows numbered from 1 to 10.

## 8.1

### Notes and sources for the Summary Report Card.

#### Row 1: Titles

B1 Estimates of food impact vary most widely, from as low as 13% (not including land use change) to as high as 30% (including land use change). We have gone for a mean point of the figures that include land use change. See page 11.

C1 Calculated from DEFRA, 2021, Consumption Emissions, and Final UK greenhouse gas emissions national statistics: 1990-2019

D1 Calculated from DEFRA, 2021, Consumption Emissions, and Final UK greenhouse gas emissions national statistics: 1990-2019

E1 Calculated from DEFRA, 2021, Consumption Emissions, and Final UK greenhouse gas emissions national statistics: 1990-2019

#### Row 2: Targets

B2 c.15% carbon reduction from consumer changes. 20% in total in UK agriculture. This refers only to the reduction in emissions in the UK agriculture sector. It is read off a graph on Page 60 of CCC, Sixth Carbon Budget, Sector Summary, Agriculture, Land use, Land use change and forestry.

D2 This includes a 40% cut in emissions from cars. Calculated from CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Surface Transport, Page 50, and CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Aviation, Page 22.

E2 See Consumer Goods Report Card notes at page 35.

Because the Summary Report Card consolidates information from the other four Report Cards, we have not compiled specific source notes for rows below this. They can be found in the corresponding rows for each of Report Cards in turn.

## 8.2

### Food Report Card: Notes and sources

#### Row 2: Targets

B2 CCC, 2020, The Sixth Carbon Budget, the UK Path to Net Zero, page 165

C2 CCC, 2020, The Sixth Carbon Budget, the UK Path to Net Zero, page 165

D2 CCC, 2021, Progress in Reducing Emissions, Report to Parliament, page 119

#### Row 3: Most recent figures

B3 CCC, 2021, Progress in Reducing Emissions, Report to Parliament, page 119

C3 DEFRA, 2020, Family food datasets. Only milk, cream, cheese, yogurt, butter and fromage frais is counted, cheese in other products is ignored for simplicity. All is counted at 1:1 apart from hard cheese which is counted at 10 grams of milk for each gram of cheese.

D3 CCC, 2021, Progress in Reducing Emissions, Report to Parliament, page 119

#### Row 5: Previous Year

B5 CCC, Unknown. 2021, Progress in Reducing Emissions, Report to Parliament, page 119 describes 2020 data as “an estimate based on the average of the two previous years”

C5 DEFRA, 2020, Family food datasets. Only milk, cream, cheese, yogurt, butter and fromage frais is counted, cheese in other products is ignored for simplicity. All is counted at 1:1 apart from hard cheese which is counted at 10 grams of milk for each gram of cheese.

### **Row 7: Government**

B7 and C7 Eating Better Alliance. Three of 24 levers for government, food service, retailers, food producers and investors. [www.eating-better.org/better-by-half-overview.html](http://www.eating-better.org/better-by-half-overview.html)

D7 Two of eight policy recommendations from Global Feedback. [www.tabledebates.org/blog/why-climate-emergency-demands-food-waste-regulation](http://www.tabledebates.org/blog/why-climate-emergency-demands-food-waste-regulation)

### **Row 8: Companies**

B8 and C8 Eating Better Alliance. Three more of 24 levers for government, food service, retailers, food producers and investors. [www.eating-better.org/better-by-half-overview.html](http://www.eating-better.org/better-by-half-overview.html)

### **Row 10: Intentions**

B9 Steentjes, K., Poortinga, W., Demski, C., and Whitmarsh, L., (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08 [cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf](http://cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf) Survey conducted Sept 2020

C9 Understanding Net Zero: A Consumer Perspective Published: 17 April 2020. [es.catapult.org.uk/reports/net-zero-a-consumer-perspective/](http://es.catapult.org.uk/reports/net-zero-a-consumer-perspective/) Survey conducted

D9 [wrap.org.uk/sites/default/files/2021-08/food-trends-report-august-2021.pdf](http://wrap.org.uk/sites/default/files/2021-08/food-trends-report-august-2021.pdf) The specific wording says 'I have been making more of an effort to reduce my food waste'

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## **8.3**

### **Heating Report Card: Notes and sources**

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#### **Row 1: Titles**

B1 Including cavity & solid wall, roof and floor.

D1 We can't currently find data just for residential heating in the CCC reports in figure or graph form, so it's going to have to be all buildings. As we've written in the text, it's currently split between homes (77%), commercial (14%) and public (9%).

#### **Row 2: Targets**

B2 Element Energy, 2021, Development of trajectories for residential heat decarbonisation to inform the Sixth Carbon Budget A study for the Committee on Climate Change. Calculated from the graphic on page 27, checked against the figures on page 22

C2 CCC, 2021 Progress in Reducing Emissions, Report to Parliament, page 111

D2 CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Buildings, page 45. Calculated from graphic.

#### **Row 3: Most recent figures**

B3 CCC, 2021 Progress in Reducing Emissions, Report to Parliament, page 111; CCC, 2020 Reducing UK Emissions, Progress Report to Parliament, page 110

C3 CCC, 2021 Progress in Reducing Emissions, Report to Parliament, page 111

D3 Final UK greenhouse gas emissions national statistics: 1990 to 2019. The figure is obtained by adding these three rows together: "Residential combustion", "Commercial and miscellaneous combustion and electricity" and "Public". "Source" figures are used because these are used by the CCC and it would be too difficult to use End User figures in this instance.

#### **Row 5: Figures from the previous year**

B5 2021 Progress in Reducing Emissions, Report to Parliament, page 111; CCC, 2020 p123

C5 CCC, 2020 Reducing UK Emissions, Progress Report to Parliament, page 110

D5 Used the same approach as in D3 above.

#### **Row 6: Gap**

D6 This is read using a tape measure off the graph on page 109 of CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Buildings

#### **Row 7: Government**

B7 to D7 All these actions and targets are inferred from their discussion in the CCC 2021 Progress in Reducing Emissions, Report to Parliament, CCC's 2021. Some also appear explicitly in the Joint Recommendations document too at p9.

### **Row 8: Companies**

B8 and C8 Skills gaps are explicitly referred to in CCC's 2021 Progress report to parliament. Joint Recommendations at p23.

Develop creative funding instruments is an explicit request of the Heat Pump Federation ([www.hpf.org.uk/campaigns](http://www.hpf.org.uk/campaigns)) but is widely discussed elsewhere, such as [www.local.gov.uk/financing-green-ambitions-full-report](http://www.local.gov.uk/financing-green-ambitions-full-report)

Installing the technologies in commercial buildings is common sense.

D8 A smart system plan is part of the CCC's 2021 Progress report to parliament. Joint Recommendations at p28.

### **Row 10: Intentions**

B10 BEIS PUBLIC ATTITUDES TRACKER September 2019 (Wave 31) at p21 [www.gov.uk/government/publications/transport-and-transport-technology-public-attitudes-tracker](http://www.gov.uk/government/publications/transport-and-transport-technology-public-attitudes-tracker)

C10 Understanding Net Zero: A Consumer Perspective Published: 17 April 2020. [es.catapult.org.uk/reports/net-zero-a-consumer-perspective/](http://es.catapult.org.uk/reports/net-zero-a-consumer-perspective/) Survey conducted

D10 Steentjes, K., Poortinga, W., Demski, C., and Whitmarsh, L., (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08 [cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf](http://cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf)

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## **8.4**

### **Transport Report Card: Notes and sources**

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#### **Row 2: Targets**

B2 CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Surface Transport, page 46. Calculated from graphic

C2 This is due to increased efficiency, not reduction. CCC, 2020, The Sixth Carbon Budget, Sector Specific Summary: Aviation, page 22. Calculated from graphic

D2 In the Balanced Scenario the 100% date is set for 2032, but this is at the latest.

#### **Row 3: Figures for most recent year.**

B3 Final UK greenhouse gas emissions national statistics: 1990 to 2019

C3 Pandemic figures, though available, are ignored because not representative.

D3 CCC 2021 Progress in Reducing Emissions, Report to Parliament, page 107

#### **Row 5: Figures from the previous year**

B5 Final UK greenhouse gas emissions national statistics: 1990 to 2019

C5 Final UK greenhouse gas emissions national statistics: 1990 to 2019

D5 CCC 2021 Progress in Reducing Emissions, Report to Parliament, page 108

#### **Row 6: Fast Enough**

D6 That is read off the graph on page 97 of CCC, 2020, Carbon Budget Sector Specific Summary: Surface Transport

#### **Row 7: Government**

B7 D7 CCC's 2021 Progress report to parliament. Joint Recommendations. Various pages.

C7 Halt airport expansion and aviation tax reform are part of the CCC's 2021 recommendations. A frequently flyer levy has been raised by the CCC previously and is widely supported: [www.bbc.co.uk/news/science-environment-56582094](http://www.bbc.co.uk/news/science-environment-56582094). [www.transportenvironment.org/challenges/planes/subsidies-in-aviation/](http://www.transportenvironment.org/challenges/planes/subsidies-in-aviation/)

D7 CCC's 2021 Progress report to parliament. Joint Recommendations, p20

#### **Row 8: Companies**

B8 Sell more electric vehicles is a re-framing of the government targets action in D7.

Decarbonising HGVs is inferred from the CCCs 2021 Report to parliament, Reducing distance is common sense.

C8 All three of these appear in the Joint recommendations CCC's 2021 Progress report to parliament pp21-22 and are inferred as actions companies can take too.

D8 These are also inferred as above.

### Row 10: Intentions

B10 Steentjes, K., Poortinga, W., Demski, C., and Whitmarsh, L., (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08 [cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf](https://cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf)

C10 [www.theguardian.com/environment/2020/nov/10/people-drive-fly-climate-crisis-global-poll-green-recovery-covid-pandemic](https://www.theguardian.com/environment/2020/nov/10/people-drive-fly-climate-crisis-global-poll-green-recovery-covid-pandemic)

D10 [www.ofgem.gov.uk/publications/one-four-consumers-plan-buy-electric-car-next-five-years-according-ofgem-research](https://www.ofgem.gov.uk/publications/one-four-consumers-plan-buy-electric-car-next-five-years-according-ofgem-research)

## 8.5

### Selected consumer goods Report Card: Notes and sources

#### Row 1: Titles

A1 Annual greenhouse gas and carbon dioxide emissions relating to UK consumption in the following categories: Clothing; Footwear; Furnishings, Carpets etc; Household textiles; Household appliances; Telephone and telefax equipment; and Audio-visual, photo and info processing equipment. currently make up 26 million tonnes of CO<sub>2</sub>e (see below) which is only 3.6% of total emissions (of the 703 million tonnes total in 2018). However, because that dataset contains some other large elements (like Miscellaneous goods and services, Other recreational equipment, other major durables for recreation and culture etc) which would take the total well above 10% this is the number we have chosen for a broad understanding of relative impact in this area. In time, we may be able to discover more about these elements, which would allow us to include them in our measurements with more confidence.

#### Row 2: Targets

B2 We are applying the CCC's territorial targets to imported emissions. The CCC's scenarios include interim targets (on the way to net zero by 2050) of a 68% cut by 2030 on 1990 levels and 78% by 2035. Territorial emissions fall from 522 million tonnes in 2019, to 316 in 2030, in other words, a cut of 40% by 2030.

Other sector specific programmes, such as that from WRAP for textiles, have set similar targets. WRAP's is for a 50% reduction by 2030. [wrap.org.uk/media-centre/press-releases/changing-clothes-reduce-climate-change-textiles-2030](https://wrap.org.uk/media-centre/press-releases/changing-clothes-reduce-climate-change-textiles-2030)

C2 If companies need to be reducing supply chain (scope 3) emissions by (say) 40% by 2030, then how can we track whether this is happening? We can only do this if they are publishing what these emissions are. Not many are doing it properly right now, and we can't wait until 2030 for them to begin reporting, by which time it may be too late. Therefore, we have set a target for 100% reporting by 2025. At this point we can move to tracking the decline (if any) in the collective reported emissions between then and 2030.

D2 If rates of repair and buying second hand are increasing then this should be reducing consumer demand for new products. We set a 40% increase target for this too. Although this will not, on its own, lead to a 40% reduction in the carbon impact of consumption it will make a contribution, and hedge against producers failing to meet their own 40% target.

#### Row 3: Emissions

B3 Annual greenhouse gas and carbon dioxide emissions relating to UK consumption in the following categories Clothing; Footwear; Furnishings, Carpets etc; Household textiles; Household appliances; Telephone and telefax equipment; and Audio-visual, photo and info processing equipment. DEFRA [www.gov.uk/government/statistics/uks-carbon-footprint](https://www.gov.uk/government/statistics/uks-carbon-footprint)

C3 Bespoke Ethical Consumer Research into the state of Scope 3 (supply chain) emissions reporting at the 40 largest consumer goods companies (clothing, furniture, electricals and household) operating in the UK. The detailed table appears at Appendix 1.

D3 Average rates of repair and second-hand items purchased annually compared to new purchases of furniture/household, clothing and electrical products. YouGov opinion survey commissioned by Ethical Consumer September 16th 2021.

#### Row 5: Last year's gap

B5 Annual greenhouse gas and carbon dioxide emissions relating to UK consumption in the following categories Clothing; Footwear; Furnishings, Carpets etc; Household textiles; Household appliances; Telephone and telefax equipment; and Audio-visual, photo and info processing equipment. DEFRA [www.gov.uk/government/statistics/uks-carbon-footprint](https://www.gov.uk/government/statistics/uks-carbon-footprint)

### **Row 7: Government**

B7 Carbon pricing can also encourage a shift of production and consumption choices towards low carbon options. See e.g.: OECD June 2021: “Effective Carbon Rates 2021. Pricing Carbon Emissions through Taxes and Emissions Trading.”

This has the advantage of impacting all product supply chains simultaneously. It has the disadvantage that, without mitigating steps being taken, it can have the greatest impact on the poorest people.

C7 This is inferred from our analysis above.

D7 A ‘right to repair’ law came into effect in the UK in July 2021. The Green Alliance particularly has been vocal in asking for improvements: [greenallianceblog.org.uk/2021/07/06/the-uks-new-right-to-repair-is-not-a-right-to-repair/](https://greenallianceblog.org.uk/2021/07/06/the-uks-new-right-to-repair-is-not-a-right-to-repair/)

### **Row 8: Companies**

B8 These are inferred from the targets

C8 This is the goal of this metric.

D8 The pricing of spare parts was an issue raised by the Green Alliance at D7 above.

### **Row 10: Intentions**

B10 Steentjes, K., Poortinga, W., Demski, C., and Whitmarsh, L., (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08 [cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf](https://cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf)

C10 Ethical Consumerism Report 2021 - forthcoming. YouGov survey data element. [research.ethicalconsumer.org/research-hub/ethical-consumer-markets-report](https://research.ethicalconsumer.org/research-hub/ethical-consumer-markets-report)

D10 Secondhand: Steentjes, K., Poortinga, W., Demski, C., and Whitmarsh, L., (2021). UK perceptions of climate change and lifestyle changes. CAST Briefing Paper 08 [cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf](https://cast.ac.uk/wp-content/uploads/2021/03/CAST-Briefing-08.pdf)

Clothing Repair: Fashion Revolution: Consumer Survey Report DECEMBER 2020. A survey of EU consumer attitudes to sustainability and supply chain transparency in the fashion industry.



# Appendix 1 Supply chain emissions reporting by 40 large consumer goods companies

Company	Date (of the report) rated?	Supply chain emissions reporting Y/N	Scope 1+2 emissions CO2e	Scope 3 emissions CO2e	Proportion of Scope 3 to Scope 1+2CO2e
<b>CLOTHING COMPANIES</b>					
Next	June 2021	N			
Marks and Spencer	June 2021	N			
Primark Stores	2nd July 2021	N			
Sports Direct/Frasers	21st June 2021	N			
TK Maxx	June 2021	N			
JD sports Fashion	5th August 2021	Y	77,385 T	4,145,393 T	98.2%
Arcadia/ASOS	26th May 2021	N			
Asda	November 2020	N			
H&M	June 2021	Y	72,580 T	17,387 KT	99.6%
John Lewis	March 2021	N			
<b>FURNITURE</b>					
IKEA	March 2021	Y	138,675	12,687,973	99.8%
DFS	DFS 2020 AR and Accounts	N			
Argos	Sains Sust Rep Update 2020/21	Y	818,161 T	26,663,081 T	97%
Poundland	Steinhoff AR 2020	N			
John Lewis	March 2021	N			
B&Q	Kingfisher plc RB Report 2021	N			
Dreams	2021 Corporate Social Values Report	N			
Furniture Village	AR to March 2020	N			
SCS	AR 2020	N			
Oak Furniture Land	No report available	N			

T = ton t = tonne kt = kilotonne (both lower case) mt = metric tonne Mt = megatonne

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Company	Date (of the report) rated?	Supply chain emissions reporting Y/N	Scope 1+2 emissions CO2e	Scope 3 emissions CO2e	Proportion of Scope 3 to Scope 1+2CO2e
<b>ELECTRICAL</b>					
<b>Apple</b>	31st July 2021	Y	47,430 mt	22,600,000 mt	99.7%
<b>Amazon</b>	5th July 2021	Y	14.89 million mt	45.75 million mt	75.4%
<b>Samsung Electronics</b>	2nd February 2021	Y	13,800 mt	16,607 mt	54.6%
<b>Microsoft</b>	10th August 2021	Y	4,448,639 mt	11,587,756 mt	72.3%
<b>Sony</b>	12th August 2021	Y	1,376,115 T	14,870,000 T	91.2%
<b>Dell Technologies</b>	12th May 2021	Y (part)	298,500 mt	16,238,000 mt	98.2%
<b>HP</b>	14th August 2021	Y	Not as a total	44,720,000 T	
<b>Panasonic</b>	January 2021	Y			
<b>LG</b>	March 2020	N			
<b>Lenovo Group</b>	26th August 2021	Y	194,215 mt	17,531,179 mt	98.9%
<b>WHITE GOODS</b>					
<b>BSH</b>	January 2021	N			
<b>Electrolux</b>	3rd March 2021	N			
<b>Arcelik</b>	5th March 2021	N			
<b>Haier</b>	January 2021	N			
<b>Miele</b>	25th February 2021	Y (part)			
<b>Whirlpool</b>	10th March 2021	N			
<b>Toshiba</b>	26th August 2021	Y	1,140,000 T	618,033,000 T	99.8%
<b>GLOBAL APPAREL BRANDS</b>					
<b>Nike</b>	19th August 2021	Y	206,664 mt	11,500,000 mt	98.2%
<b>Inditex</b>	21st June 2021	Y	485,496 T	14,888,172 T	96.8%
<b>Adidas</b>	27th August 2021	N			

T = ton t = tonne kt = kilotonne (both lower case) mt = metric tonne Mt = megatonne

# Appendix 2 Relative Consumption emissions

	FROM TERRITORIAL INVENTORIES		FROM DEFRA EMISSIONS DATA	
	Million tonnes CO2e	Percent of 703 (total consumption figure)	Million tonnes CO2e	Percent of 703 (total consumption figure)
Fuel used in private vehicles (cars, mopeds)	70	10%		
Embodied in purchased vehicles			9	1%
Flights	38	5%	44	6%
Other public transport (total, not just fuel)	7	1%		
Goods transport (HGVs, light duty vehicles, shipping)	58	8%		
Residential heating	99	14%	79	11%
Waste disposal	19	3%		
Electricity – households			40	6%
Electricity – businesses & services (counted elsewhere in the consumption figures)	65	9%		
Electricity – total	104	15%		
Food consumed at home (including beverages) – does not include anything for land use			68	10%
Restaurants, pubs and eating out			25	4%
Hotel stays and room rental			6	1%
Audio visual & telephone equipment & services			8	1%
Embodied in purchased clothing including footwear			11	2%
Furniture, furnishings, carpets			7	1%
Medical			10	1%
Household textiles			3	0%
Water and misc “dwelling services”			4	1%

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	FROM TERRITORIAL INVENTORIES		FROM DEFRA EMISSIONS DATA	
	Million tonnes CO2e	Percent of 703 (total consumption figure)	Million tonnes CO2e	Percent of 703 (total consumption figure)
Household appliances, utensils, tools			5	1%
Newspapers, books and stationery			1	0%
Tobacco			0	0%
Postal services			0	0%
Miscellaneous goods and services			20	3%
Other recreational equipment etc.			17	2%
Recreational and cultural services			6	1%
Imputed rentals for households			5	1%
Other major durables for recreation and culture			4	0%
Actual rentals for households			9	1%
Education			2	0%
Maintenance and repair of the dwelling			1	0%
Goods and services for household maintenance			1	0%
The amount left over, roughly (this is likely to be government, gross fixed capital formation, valuables, changes in inventories, NGOs – all of these are intermediate categories, e.g. production infrastructure. They should really be allocated to the consumption categories where they will end up in the end, but this is too difficult to calculate)			150	21%