



THE CENTRE FOR CLIMATE CHANGE AND SOCIAL TRANSFORMATIONS

HOW HAS COVID-19 IMPACTED LOW-CARBON LIFESTYLES AND ATTITUDES TOWARDS CLIMATE ACTION?

This briefing is intended as a resource for both academic and non-academic teams engaged in climate change mitigation and adaptation planning, particularly those interested in societal responses to climate change.

KEY POINTS

- COVID-19 has created an unprecedented – perhaps unique - ‘moment of change’, a period when normal routines have been rapidly upended and new ones have emerged.
- Survey responses report substantial changes in sustainability-related routines; reductions in waste, travel and consumption; rise in low-carbon recreation such as virtual and outdoor exercise, gardening and creative hobbies; and experimentation with alternative daily schedules. There is, however, a wide diversity of experience.
- Reported concern about climate change has increased since August last year, and there is greater support for climate change mitigation policies including measures to decrease meat consumption and flying.
- When lockdown is lifted, there is a risk of recidivism into pre-existing habits without appropriate infrastructure, incentives, and norms to encourage and lock in new low-carbon routines. The support for climate change policy action we have evidenced provides a strong mandate to implement these wider changes.



Centre for **Climate Change**
and **Social Transformations**

CAST is a global hub for understanding the role of people in shaping a positive low-carbon future. Based at Cardiff University, our additional core partners are University of Bath, University of East Anglia, University of Manchester, University of York and the charity Climate Outreach.

Introduction: Is COVID-19 a ‘moment of change’?

Climate change requires rapid and fundamental transformation of our society. Achieving ‘net zero’ emissions is only possible with substantial changes to our previously taken-for-granted lifestyles. Changing lifestyles is difficult, however, as much of our behaviour is habitual¹; Habits ‘lock in’ behaviour² and stabilise patterns of everyday action. Many interventions (e.g., information campaigns) are ineffective in changing behaviour because they do not engage with habits³.

Since habits are contingent not only on individuals’ behaviours, but also on societal conditions that trigger them (e.g. by certain places, times, or social roles), change in these conditions may disrupt habits⁴. Consistent with this, ‘moments of change’ – defined broadly as ‘occasions where the circumstances of an individual’s life change considerably within a relatively short timeframe’⁵ – have been identified as an important driver of lifestyle change⁶, presenting important opportunities to reshape lifestyles in more sustainable ways.

While the evidence on ‘moments of change’ has tended to focus on major life events (e.g., moving home, having a child, retiring⁷), there is evidence that also exogenous environmental, infrastructural or socio-economic shocks can disrupt routines and provide opportunities to reshape them⁸. Measures to respond to the (COVID-19) pandemic may be the most significant disruption to lifestyles in living memory, and the lockdowns imposed to deal with the pandemic have created huge economic and social turmoil. The sudden arrival of a new infectious disease has impacted lives and livelihoods globally, and, unintentionally, created an unprecedented and perhaps unique ‘moment of change’ during which many climate-relevant behaviours have been upended almost overnight. People are working, consuming and interacting in new ways, some of which may be more desirable both personally and environmentally (e.g., commuting less⁹) while others less so (e.g., avoiding public transport and using private vehicles for short journeys). There is clear evidence that emissions have fallen significantly during lockdown¹⁰, but what are the changes in attitudes, behaviours and routines that are contributing to this?

In this briefing paper, we present initial findings from two survey studies that were conducted in May 2020 to explore the impact of COVID-19 pandemic on the UK public’s lifestyles and routines, focusing on behaviours that have significant impacts on climate change (travel, food, product consumption, and energy use). The studies also examined how climate-relevant attitudes and policy support have changed following the COVID-19 pandemic.

BOX 1

Two surveys were undertaken to examine the impacts of lockdown policies on sustainability-related attitudes, behaviours and routines. Both surveys examine the impacts of the COVID-19 lockdown in the UK. Follow-up surveys will be conducted when lockdown is lifted to understand the longer-term impacts on routines.

SURVEY 1:

- UK survey (N=1,526), representative of age, gender and ethnicity (mean age = 46; female =51.9%)
- Data collected online May 22nd – 24th 2020 via Prolific (www.prolific.co)
- Pre-COVID, 15% were not in employment (higher than the national average of 4% [ONS]), although median household income was slightly higher than the national average (£32,000 vs. £29,600 [ONS])
- Most questions were closed (i.e. quantitative data) with just one open-ended (qualitative) question

SURVEY 2:

- UK survey (N=284), collected online 19th May – 9th June 2020.
- Includes extensive variety of household structure, employment/occupation conditions, income, and household location/type.
- Mixed-method survey gathering qualitative accounts of people’s experiences of social distancing/lockdown, and implications for food, energy and mobility related routines.

How and why have lifestyles changed under lockdown?

1. WORK, TRAVEL, AND LEISURE

Survey 1 found that before COVID-19, 11.4% worked entirely from home, rising to 36.2% during lockdown. For most people, working from home during lockdown was a positive experience (Fig.1). Consistent with this, 30.6% of people reported that they would work from home a little or a lot more after lockdown than they did before, although a majority reported that this would not change (see Fig.10 on page 9). More people also intended to increase their use of virtual work and social meetings, and of phone/online GP appointments, than intended to decrease them (though again more intended use these about the same as before lockdown; Fig.10).

A notable (and from the perspective of low-carbon travel, concerning) 52% intended to use public transport less after lockdown compared to before, whereas only 4.9% intended to use public transport more and 43.1% said they would not change how much they used it. Similarly, more intended to reduce the amount they fly for holiday or leisure purposes (47%) post-lockdown, than planned to increase it (8.3%) or to maintain pre-lockdown levels (44.7%; see Fig.10 on page 9). Consistent with the reduction in consumption noted later (section 3), people in Study 1 reported spending less time shopping and more time gardening and on creative hobbies (e.g., music, art, sewing) during lockdown than before it (Fig.2).

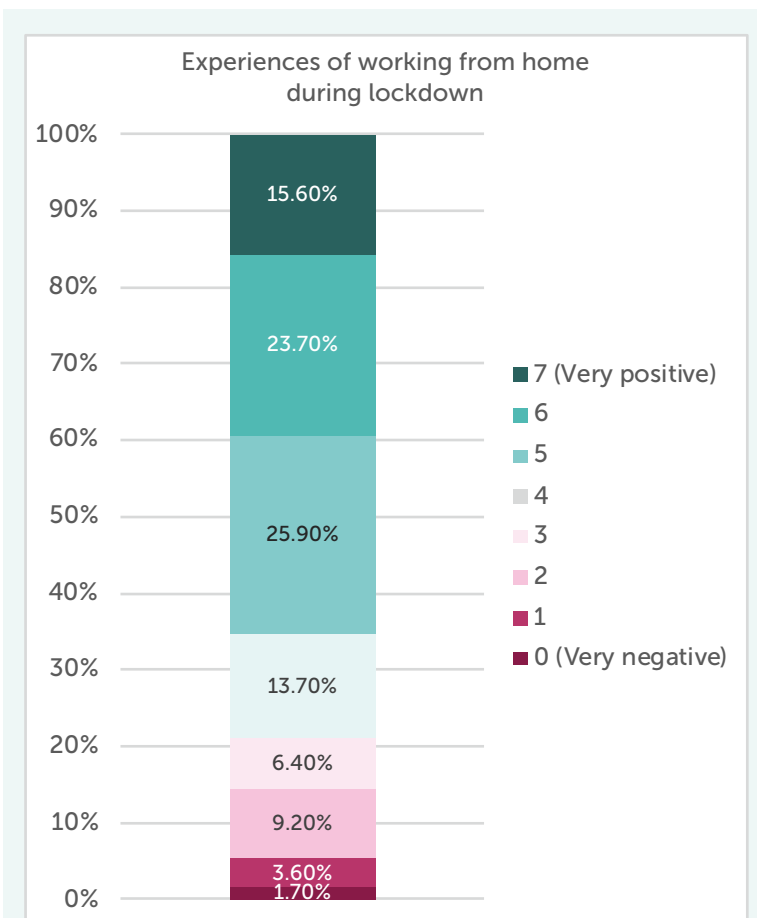


Figure 1. Experience of working from home during lockdown (Study 1)

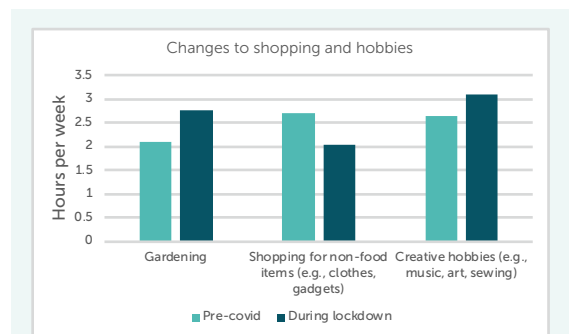


Figure 2. Gardening, shopping and creative hobbies pre-COVID and during lockdown (Study 1)

UNDERSTANDING CHANGES IN WORK AND LEISURE

Working from home was a positive experience for many. Survey 2 shows that positive experiences were typically associated with a sense of control, such as being able to manage one’s time and schedule different activities in ways that better suited them, avoiding distractions that come with open-plan offices, wearing comfortable clothes, and having control over temperature, ventilation and light:

“ I am sat next to a window that I can open so I can adjust the light & temperature to suit me. It is quiet and I can adjust noise levels (such as playing music) as needed. My office uses a hot-desking system which often leads to crowded spaces and lots of noise. The temperature in the building is frequently cold which is not the case at home. ”

Several respondents described how they were experimenting with different working hours and schedules to better accommodate other interests and/or care for dependents. These changes included starting and finishing earlier, working condensed hours, working longer days with a longer break to do other things during the day.

“ I usually work a 7- 8 hour day, though I usually take breaks amounting to 2-3 hours during the day, to do other activities, so I work into the early evening. ”

“ My routine previously was to start quite early. I would get the bus into the centre at 7:30 with a view to starting work at 8. I shifted my routine to start even earlier now. Starting work between 6:30 and 7:00 most days. ”

However, not all experiences were positive. Many participants reported feeling some loss of productivity (40%), which diminished the experience of working from home. In some cases this was linked to the loss of spontaneous collaboration:

“ I worked in a shared office where I could discuss things with colleagues, here I had to contact them remotely and sometimes couldn't move forward ”

For many, the loss of productivity was associated with inappropriate spatial and material configurations of their home. For example, while many respondents have dedicated spaces in their home that could accommodate working from home (most commonly dining rooms, and spare bedrooms), others were without such spaces and as a result had to work in bedrooms, living rooms and kitchens. These spaces were described as having mixed uses, and making it difficult to separate work and leisure:

“ We both work from the kitchen, living room and spare room negotiating who is going to use each space at the beginning of the day. ”

“ I share the space with my partner. I have set up an office in a different room than him as it was impossible (!) with us both on teleconferences at once. However, I usually start the morning in with him and get through emails quietly, then decamp when the day gets going – my office space is not as nice. ”

The experience of combining working from home with other commitments, such as homeschooling or caring for children, adds further complexity to this picture. Several participants described the 'impossibility' of juggling these commitments, whilst others described taking 'shifts' with a partner to ensure each has at least some productive time:

“ Trying to work at home with two kids is impossible. I’ve had to sit in awkward positions to avoid kids tripping over internet cables but also so I can watch them. ”

“ I am currently working at the dining table in our living space whilst home-schooling one child and entertaining a toddler. I am starting work at 5am so that I can fit in as many hours as possible before they wake up, as when they are awake I am constantly distracted. ”

“ My husband and I take ‘shifts’ to look after our son, we do this in 3-hour shifts so we each try to work 4-6 hours each day whilst looking after our toddler ”

In some cases, trying to juggle these different commitments was a source of guilt and stress, even when respondents were otherwise enjoying, or experiencing benefits from, working from home:

“ My husband and I are working from home but we have a 4 year old boy to look after at the same time which is stressful and I feel bad he is on the laptop or tv so I can work a lot. At the same time both me and my husband are enjoying eating meals together and as he normally works away he is especially glad of this time together. A small part of us doesn’t want to go back to and office. I do however feel stressed ”

2. FOOD SHOPPING AND PREPARATION

Results from Survey 1 show that there has been a significant rise in online grocery shopping. While the most common source for food shopping continues to be in-person trips to supermarkets, online grocery shopping has more than doubled from 12% pre-COVID to 25% during lockdown. Alongside this, a significant reduction in food waste was reported (Fig.3), more food was prepared at home (Fig.4) and, there was evidence of an increase in waste-reducing practices including meal planning, freezing and preserving food (Fig.5). A small – but detectable – reduction in meat consumption was reported (Fig.6).

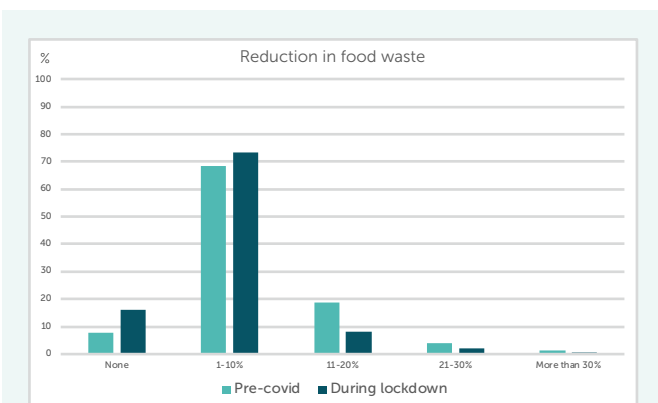


Figure 3. How much of food bought is thrown away (including inedible food e.g. bones, egg shells; food past its 'sell by' date, leftovers, etc.) (Study 1)

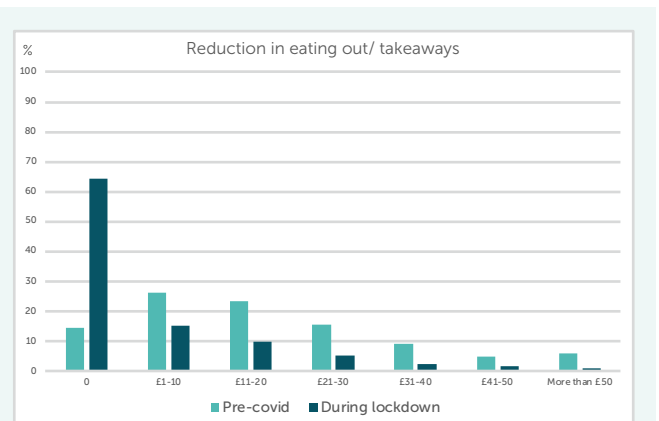


Figure 4. Spend on eating out/ take-aways pre-COVID and during lockdown (Study 1)

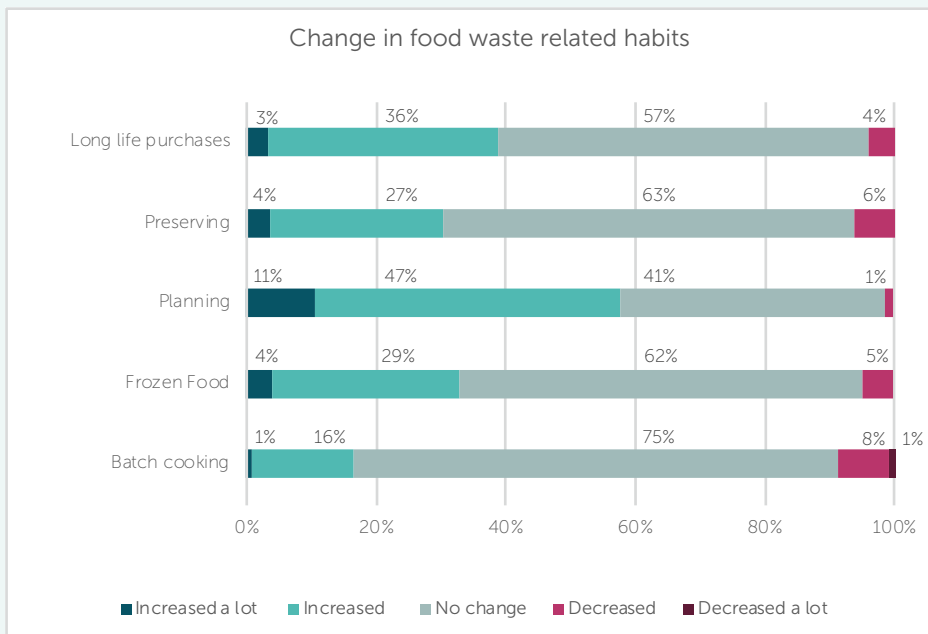


Figure 5. Change in food waste-related habits (Study 2)

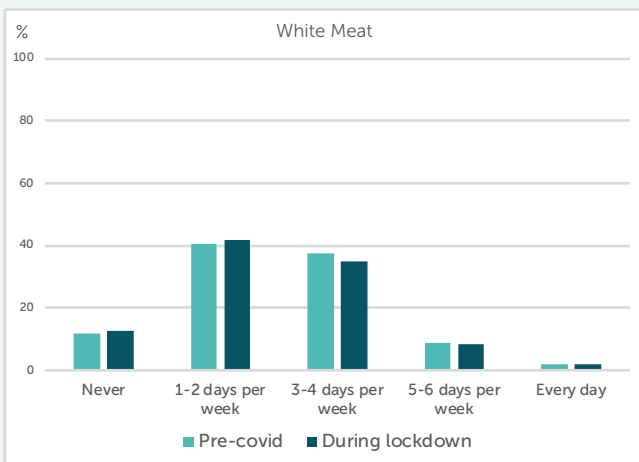


Figure 6. Red and white meat consumption pre-COVID and during lockdown (Study 1)

UNDERSTANDING CHANGES IN FOOD-RELATED ROUTINES

The altered geography of people’s daily lives is an important factor in reducing food waste. Respondents in Survey 2 described how restrictions on work, exercise and socialising have led to more time being spent at home and less spontaneity in cooking and eating. This, in turn, allowed people to plan their meals, keep track of what was in the fridge and eat what needed using up:

“ A lot of our usual food waste came from not realising things are about to go off. We are now much better at cooking things off in batches or freezing it before it goes off. More time at home has meant I have noticed when food gets close to its use-by date. ”

“ *We are being extra careful now to use up what we have. Where previously we might throw things out that are slightly past their use-by date, or go out to buy something else that is more in line with our preferences at that time, as opposed to eating what we already have* ”

Part of this change relates to interruptions to sequences of practices; while working from home, people are not commuting and regular ‘small’ shops during lunch breaks or after work are less frequent.

“ *Previously we would do small quick shopping trips every 1 or 2 days, for example on the way home from work. Fewer larger trips means less spreading and exposure.* ”

There are also connections being drawn between food waste and the risk of virus transmission, as it results in more frequent shopping:

“ *We plan really carefully now so that we don’t waste anything. This is just because we think that going to the shop risks our health and the health of others so we try to do it as infrequently as we can to reduce the risk.* ”

That said, 10% of respondents report increases in food waste, as a result of buying more food in a single shop and it not lasting as long as planned.

With regards to consumption of meat and dairy products, some respondents indicated a decrease in meat consumption (13.6%), and some an increase (12.5%). In instances where a decrease was reported, reasons given included initial shortages in meat, and also that lockdown provided an opportunity to galvanise pre-existing habits:

“ *“I was trying to eat less meat and dairy before the lockdown, so making all my meals at home has been a good opportunity to get into the habit”* ”

Where meat and dairy consumption was reported to have increased, responses indicate an association of meat and dairy with luxury, and consumption of these products having risen to compensate for giving up other luxuries during lockdown:

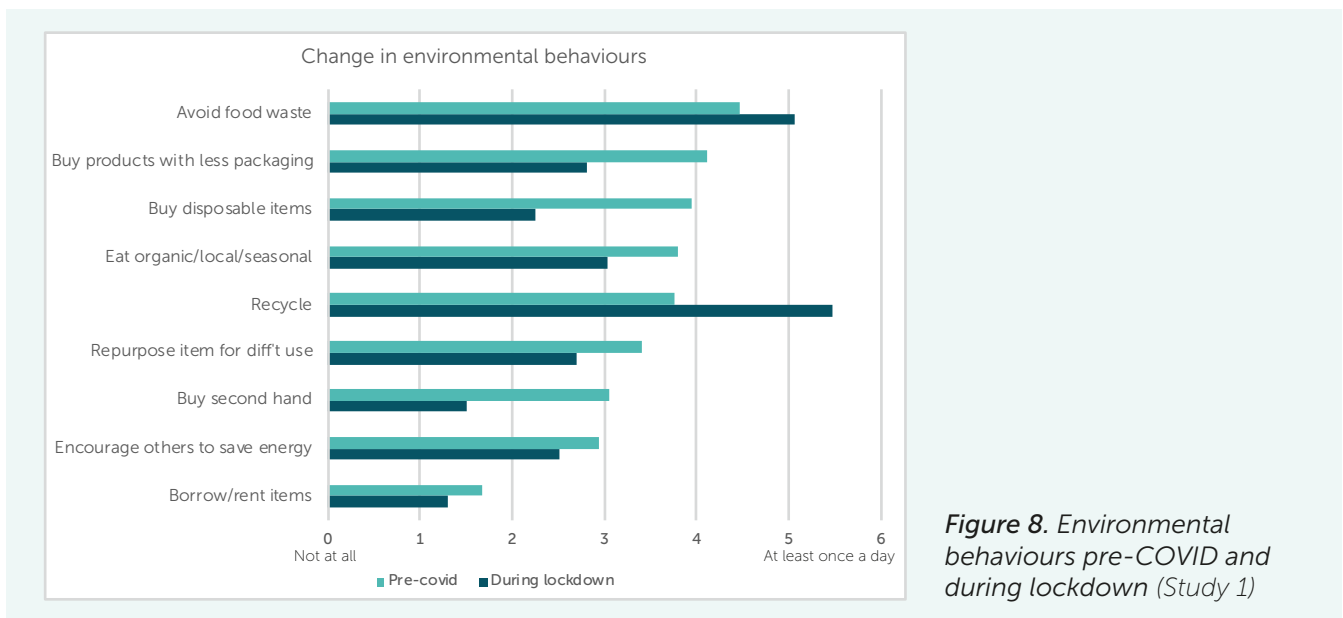
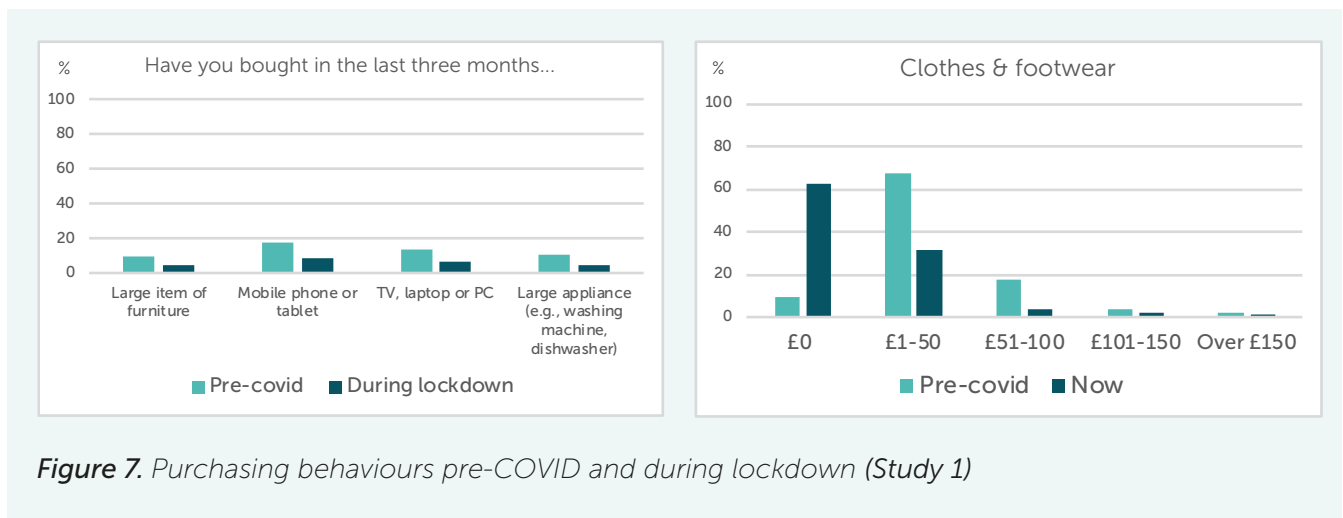
“ *[I’ve been] buying more meat as a luxury; same with chocolate, ice cream [and] crisps* ”

“ *Purchasing high quality cheese, coffee and wine to make up for not eating out.* ”

3. MATERIAL CONSUMPTION AND WASTE

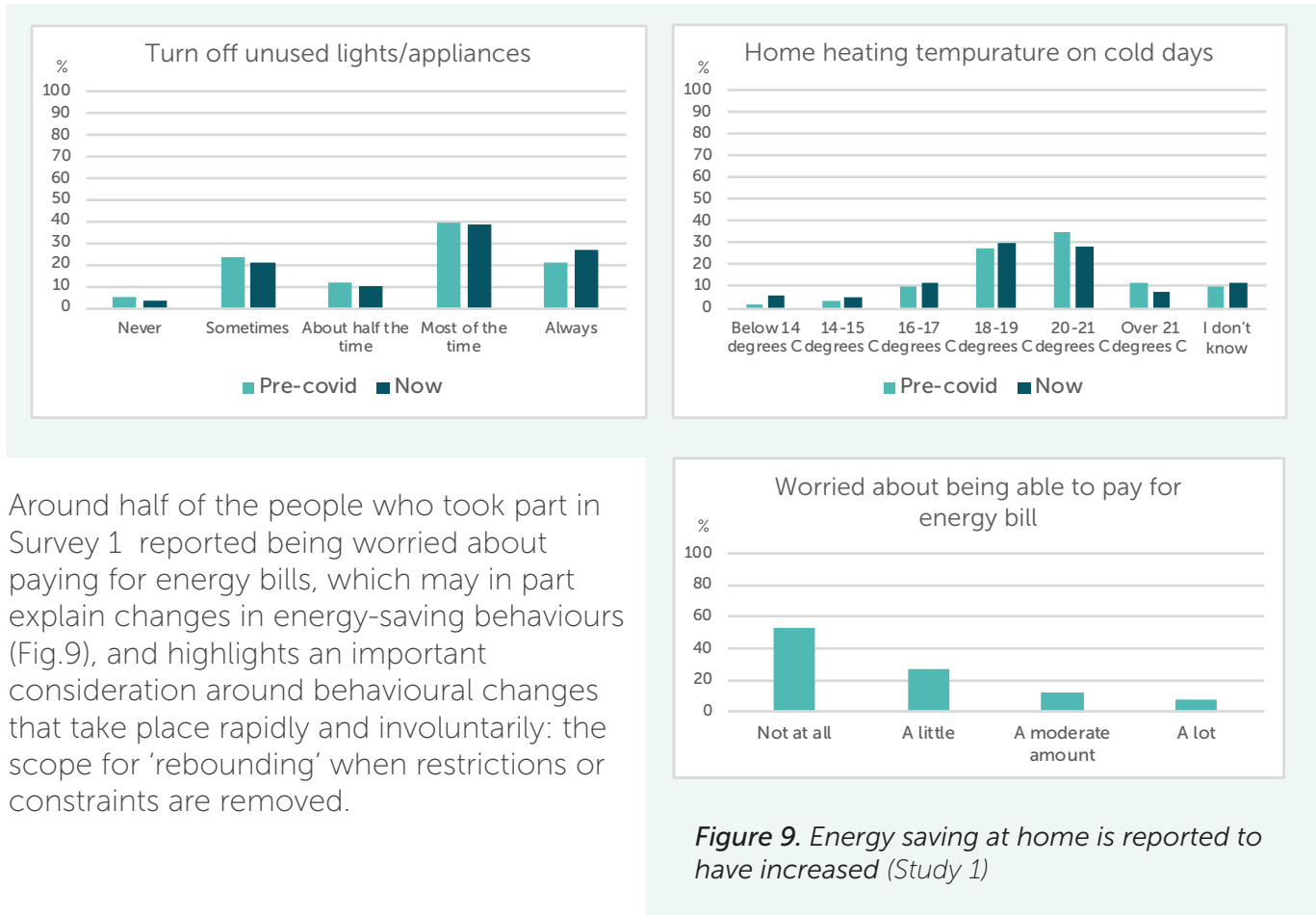
Respondents in Survey 1 reported spending less in general during lockdown, with the most pronounced drop in expenditure on clothes and footwear (Fig.7). Spending on pet products, health/beauty products, phone and internet/TV contracts, appliances, electronics and furniture has also significantly decreased.

At the same time, environmental behaviours changed significantly during lockdown. In particular, people report greater efforts to avoid food waste, an increase in recycling, and decreased purchasing of disposable items during lockdown (Fig.8), adding up to a significantly altered pattern of consumption and waste from UK households.



4. ENERGY USE

People reported turning off unused lights and appliances and heating their home to a lower temperature on cold days, more often during lockdown as compared to before the COVID-19 pandemic.



Around half of the people who took part in Survey 1 reported being worried about paying for energy bills, which may in part explain changes in energy-saving behaviours (Fig.9), and highlights an important consideration around behavioural changes that take place rapidly and involuntarily: the scope for 'rebounding' when restrictions or constraints are removed.

What new habits do people want to retain after lockdown?

“ would like to do more online grocery shopping and have it delivered as this is a good way of saving money. I would like to do less entertaining at home to save time, energy and money. I would like to continue to spend more time in the garden, would like to continue my daily walking programme. I would like to continue my cooking and hobbies programme. I would like my awareness of those less fortunate people to be maintained ”

“ Spending more time growing vegetables and repurposing things we have rather than buying new ”

“ Visit family and garden centres. Recycle. ”

Leisure/ hobbies	19%	Hygiene	6%
Exercise	13%	Health	4%
Shopping	13%	Home	3%
Environment	11%	Socialising	3%
Family	9%	Self care	3%
Work from home	9%	Sense of community	2%
Save money	9%	Slower pace	2%
Travel	7%	Mental health	1%
Cooking	7%	Solitude	1%
Online	6%	Learning	1%
		Nothing	14%

Table 1. Categories of behaviours that respondents would like to maintain post-lockdown (Study 1)

Most people (86%) in Survey 1 identified at least one thing they would like to keep doing after lockdown restrictions were removed, and several identified many (see example quotes above from three respondents).

The main categories identified are shown in Table 1, and behavioural intentions for work and travel shown in Fig.10.

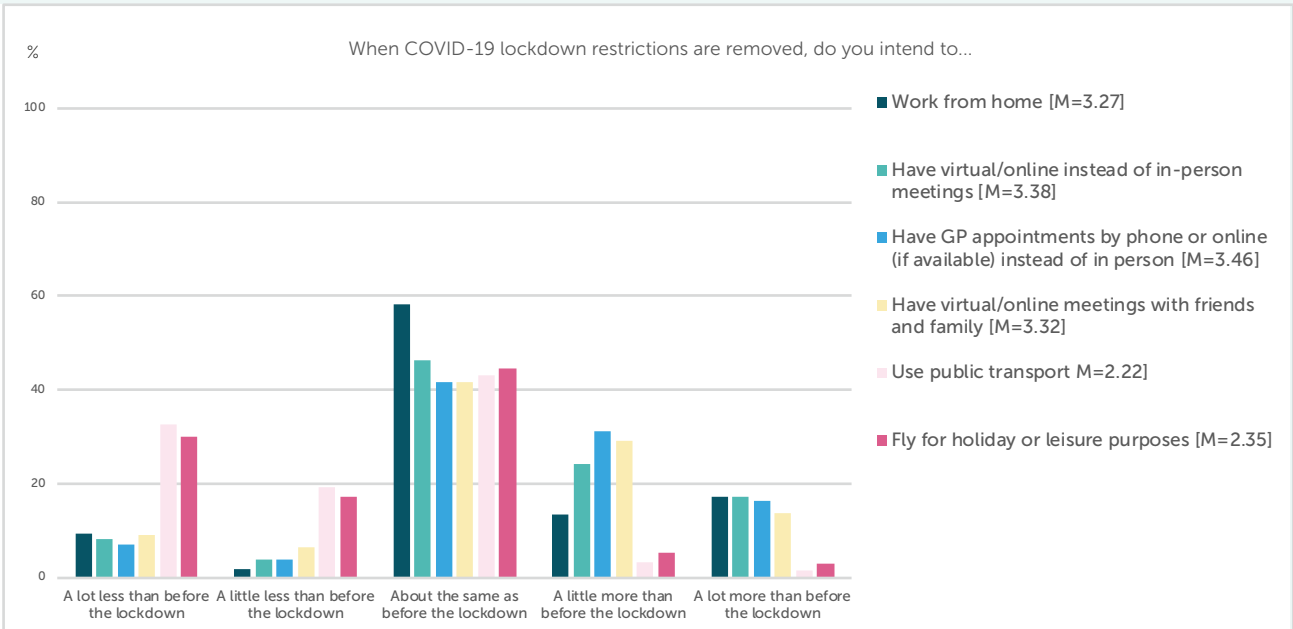


Figure 10. Behavioural intentions for work and travel when lockdown restrictions are removed (Study 1)

The responses from Survey 2 indicate that people are interested in continuing virtual ways of working and working from home, but less interested in continuing with virtual hobbies, particularly physical hobbies, such as yoga, and some social activities. However, many benefits were associated with virtual alternatives:

“ I’ve enjoyed the yoga classes. There was only one session which bad sound quality meant no one could hear the instructor properly, but otherwise it has worked pretty well. I haven’t had to spend time getting to and from a venue, I don’t care what I’m wearing, if I’ve remembered to shave my legs (?!) or that I don’t have a proper yoga mat and I’m just using a blanket because people can’t see me in much detail! ”

“ I like doing online yoga classes as I feel less self-conscious than in person and I like how flexible they can be within my schedule. ”

“ I enjoy not having to travel and the lack of effort involved in socialising this way! ”

Virtual quiz nights were frequently reported, and one of the hobbies many respondents wished to continue with, as well as baking and gardening. Furthermore, several respondents had become involved in “socially useful” past-times, such as sewing scrubs and preparing food for others which they hoped to sustain:

“ I have done new things with my hobbies, like sewing scrubs. This has made me realise that I can do more socially useful things with my hobbies, which I would like to continue in the future. ”

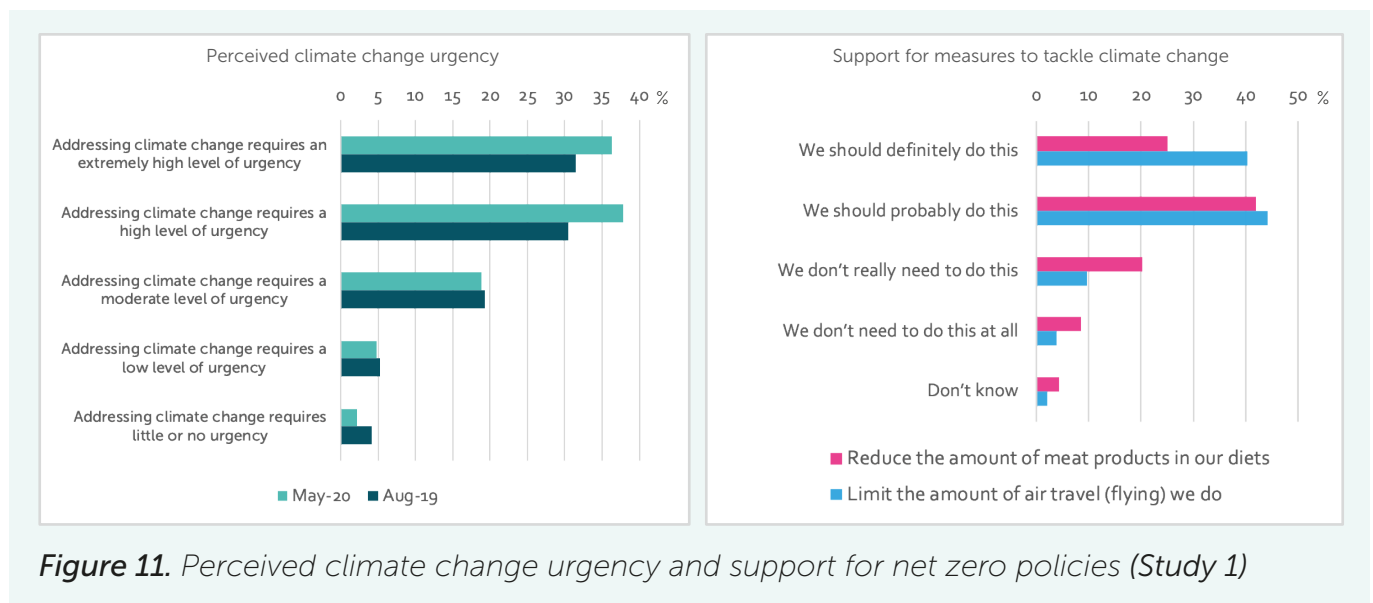
Though people seemed eager to continue the routine of exercising, in most cases people looked forward to the return of more sociable and motivating conditions once restrictions were lifted.

Has Covid-19 changed climate change attitudes?

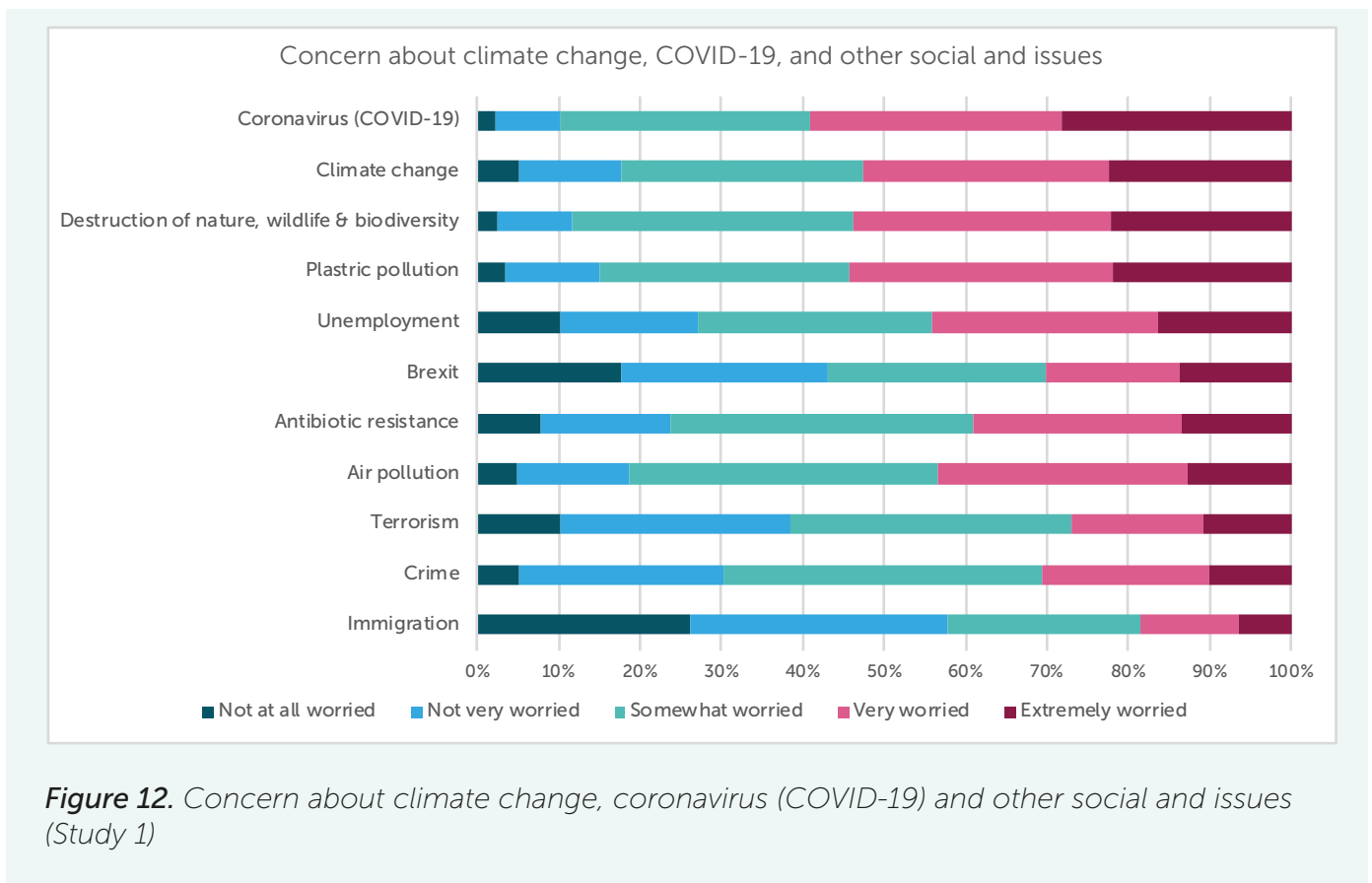
It is well known that people have a limited capacity for how many issues they can worry about at once¹¹. Increases in concern about one issue typically reduce concern about others. This was vividly demonstrated in the wake of the financial crisis of 2008 with a dramatic decline in belief in climate change¹². This suggests that immediate pressing concerns (such as economic hardship or a pandemic) crowd out more ‘psychologically distant’ risks, such as climate change¹³.

However, our study found an opposite effect. Rather than a decrease in concern about climate change, it found that concern about the climate was higher during the COVID-19 pandemic than in August last year (Fig.11).

Furthermore, support for climate change mitigation policies, including measures to decrease meat consumption and flying, was higher during the COVID-19 pandemic than in 2019, which already represented a high point for public concern on climate change (Fig.11).



Indeed, concern about COVID-19 was only slightly greater than about climate change. Both coronavirus and climate change rank much higher than other social issues (e.g., crime, immigration) (Fig.12).



Is COVID-19 likely to lead to low-carbon habits in the long-term?

Our studies show that lockdown disruption has created some low-carbon habits, including, less travel, reduced energy use, less food waste, and lower levels of material consumption. Many intend to keep these habits after lockdown restrictions are removed. However, intentions do not always translate into behaviour. Similarly, intentions may shift as COVID-related risks and restrictions change; for example, intentions to reduce travel may diminish when a vaccine is developed.

Our research has shown that COVID-19 represents a critical moment of change that has disrupted many climate-relevant behaviours. This provides a 'window of opportunity' during which behaviours are more receptive to change and interventions may be more effective. Given that new habits take 2-3 months to form¹⁴, the lockdowns in most countries are long enough to establish new, enduring routines. Furthermore, interventions targeted to moments of change have been found in several cases to be significantly more effective than when applied during stable times when habits are more resistant to change¹⁵. For example, information and incentives (free bus passes) provided to those who recently moved house were shown to increase bus travel in both UK and German studies.¹⁶

There is however a risk of recidivism into pre-existing habits after lockdown restrictions are lifted¹⁷, particularly if economic stimulus measures intentionally or inadvertently promote high-carbon consumption¹⁸. So, while COVID-19 may represent a unique window of opportunity to promote low-carbon lifestyles, this is only likely to translate into long-term change with appropriate infrastructure, incentives, and norms to encourage and lock in new low-carbon routines. The intervening period between 'lockdown' and living in a post-COVID environment without any restrictions may offer an important pathway to embedding new habits. Immediate health-focused interventions and guidelines as well as recovery and stimulus packages in the near term have the potential to facilitate or frustrate the long-term adoption of climate positive lifestyle changes.

The findings emphasize the central role of work in shaping everyday activity patterns through the time and energy available for this. This includes practices such as food shopping and travel, with implications for food waste and emissions. A key question then, as restrictions are lifted, is how to avoid a return to work-life schedules that re-pressurize people's experience of time and continues to allow space for the low-carbon habits that these surveys have observed.

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CAST is a global hub for understanding the role of people in shaping a positive low-carbon future.

We explore and communicate the tangible benefits of rapid climate action, asking how we can live in ways that are fairer, happier, and healthier while also radically cutting our carbon emissions. Based at Cardiff University, our additional core partners are University of Bath, University of East Anglia, University of Manchester, University of York and the charity Climate Outreach.

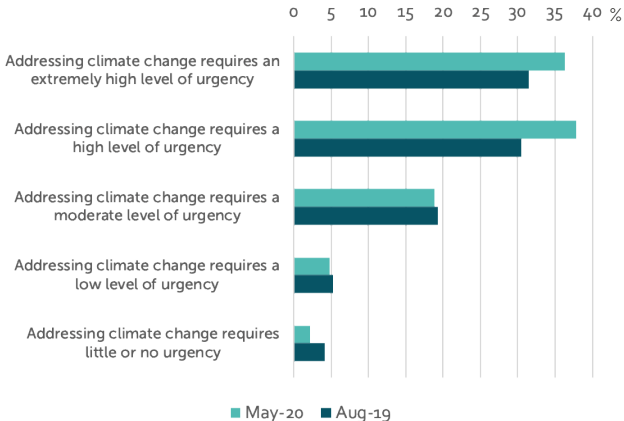
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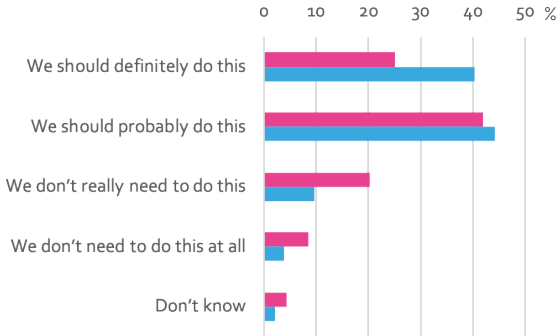
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Perceived climate change urgency



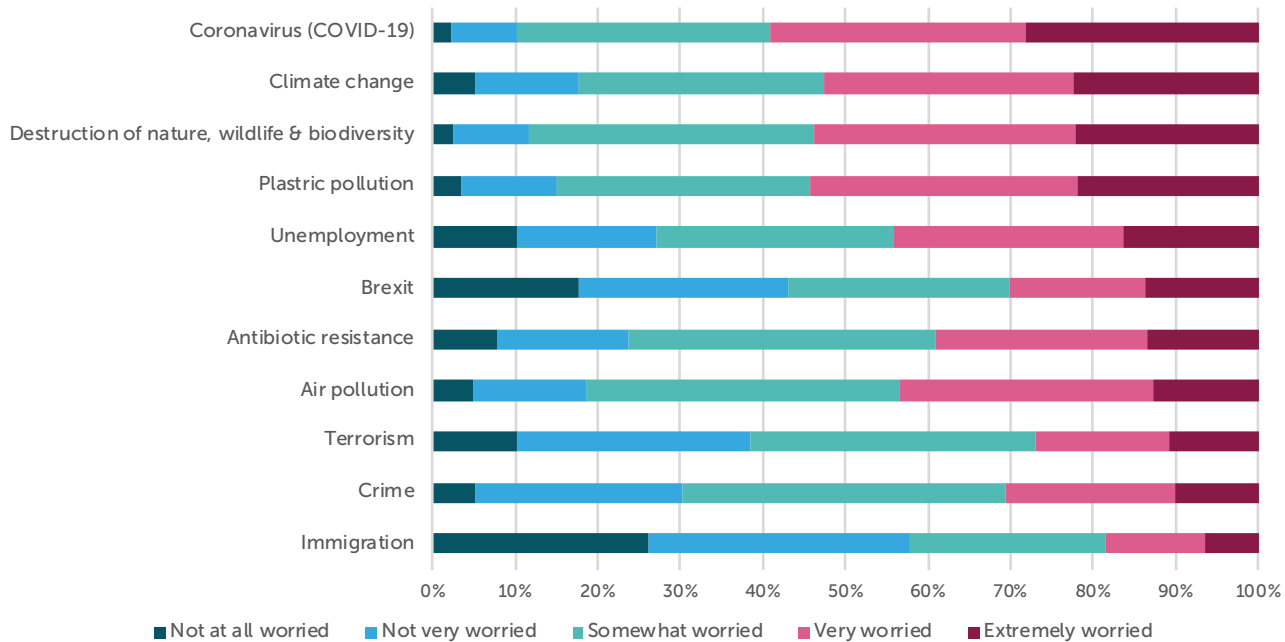
Support for measures to tackle climate change



■ Reduce the amount of meat products in our diets

■ Limit the amount of air travel (flying) we do

Concern about climate change, COVID-19, and other social and issues



Change in environmental behaviours

