



CONSUMERS AND THE CLIMATE CRISIS:

THE KEY TO UNLOCKING BEHAVIOUR CHANGE

CONTENTS

| | |
|---|-----------|
| Executive Snapshot: consumer calls for action | 3 |
| Consumers and behaviour change | 6 |
| The challenge | |
| The view of global consumer advocacy | |
| The need for a fast, fair and accountable transition | 9 |
| A fast transition | |
| A fair transition | |
| An accountable transition | |
| Consumer calls for action | 15 |
| How we travel | |
| How we plug in | |
| What we buy | |
| What we eat | |
| How we live | |
| How we spend and save | |
| COP26 and beyond | 36 |

ABOUT CONSUMERS INTERNATIONAL

Consumers International is the membership organisation for consumer groups around the world. We believe in a world where everyone has access to safe and sustainable goods and services. We bring together over 200 member organisations in more than 100 countries to empower and champion the rights of consumers everywhere. We are their voice in international policy-making forums and the global marketplace to ensure they are treated safely, fairly and honestly. We are resolutely independent, unconstrained by businesses or political parties. We work in partnership and exercise our influence with integrity, tenacity and passion to deliver tangible results.

Report version: 02.11.21

EXECUTIVE SNAPSHOT: CONSUMER CALLS FOR ACTION

Consumers are key to ensuring global action on climate change is successful. For the world to reach net zero, consumers everywhere will have to make fundamental changes to how they travel, heat, cool and power their homes, the food they eat and the products they buy. These changes will be impossible without large-scale transformations in the marketplace and regulatory environment which strengthen consumer rights and maintain consumer confidence. This document is a synthesis of actions and ideas from our membership of over 200 consumer advocacy organisations, who represent consumers in countries at different stages of economic development, but are united in their view of consumer rights and responsibilities. This document is also an invitation to connect, learn and build together with leaders from all stakeholder types who want a fair, safe and sustainable marketplace for all consumers.

How we travel

1. Take action against the most carbon-intensive forms of transport

- Ensure consumers are informed in a reliable and accessible way about the true emissions levels of each form of transport
- Prioritise regulation of manufacturers, who have most agency to respond, over measures that affect consumers directly

2. Invest in a functioning public and active transport infrastructure

- Complement investment in public transport infrastructure with subsidies for low carbon travel
- Evolve planning laws to reduce the need for personal vehicles, whilst supporting cycling and walking

3. Provide support for consumers to go electric

- Subsidise electric vehicles and support the development of second-hand markets
- Rapidly deploy the necessary charging infrastructure to encourage adoption by consumers

How we plug in

1. Establish improvements in energy efficiency

- Ensure annual energy intensity improvements of 3% or above, underpinned by mandatory standards and financial incentives
- Provide reliable consumer information and education and support trusted efficiency-enhancing technologies

2. Ensure renewable electricity is affordable for all consumers

- Give consumers the information and power to choose their energy supply
- Design flexible markets which give consumers access to affordable renewable electricity

3. Create a level playing field for self-generated renewable energy

- Remove subsidies that discriminate against decentralised energy systems
- Help consumers to self-organise around innovative energy services

What we buy

1. Improve the quality and reliability of product sustainability information

- Introduce marketing restrictions to tackle greenwashing
- Consult consumer advocacy organisations in the development of green claims and labelling legislation

2. Take action to make production processes cleaner

- Support international standards which embed robust net-zero goals across all sectors
- Encourage industry self-regulation, in the form of voluntary targets, supplier agreements and codes of conduct

3. Promote innovation and investment in a more circular materials economy

- Introduce robust 'Right to Repair' legislation
- Strengthen laws against planned obsolescence, and set product standards on durability

What we eat

1. Communicate sustainable dietary guidelines to consumers

- Introduce and align national dietary guidelines to emissions reductions
- Communicate guidelines to consumers through labelling and education

2. Support the development of sustainable food production

- Align agricultural policies and subsidies to 1.5 degrees Celsius trajectory
- Create and promote frameworks to connect consumers directly with producers

3. Ensure traceability and transparency along the food value chain

- Support the provision of accurate consumer information on food provenance
- Promote digital tools which enhance traceability at all stages of the value chain

How we live

1. Provide low-carbon homes for all consumers

- Introduce building regulations and codes that minimise emissions in new construction
- Establish energy efficiency standards for new homes and support retrofits for old ones

2. Help consumers adopt low carbon home heating technologies

- Ensure all consumers, including the poorest, can switch to low carbon heating technologies
- Put in place robust consumer protections on new technologies

3. Help consumers adopt efficient home cooling technologies

- Encourage urban areas to be designed with natural cooling
- Introduce stricter efficiency standards and consumer protections for cooling technologies

How we spend and save

1. Promote net zero aligned financial services as the default option for consumers

- Align financial services to robust international net zero standards, backed up by regulation
- Support employers to ensure employee pensions are net zero aligned as default

2. Communicate the sustainability impact of financial services to consumers

- All financial services providers to provide, clear, credible, and comparable information on the climate impact of their services
- Environmental reporting definitions to be internationally standardised to enable more consistent monitoring

3. Ensure considerations of climate impact are part of all financial decisions

- Implement climate due diligence requirements for financial providers
- Support consumers with financial advice and education aligned to net zero

CONSUMERS AND BEHAVIOUR CHANGE

The 2021 United Nations Climate Change Conference (COP26) offers a unique opportunity to step up international ambition on climate change and to take decisive steps towards achieving a net zero carbon world and limit global warming. Consumers are key to ensuring the commitments made in Glasgow become reality. For the world to reach net zero, consumers everywhere will have to make fundamental changes to how they travel, heat, cool and power their homes, the food they eat and the products they buy. These behavioural shifts will be impossible without significant changes in the marketplace as a whole. To secure consumer buy-in and action, it is important that policy-makers ensure the regulatory environment protects and supports consumers through the transition.

The challenge

Ambitious emissions reduction targets need to be backed up by ambitious action by all stakeholders. Now that 73% of global emissions are covered by a net zero goal, countries must translate national commitments into credible, joined-up policies, and every sector of the global economy must undergo a transformation.¹ The role that consumers will play in these transformations is as yet undetermined.

Emissions from consumption are a persistent and difficult challenge for climate policy strategy. Almost three quarters of global greenhouse gas emissions are estimated to come from ‘lifestyle’ consumption, including mobility, diet and housing.² To limit global warming to 1.5 degrees Celsius above pre-industrial levels – a level deemed to significantly reduce the risks and impacts of climate change – ‘lifestyle’ greenhouse gas emissions will need to decline by 80-93% by 2050 in developed countries, and between 23-84% in developing countries, depending on the country and the scenario.³ But climate policy has so far failed to comprehensively grapple with the issue of how to accelerate consumer behaviour change in an equitable and publicly accepted way. **According to survey carried out by Consumers International in September 2021, 9 in 10 consumer advocates say that their government is not doing enough to help consumers lower their carbon footprint.**⁴ Despite its huge potential, sustainable consumer behaviour is often downplayed in analyses of climate change mitigation for meeting international targets.⁵ One reason for this is that behavioural

¹ https://climateactiontracker.org/documents/853/CAT_2021-05-04_Briefing_Global-Update_Climate-Summit-Momentum.pdf

² Hertwich and Peters, 2009. Ivanova et al. argue that around two-thirds of global GHG emissions are ‘directly and indirectly’ related to household consumption, where the global average is about 6 tCO₂eq/cap (2020).

³ Akenji et al., 2019

⁴ Consumers International Global COP26 Membership Survey, 2021

⁵ Creutzig et al., 2016

changes are perceived to be more value-laden and more difficult to quantify and implement than supply-side and technological changes.⁶ The result has been a lack of coherent planning and investment: only 79 countries have adopted policy instruments aimed at supporting the shift to sustainable consumption and production.⁷ This situation needs to be addressed urgently if a net zero emissions world is to become a reality.

The view of global consumer advocacy

A shift to low-carbon consumer behaviours is an opportunity championed by global consumer advocates. To win the ‘race to zero’ emissions by 2050, the world must achieve near term breakthroughs across every sector of the global economy.⁸ Achieving these transformations at the pace and scale required will not be possible without changes in consumption patterns, which, in some cases, will require substantial individual consumer behaviour changes. This is unavoidable in sectors like aviation and agriculture: methane-producing livestock, for example, cannot be decarbonized like an energy grid.

However, there are limited places where the specific role of *consumers* – the largest group of actors in the global economy – is discussed in relation to the climate transition. Reaching net zero will require all economic actors across all sectors to take on a new balance of rights and responsibilities. This is also the case for consumers. Consumers are increasingly eager to contribute to a more sustainable world,⁹ in particular younger generations.¹⁰ As the largest economic group, they have the potential to drive tipping points in different sectors of the global economy. Many of the approaches for achieving the United Nations Sustainable Development Goals and climate targets rely heavily on consumers making different purchasing choices, or modifying their usage of goods or products and services.¹¹ But this is not a fair responsibility to place on consumers where the current structure of the marketplace favours unsustainable options. Consumers can take on more *responsibility* for changes only when they are given more *rights* – for example, when the sustainable choice is made the easy choice. A rights-based view of the marketplace is therefore crucial to understanding and unlocking consumers’ ability to drive faster and more meaningful system change.¹²

⁶ Creutzig et al., 2016; Hardt et al., 2019

⁷ https://wesr.unep.org/indicator/index/12_1_1

⁸ <https://racetozero.unfccc.int/wp-content/uploads/2021/08/2020-Breakthroughs-Upgrading-our-systems-together.pdf>

⁹ <https://www2.deloitte.com/uk/en/pages/consumer-business/articles/sustainable-consumer.html>

¹⁰ <https://www2.deloitte.com/uk/en/pages/consumer-business/articles/sustainable-consumer-2020.html>

¹¹ https://unctad.org/system/files/official-document/ditccplp2017d2_en.pdf

¹² <https://unctad.org/topic/competition-and-consumer-protection/un-guidelines-for-consumer-protection>

If ‘consumer rights’ are a relative newcomer to climate mitigation discussions, it is because the priorities and concerns of consumers have previously been ignored. This paper seeks to help raise questions about the potential role of consumers and share what advocates who represent consumers in the marketplace are thinking. For over 60 years, Consumers International has represented the global voice of consumers to international decision-makers and is highly active at the international level on sustainable consumption issues. This includes a successful campaign to update the United Nations Guidelines for Consumer Protection to incorporate sustainability in 1999 and 2015.¹³ We are the membership organisation for consumer groups around the world, bringing together over 200 organisations from more than 100 countries. Consumer advocacy organisations combine expert knowledge on environmental policy and consumer rights with an intimate understanding of the lived experiences of people and communities worldwide. Our voice should be seen as central to climate negotiations and policy-making. **94% of consumer advocacy organisations surveyed this year say that environmental sustainability has become of key importance to their organisation, and most have updated their organisational strategy to reflect this.**¹⁴

Together with our members, we have put together **three cross-cutting calls for action** and **a series of key policy demands** based on consumer rights principles, to help guide the conversations and commitments at COP26 in November. In order to make a **fast, fair** and **accountable** transition a reality, we are calling on governments to commit to:

- 1. Creating an enabling environment for rapid consumer behaviour change.**
- 2. A ‘consumer fairness test’ for every climate mitigation policy, ensuring a transition that works for all.**
- 3. The expansion and deepening of consumer representation and participation in decision-making through the transition.**

This report provides insight into what consumer-centred solutions can and should look like across six major areas of transition: transport, energy, manufactured goods, diets, domestic heating and cooling, and finance. Policy recommendations for each area of transition are accompanied by examples of our members’ work, demonstrating how consumer advocacy’s approach to behaviour change works in practice.

¹³ To learn more about the work of Consumers International on sustainability and our international leadership in the space, see Annex I.

¹⁴ Consumers International Global COP26 Membership Survey, 2021

THE NEED FOR A FAST, FAIR AND ACCOUNTABLE TRANSITION

A fast transition

In order to make a fast transition a reality, we are calling on governments to commit to **creating an enabling environment for rapid consumer behaviour change**. Mobilising consumer behaviour change at scale and at speed is key to meeting internationally agreed climate targets. But consumers face various barriers which prevent them from changing their behaviours at the required pace. Policies should seek to unlock transition pathways that empower consumers and combine state, market and civil society-led transformation.

Consumers increasingly recognise the urgency of global action on climate change, expect action from companies and governments and express willingness to shift their consumption habits in a more sustainable direction.¹⁵ However, consumers as individuals lack the ability to drive the transition without the correct environment and support. There are consistent barriers that consumers face which prevent them from acting on their good intentions:

1. Consumers are often not aware of the environmental impacts of their behaviour, or of the most effective ways to reduce them. **Over half of consumer advocates say that consumers in their country are unaware of the changes they will need to make to their consumption habits for the world to reach net zero; only 8% say consumers in their country are 'very aware'**.¹⁶
2. Many actions may be too costly or inconvenient under current marketplace circumstances.
3. Consumers lack the institutional power to consistently and successfully make demands for changes upstream in supply chains.

A policy approach that focuses solely on influencing the choices made by individual consumers fails sufficiently to account for the effects of physical and economic 'lock-in'.¹⁷ Social and infrastructural factors produce certain patterns and norms of demand which are not easily broken by well-intentioned individuals.¹⁸ This suggests that the importance of public policy in creating an enabling environment for behaviour change has previously been underestimated. Only by tackling the systemic conditions and drivers of habitual practices, can we reconfigure systems in a more sustainable way. Undirected voluntary efforts by consumers will not be sufficient to reach the drastic

¹⁵ <https://yougov.co.uk/topics/food/articles-reports/2021/04/29/global-willingness-pay-for-sustainability>

¹⁶ Consumers International Global COP26 Membership Survey, 2021

¹⁷ Sovacool & Griffiths, 2019; Stephenson et al., 2010; Unruh, 2010.

¹⁸ Shove, 2003

reductions needed to achieve the 1.5 °C goal; consumers need a regulatory framework that supports and incentivises behavioural changes.

Change in the climate context is required at both the level of the individual businesses and consumers, and at the systemic-political level. These two levels are not only linked, but also reinforce one another.¹⁹ We need coordinated action from different players across economic systems to achieve a genuine step-change in progress. This will in turn enable governments to go further and faster in their efforts to decarbonise, activating the positive ambition loop between state and non-state actors.

There are multiple intervention points that can bring about an enabling environment for rapid consumer behaviour change. Understanding pathways which combine state, market and civil society-led transformations will be critical.²⁰ Awareness-raising from environmental NGOs can contribute to a groundswell from individuals and households.²¹ Private sector actors can engage consumers in new ways by adopting innovative, climate-smart business models.²² Government policy can play a range of roles, from directly mandating behavioural changes to supporting a wider ecosystem of transformation. This report outlines the types of policies that are required to mobilise consumers across six areas of transition: transport, energy, consumer goods, diets, domestic heating and cooling and finance.

The policy interventions recommended in this report will span four categories:

- 1. Regulations and mandates**, which enable roughly 70% of the emissions saved by behavioural changes in the International Energy Agency's Net Zero by 2050 Roadmap.²³ These include mandatory standards for eco-design and energy efficiency and the mandatory phasing-out of petrol and diesel vehicles.
- 2. Market-based incentives**, which enable two-thirds of the emissions saved by behavioural changes in the IEA's 2050 Roadmap. These include subsidies for low carbon choices, disincentivizing high carbon choices through taxation, and the expansion of emissions trading schemes.
- 3. Infrastructure provision**, which is a key enabling factor of many behavioural shifts. This includes investment in transport infrastructure and electricity infrastructure.
- 4. Information and awareness measures**, which are estimated to enable 30% of the emissions saved by behavioural changes in the IEA's 2050 Roadmap. Holistic approaches

¹⁹ Newell et al., 2020

²⁰ Scoones et al., 2015

²¹ <https://en.unesco.org/themes/education-sustainable-development/cce>

²² Rosenstock et al., 2020

²³ <https://www.iea.org/reports/net-zero-by-2050>

are required, combining consumer educational campaigns, mass-reach communication, improved product labelling, and marketing restrictions.

A fair transition

In order to make a fair transition a reality, we are calling on governments to commit to a **‘consumer fairness test’ for every climate mitigation policy, ensuring a transition that works for all**. Policies should be tested to ensure that the cost burdens of the transition are distributed equitably. The most vulnerable consumers need to be supported in making changes and protected from unfair financial burdens. Policies should target behavioural ‘hotspots’ that are most carbon intensive and the actors who contribute the most to emissions.

The responsibility for behaviour change should reflect the agency to enact it. This means that change must begin with action from high-emitting industries, rather from individual consumers. And the proportion of consumers globally that need to make the largest transformations in their lifestyles is relatively small. According to the 2020 UN Emissions Gap report, which for the first time included a chapter dedicated to ‘equitable low carbon lifestyles’, the combined emissions of the richest 1% of the global population account for more than the poorest 50%.²⁴ This group will need to reduce its footprint by at least a factor of 30 to stay in line with the Paris Agreement targets, whilst the poorest 50% could actually increase their footprint several times. On this basis, the Civil Society Equity Review concludes that the most equitable mitigation framework would see the richest 10% globally take responsibility for 87% of the total emissions cuts needed, while the poorest 50% are not yet required to cut emissions at all.²⁵ These inequities are also reflected geographically. The majority of those living at or below their ‘fair share’ (which researchers have suggested is 1.7 gha/per capita) are based in Latin America, Asia, and Africa.²⁶ The scope, scale and speed of adoption of behavioural changes pursued by different countries strategies should therefore be expected to vary widely.

However, it is not the case that behaviour change is a problem only for high-income countries. Rapidly industrialising countries are projected to contribute almost all of the growth in carbon emissions, with increases in household consumption driving much of that increase.²⁷ This underscores the importance of what is sometimes called ‘lifestyle leapfrogging’. Policies in

²⁴ UNEP, 2020

²⁵ CSO Equity Review, 2018

²⁶ Moore and Rees, 2013

²⁷ Schroeder and Anantharaman, 2017

developing countries should aim to help consumers avoid ‘carbon lock-in’ and instead adopt more sustainable consumption patterns. This process can be supported through aid and climate finance.²⁸

It is also important that countries’ climate mitigation policies do not burden those who can afford it least with the costs of the transition. It should concern policy-makers that the lifestyle emissions of the richest in society are currently increasing, with any curtailment of lifestyle emissions being driven by shifts in behaviour amongst the lower and middle classes.²⁹ There are important lessons for future policy interventions:

1. Policy should primarily target actors most responsible for emissions, such as high-emitting industries.
2. Consumer interventions should be directed at those behaviours or ‘hotspots’ contributing the most emissions.³⁰ Often this will be the behaviours of consumers from the highest income levels.³¹ This is because individual carbon footprint increases with income, especially in the transport category where high-carbon behaviour categories, such as air travel and car use, have a high income elasticity.³²
3. The most economically vulnerable consumers need to be supported in making changes and protected from unfair financial burdens.

The latter is important both in terms of equity but also legitimising future sustainable behaviour interventions: consumer support and acceptance of systems changes is essential for the transition to be politically sustainable. Many consumers do not have the resources to pay more for sustainable goods and services or the power to make certain changes (for example if they live in rented or social housing). It is imperative that these consumers are supported financially and practically to access low carbon goods and services. A policy approach to the transition which allows the poorest consumers to be penalised will struggle to maintain popular support. A ‘consumer fairness test’ for climate mitigation policies has the potential to demonstrate publicly that the cost burdens of the transition are being distributed equitably.

²⁸ Unruh, 2010

²⁹ Across Europe, analysis reveals that the emissions reductions achieved since 1990 have predominantly come from the reduced and altered consumption of lower- and middle-income EU citizens, while the total emissions of the richest 10% grew. Gore and Alestig, 2020.

³⁰ For instance, the IGES report found that just three domains (nutrition, housing and mobility) have an outsized impact amounting to approximately 75% of total lifestyle carbon footprints: Akenji et al., 2019. See also: Gardner and Stern, 2008.

³¹ See Malier, 2019

³² Ivanova, 2020

An accountable transition

In order to make an accountable transition a reality, we are calling on governments to commit to **the expansion and deepening of consumer representation and participation in decision-making through the transition**. A net zero future will require consumers to make complex decisions in new and evolving markets. Consumer advocacy representation in policy-making and standards-setting is needed to ensure consumer protections are fit for a sustainable future. Direct consumer consultation and participation in the policy-making process will help maintain consumer confidence and acceptance through the transition.

Non-state actors should be empowered to complement as well as contribute to more formal, state-led climate governance processes. A polycentric model of climate governance leverages the unique capacities of civil society organisations: their ability to self-organise locally; their flexibility; their experience in building trusting relationships; their potential for experimentation and innovation; and their ability to incorporate feedback loops through experiential learning.³³ Consumer advocacy organisations can play unique and powerful role in this regard. Until now, consumers have lacked a seat at the table in international climate negotiations: **only 1 in 4 consumer organisations are planning to engage directly with COP26**.³⁴ Reversing this trend is key to building the political sustainability of the required consumption changes.

“For too long, analysts have been imagining clever energy transitions that can solve many problems of environmental sustainability, such as climate change and water scarcity, without paying enough attention to political sustainability. Consumers sit at the centre of that political equation.” - David Victor, Professor of Innovation and Public Policy, University of California, San Diego³⁵

9 out of 10 of surveyed consumer organisations are actively working to help consumers live lower carbon lifestyles. These organisations know from experience how consumer-centred climate solutions can be put into practice. They know how to bridge the gap between individual consumers and system-level change. And yet **less than half of consumer organisations are included in environmental policy-making in their country**.³⁶ This is a lost opportunity for joined-up and innovative policy-making.

³³ Ostrom, 2010

³⁴ Consumers International Global COP26 Membership Survey, 2021

³⁵ https://www3.weforum.org/docs/WEF_Fostering_Effective_Energy_Transition_2020_Edition.pdf

³⁶ Consumers International Global COP26 Membership Survey, 2021

Consumer organisations are also well placed to act as convenors between different non-state actors that might not usually join forces. For example, as a co-lead of the UN One Planet network's Consumer Information Programme for Sustainable Consumption and Production, Consumers International convenes consumer goods companies, innovative technology start-ups, leading environmental NGOs, labelling and environmental assessment experts and government policy-makers from around the world, to scale up the provision of good quality consumer information on sustainability.³⁷ Action-oriented coalitions of this breadth and depth will be needed in every sector to drive progress towards net zero emissions.

We are calling for consumer representation in the transition in order to usher in protections and rights for consumers that are fit for a radically different net zero future. Consumers will be making complex and often costly decisions in new and evolving markets.³⁸ Without robust consumer protections and routes to reliable and effective redress, consumers will find themselves increasingly vulnerable in the transition. Consumers need to access low carbon products and services with ease, confident that they will work effectively, be safe and genuinely provide environmental benefit. In cooperation with national consumer organisations, governments should ensure that consumer protection law is updated and strengthened across all areas of transition, to keep up with the pace of change.

³⁷ <https://www.oneplanetnetwork.org/programmes/consumer-information-scp/about>. See Annex I.

³⁸ <https://www.which.co.uk/policy/sustainability/8178/supporting-consumers-in-the-transition-to-net-zero>

CONSUMER CALLS FOR ACTION

How we travel

Transportation emissions from cars, trucks, trains, planes and ships are responsible for around 23% of total energy-related CO₂ emissions.³⁹ Consumer transport choices will play an important role in securing a net zero future. Already the pandemic is delivering changes in patterns of personal mobility, both over short and long distances.⁴⁰ But concerted action from government, businesses and civil society is urgently required to capitalise on these trends. Consumers International and its members call on governments worldwide to:

1. Take action against the most carbon-intensive forms of transport

- Ensure consumers are informed in a reliable and accessible way about the true emissions levels of each form of transport
- Prioritise regulation of manufacturers, who have most agency to respond, ahead of measures that affect consumers directly

Consumer behavioural changes in the most carbon-intensive areas of transport will be required to meet international targets.⁴¹ Yet data from the recent HOPE (Household Preferences for Reducing greenhouse gas Emissions) research project suggests that transport does not receive the policy attention it deserves: only 1.2% of identified policies tackle aviation emissions, even though they account for approximately 25% of total household emissions in the surveyed countries.⁴²

A staggered approach can tackle emissions from consumers' travel choices in a publicly accepted way. In the first place, consumers should be educated about the climate impacts of their travel choices: behavioural studies suggest that information nudges can be effective in persuading consumers to reduce flying, for example.⁴³ Informing consumers in a reliable and accessible way about the true emissions levels of their petrol or diesel vehicles can have a large impact, since it incentivises the purchase of more efficient vehicles which save consumers money in the long-run. Positive momentum can be built as co-benefits around health and financial savings become apparent to consumers.

³⁹ https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf

⁴⁰ <https://ourworldindata.org/covid-google-mobility-trends>

⁴¹ Girod et al., 2013; Hedenus et al., 2014

⁴² Dubois et al., 2019

⁴³ One study of 6,000 consumers in Europe and the US found that *flygskam* or 'flight shame' had led them to cut back 21% on air travel. <https://www.ingka.com/news/global-climate-action-report-from-ikea/>

SPOTLIGHT: MILE21

The Mile21 project, carried out by Consumers International members Altroconsumo, Test-Achats/Test-Aankoop, DECO PROTESTE and OCU, together with their partners, monitors the gap between real-world data on fuel consumption (gathered through direct consumer involvement and vehicle tests on the road) and the data provided by car manufacturers. Through the platform's self-reporting tool, consumers can track their car's consumption, receive advice on green driving and test their savings potential. The compare tool helps consumers make well-informed purchase decisions for more efficient vehicles.

Where education and information is not enough to shift consumers away from carbon-intensive transport, mandatory measures can be effective.⁴⁴ Measures affecting manufacturers (such as stricter emissions standards and rules phasing out the use of petrol and diesel fuels)⁴⁵ should be given priority over measures that affect consumers directly (such as fuel taxes, distance-based vehicle insurance and congestion charges). This is because manufacturers have the agency to respond to directives, whereas measures targeting consumers risk penalising the most vulnerable consumers. However, a sensitive balance of pricing and regulatory policies has successfully brought about change in places as diverse as Singapore, Stockholm and London, where car ownership, car use, and GHG emissions have all been reduced.⁴⁶ Policies which target consumers directly, such as a Frequent Flier Levy, must be carefully calibrated towards high-income, hyper-mobile consumers.⁴⁷

2. Invest in a functioning public and active transport infrastructure

- Complement investment in public transport infrastructure with subsidies for low carbon travel
- Evolve planning laws to reduce the need for personal vehicles, whilst supporting cycling and walking

Government investment in transport infrastructures is a key enabling factor for consumers to adopt low carbon forms of travel. For example, the shift in the IEA's 2050 Roadmap from regional flights to high-speed rail would necessitate building around 170,000 kilometres of new track globally by 2050 (a tripling of 2020 levels).⁴⁸ In addition to direct investment, securing a functioning public transport infrastructure could involve changes in planning law which reduce the need for car use, subsidies for low carbon public transport, and city planning that supports safe bicycle lanes and pedestrianisation.

⁴⁴ Byars et al., 2017

⁴⁵ https://advocacy.consumerreports.org/press_release/consumer-reports-to-testify-at-nhtsa-hearing-in-favor-of-stronger-fuel-economy-standards/

⁴⁶ <https://www.ipcc.ch/sr15/download/>

⁴⁷ Fouquet & O'Garra, 2020; Gossling et al., 2020

⁴⁸ <https://www.iea.org/reports/net-zero-by-2050>

There is evidence that providing better active travel infrastructures can rapidly decrease the need for daily car use and increase the uptake of cycling.⁴⁹ Moreover, there are knock-on health and economic benefits: researchers have calculated these as being worth £724 million in the areas close to ‘mini-Holland’ cycling schemes in London, dwarfing the initial infrastructure cost of £80 million.⁵⁰

SPOTLIGHT: CITIZEN CONSUMER AND CIVIC ACTION GROUP (CAG), INDIA

To tackle the contribution made by the transport sector to air pollution in urban India, CAG carry out research, public awareness and government engagement to promote the integration of public transport systems for easy use by consumers. Studies on Intermediate Public Transport (such as car sharing) explore the possibility of scaling ‘transport as a service’ models. Periodical road audits assess the pedestrian and cyclist-friendliness of Chennai’s roads and suggest key design interventions to ensure safety. Finally, CAG engage in city planning processes and advocate for a robust system of citizen participation in the governance of the transport sector.

3. Provide support for consumers to go electric

- Subsidise electric vehicles and support the development of second-hand markets
- Rapidly deploy the necessary charging infrastructure to encourage adoption by consumers

New technologies such as electric vehicles (EVs) offer major opportunities to reduce the carbon footprint of transport. Analysis from Bloomberg New Energy Finance indicates that the cost of batteries (the most expensive part of an EV) has fallen by nearly 90% over the last decades and EVs are expected to be cheaper than fossil fuel vehicles by the mid-2020s across a range of different vehicle types.⁵¹ However, a lack of charging points, extensive charge time and inadequate battery range mean that many consumers remain reluctant to make the switch.

Government support is needed to ensure EVs become an affordable option for all consumers. **3 out of 5 of consumer advocates say cost is a major barrier to consumers adopting low-carbon forms of transport, and almost three quarters think that government should provide more subsidies to consumers (tax benefits, direct grants) to help them go electric.**⁵² In addition to subsidies, governments should make urgent investments in easily accessible, affordable and joined up charging infrastructure. It is crucial that infrastructure keeps pace with future demands and supports consumers wherever they live and whether or not they have off-street parking. Moreover,

⁴⁹ Aldred et al., 2020

⁵⁰ Aldred et al., 2020

⁵¹ <https://about.newenergyfinance.com/electric-vehicle-outlook/>

⁵² Consumers International Global COP26 Membership Survey, 2021

governments should adopt provisions to boost the second-hand EV market. For example, Consumers International member Altroconsumo in Italy participated in a Europe-wide study of the total cost of ownership of different car fuels which showed that second and third hand electric cars are already the best choice even in purely economic terms.⁵³ Finally, high quality information is needed to dispel misconceptions about the performance of EVs, such as how far it is possible to travel before needing to recharge.

How we plug in

Consumers must be at the heart of any attempts to secure renewable energy for all. Consumer-centred energy policy has the potential to rapidly accelerate change in favour of renewable generation, whilst simultaneously expanding access for the 759 million consumers without electricity.⁵⁴ This is why Consumers International lobbied successfully for the inclusion of ‘universal access to clean energy’ in the 2015 revision of the UN Guidelines on Consumer Protection.⁵⁵ Action from all stakeholders in the energy sector is needed urgently to make this a reality. Consumers International and its members call on governments worldwide to:

1. Establish improvements in energy efficiency

- Ensure annual energy intensity improvements of 3% or above, underpinned by mandatory standards and financial incentives
- Provide reliable consumer information and education and support trusted efficiency-enhancing technologies

Improving energy efficiency is central to the global goal of reducing greenhouse gas emissions. Current and planned policies are projected to achieve an energy intensity improvement of annual average rate of 2.4% to 2030. This remains significantly below the 3% rate of improvement required to reach SDG 7.3 (doubling the global rate of improvement in energy efficiency by 2030).⁵⁶ Without a significant step-up in government action, global energy demand is expected to increase 50% by 2050.⁵⁷ Individual consumers have their part to play here, but they need to be given access to affordable efficiency-improving technologies and practical, reliable information and advice on how to improve their energy efficiency. Mandatory regulations, such as codes and standards, including

⁵³ <https://www.altroconsumo.it/organizzazione/media-e-press/dossier-tecnici/2021/costi-possesso-automobile-nuovo-studio>

⁵⁴ <https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf>

⁵⁵ <https://unctad.org/topic/competition-and-consumer-protection/un-guidelines-for-consumer-protection>

⁵⁶ <https://www.iea.org/reports/tracking-sdg7-the-energy-progress-report-2021>

⁵⁷ <https://unctad.org/topic/competition-and-consumer-protection/un-guidelines-for-consumer-protection>

minimum energy performance standards for appliances, are effective interventions.⁵⁸ These measures can be complemented by fiscal and financial incentives, such as tax reliefs, public financing and the use of market-based instruments.

Reliable consumer information and education is central to empowering consumers directly to improve their energy efficiency. Consumers International members across Hong Kong, Zimbabwe, the United States and elsewhere are carrying out testing and consumer education on higher-efficiency consumer electric appliances. A great deal of research shows that behavioural nudges can significantly reduce home energy use,⁵⁹ such as providing energy saving tips provided to households⁶⁰ and mailing a monthly energy statement to households.⁶¹ Policy-makers should cooperate with consumer organisations, who are familiar with the needs and priorities of consumers in their countries, when designing behavioural interventions.

New technologies such as smart meters are able to improve energy efficiency through identifying patterns of energy usage and helping to manage distribution and demand. Smart meters can also be used to deliver micro-incentives for behaviour change. **86% of consumer advocates say their government should invest directly in efficiency-enhancing technologies.**⁶² However, research in 2019 by Consumers International found a profound lack of consumer trust in connected digital devices, due to lack of clarity on data collection and use. Issues which must be addressed to build consumer trust include security, access and interoperability.⁶³ More can also be done to protect consumers from the algorithmic manipulation of prices resulting from providers having access to detailed data on consumers' energy consumption.⁶⁴

2. Ensure renewable electricity is affordable for all consumers

- Give consumers the information and power to choose their energy
- Design flexible markets which give consumers access to affordable renewable electricity

The economics of renewable energy has now reached a point that mass savings for consumers are within reach. Thanks to technological advances and policy incentives, the costs of onshore wind and solar power have declined by 44 percent and 87 percent respectively since 2005. More than half of

⁵⁸ <https://www.iea.org/commentaries/the-untapped-potential-of-energy-efficiency>

⁵⁹ Šćepanović et al. 2017; Abrahamse et al. 2015

⁶⁰ Allcott, 2011

⁶¹ Carroll et al., 2014

⁶² Consumers International Global COP26 Membership Survey, 2021

⁶³ <https://www.consumersinternational.org/media/239715/trust-by-design-guidelines.pdf>

⁶⁴ <https://www.ceer.eu/documents/104400/-/-/3b167ae3-9a7a-fd36-a02e-c64ad7595a51>

installed renewable electricity generation capacity in 2019 was cheaper than new coal plant alternatives.⁶⁵ Renewables are also now increasingly cost-competitive with gas-fired generation with some solar generation sources now producing the cheapest electricity in history.⁶⁶

SPOTLIGHT: COLECTIVO ECOLOGISTA JALISCO (CEJ), MEXICO

The electricity in Mexico's heavily populated Guadalajara Metropolitan Area (AMG) is likely sourced from a thermoelectric power plant in the neighbouring state of Colima, which is surrounded by fragile ecosystems and vulnerable populations. During the global Green Action Week campaign in 2021, CEJ held a series of 'Digital Dialogues on Energy Consumption' in order to: document and communicate the origin of the energy consumed in the AMG; encourage the exchange of concerns and experiences between the consumers of the AMG and the inhabitants of Manzanillo affected by the thermoelectric plant; and enable consumers to discuss and take ownership of their right to human and environmental health and access to clean, renewable and affordable energy.

A fast, decisive shift to renewable technologies therefore offers economic as well as environmental benefit. The conventional wisdom that a clean-energy future would cost more than the fossil-energy past is false: modelling from the University of Oxford's Institute of New Economic Thinking in 2021 shows that a 'decisive transition' of accelerated zero-carbon deployment would save the world \$26 trillion in energy costs over the coming decades compared with continuing today's energy system, while at the same time meeting the Paris targets.⁶⁷ New and bold policies on trade and investment have the potential to drive the deployment of zero-carbon technologies, expand markets, accelerate cost reductions, and build the smart-grid infrastructure that such a transition requires.

However, it is equally important that cost-savings from the transition are passed down to consumers. Intelligent, consumer-centred regulation can ensure that liberalised energy markets work efficiently, and that consumers are active and confident players. For the choice mechanism to help drive the transition, consumers need to be given the choice in the first place: **half of consumer advocates say lacking the power to choose is a barrier to consumers using renewable-only electricity.**⁶⁸ Policy must ensure that price signals reach consumers, for example in relation to declining renewable generation costs. This means redirecting carbon fuel subsidies to renewables, in a way that benefits consumers: **3 in 5 consumer advocates are asking their government to provide greater subsidies for**

⁶⁵ <https://www.irena.org/publications/2020/Jun/Renewable-Power-Costs-in-2019>

⁶⁶ <https://www.weforum.org/agenda/2021/07/renewables-cheapest-energy-source/> <https://www.lazard.com/perspective/levelized-cost-of-energy-levelized-cost-of-storage-and-levelized-cost-of-hydrogen/>

⁶⁷ https://www.inet.ox.ac.uk/files/energy_transition_paper-INET-working-paper.pdf

⁶⁸ Consumers International Global COP26 Membership Survey, 2021

consumers to help them use renewable-only electricity.⁶⁹ Policies should establish positive feedback loops through the promotion of demand response, especially where the stability of electricity grids fed by intermittent renewables is a concern.⁷⁰ By encouraging consumers to be flexible in their consumption, total system costs are reduced, which in turn reduces the price consumers pay for their electricity. Finally, consumers should be rewarded with lower bills for switching to renewable-only tariffs, rather than burdened with opaque premiums.⁷¹ **60% of consumer advocates say that consumers in their country are unaware of the fuel mixes in their electricity tariffs.**⁷² Transparency is needed on the contractual relationship as well as on the product, especially switching between suppliers. Information provided to consumers should be simple, readily accessible and comparable, allowing consumers to make well-informed choices. It is important to prevent situations where the option of switching suppliers misfires, with consumers exercising the wrong option against their own interests.⁷³

SPOTLIGHT: CONSUMER ADVOCATES AGAINST HIGH ELECTRICITY BILLS

Consumer advocates everywhere are finding innovative ways to help consumers cut their electricity bills:

- *Consumentenbond in the Netherlands run an energy collective, where consumers come together for greater bargaining power. Energy companies bid for their collective business, with the winning provider committing to supply 100% European green energy.*
- *CHOICE in Australia has set up a switching service called Bill Hero, helping consumers choose cheaper deals.*
- *Consumer advocates in Spain, Japan, the US and elsewhere advocate for transparency in electricity bills and run bill advice workshops.*

3. Create a level playing field for self-generated renewable energy

- Remove subsidies that discriminate against decentralised energy systems
- Introduce policies to enable consumers to self-organise around innovative energy services

As individuals become engaged in decentralised energy solutions, such as roof solar panels or batteries in their basements, a new actor has emerged in the energy landscape: the prosumer – people who both produce and consume energy, for example by selling their excess electricity back to

⁶⁹ Consumers International Global COP26 Membership Survey, 2021

⁷⁰ <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/11/Prices-Behind-the-Meter-Insight-61.pdf>

⁷¹ <https://www.which.co.uk/news/2019/09/how-green-is-your-energy-tariff/>

⁷² Consumers International Global COP26 Membership Survey, 2021

⁷³ Hills, 2012

the grid. The rise of prosumers has the potential to accelerate the transition to clean energy in different ways in different parts of the world.

In countries where large sections of the population live off grid, or with an unreliable electricity supply, self-generation can be essential to raising the standard of living. Making self-generation and trading the easy, mainstream choice is an opportunity to improve energy access and unlock economic benefits, as well as contributing to clean energy goals. Action to secure this win-win solution has been made more urgent by the Covid-19 pandemic, which has reversed progress in global energy access. For example, in sub-Saharan Africa, the number of people without access to increased in 2020, pushing many countries further away from achieving the goal of universal energy access by 2030.⁷⁴ Policies in these countries should ensure that decentralised, off-grid systems are able to operate without discrimination, for example by removing asymmetric subsidies. In countries with comprehensive grids, prosumers can help to overcome the intermittency challenges of renewable electricity systems and issues of variability inherent in wind and solar power. Prosumers can provide services to system operators in the form of frequency response, reserve services and grid balancing, and reducing the overall need for grid reinforcement by using electricity produced on-site that does not rely on network infrastructure.

In both cases, there are a wide range of challenges to be overcome in empowering this new energy actor to play as valuable a role in the energy transition as possible. This includes technical challenges, such as ensuring metering systems incentivise prosumers to shift their consumption to periods of lower pricing, increasing consumer understanding and trust, and ensuring that regulation creates a level playing field. Generation licenses and liability protections should be adapted for small scale producers and generous feed-in tariffs compatible with market design should be considered. Finally, a range of policy options are available to make it easier for consumers to self-organise around energy services (such as electricity aggregation, peer-to-peer trade, energy communities) alongside traditional supply arrangements.

What we buy

Manufactured goods and materials – the clothes we wear, the books we read, the plastics in the device you’re using to read this sentence – account for nearly a third of greenhouse gas emissions worldwide.⁷⁵ How consumers buy, use and dispose of consumer products is therefore a fundamental issue that needs to be addressed in order to reduce carbon emissions. Consumers increasingly care about sustainability and report they are willing to change their shopping habits to reduce

⁷⁴ <https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity>

⁷⁵ <https://www.nature.com/articles/s41561-021-00690-8>

environmental impact.⁷⁶ Ambitious action from government and all marketplace stakeholders is needed to meet consumers' growing demands. Consumers International and its members call on governments worldwide to:

1. Improve the quality and reliability of product sustainability information

- Take action against greenwashing in product marketing
- Consult consumer advocacy organisations in the development of green claims and labelling legislation

Although it is not the biggest barrier, there is evidence that a lack of information is stopping consumers from adopting more sustainable lifestyles.⁷⁷ **69% of consumer advocates say that consumers are 'not very aware' or 'completely unaware' of the climate impact of the manufactured goods they buy.**⁷⁸ Too many green claims are being used on the market, with many of them unsubstantiated, misleading or dishonest. This creates confusion, making it hard for consumers to identify sustainable products and services.

Action from all marketplace stakeholders is needed. When communicating the sustainability characteristics of products to consumers, businesses can stand out from their competitors by following the relevant UN Guidelines,⁷⁹ which demonstrate how to make green claims reliable, relevant, clear, transparent and accessible. Labelling organisations will play an important role in standardising consumer sustainability information: **4 in 5 consumer advocates support improved product labelling to help consumers buy manufactured goods with a lower carbon footprint.**⁸⁰ Digitalisation can be harnessed to communicate the relative benefits of different labels to consumers.⁸¹ It is important that consumers are able to distinguish between type-1 ecolabels, which are verified by an independent third-party organisation, and unverified self-made claims by producers. **Half of consumer advocates say that consumer understanding of product environmental labels in their country is 'low' or 'very low'.**⁸² Mandatory product labelling of embodied or lifecycle emissions and a requirement for companies to disclose their carbon emissions are potentially impactful options.

⁷⁶ https://www.accenture.com/_acnmedia/PDF-127/Accenture-COVID-19-CGS-Pulse-Survey-Research-Wave-4.pdf; <https://www.ibm.com/downloads/cas/EXK4XKX8>

⁷⁷ <https://www2.deloitte.com/uk/en/pages/consumer-business/articles/sustainable-consumer.html>

⁷⁸ Consumers International Global COP26 Membership Survey, 2021

⁷⁹ <https://www.oneplanetnetwork.org/resource/guidelines-providing-product-sustainability-information>

⁸⁰ Consumers International Global COP26 Membership Survey, 2021

⁸¹ <https://link.springer.com/article/10.1007/s11367-020-01741-9>

⁸² Consumers International Global COP26 Membership Survey, 2021

Governments also need to take action against greenwashing in product marketing. Enforcement action will help to avoid a situation where consumers lose trust in all green marketing claims, because they cannot distinguish between good and bad. Governments should introduce clear and robust guidelines to businesses on providing green claims, followed by swift enforcement and proportionate penalties.⁸³ From the consumer advocacy perspective, the best policy option would be a pre-approval scheme for green claims, as already happens for health claims for food in the EU.⁸⁴ Bans on advertising on fossil fuel products should also be considered.⁸⁵

Consulting consumer organisations in the development of new regulation around green claims and labels will be key. Many consumer organisations, such as Consumer Reports in the US, are introducing their own 'green choice' designations for products they test.⁸⁶ And in developing countries, consumer advocates are driving forward the debate in civil society and legislature. This year, the Kenya Consumers Organisation convened groups of grassroots consumer advocates to share views and experiences on how to monitor the sustainability of goods offered to consumers and how to promote greater consumer awareness of sustainable goods.⁸⁷

2. Take action to make production processes cleaner

- Support international standards to embed robust net-zero goals across all sectors
- Encourage industry self-regulation, in the form of voluntary targets, supplier agreements and codes of conduct

Alongside rising consumer willingness to alter shopping habits comes rising expectations that products will be low carbon by default.⁸⁸ Whilst consumers are a powerful economic group, they do not always have the ability to influence the system at the scale required to cause change. For the consumer expectation of sustainability to be met, upstream changes in industry must be made. Consumers cannot wield their purchasing power for sustainability if there are no sustainable choices

⁸³ <https://www.gov.uk/government/news/green-claims-cma-sets-out-the-dos-and-don-ts-for-businesses>
<https://www.acm.nl/sites/default/files/documents/guidelines-sustainability-claims.pdf>

⁸⁴ https://www.beuc.eu/publications/beuc-x-2020-116_getting_rid_of_green_washing.pdf

⁸⁵ <https://verbiedfossielereclame.nl/only-words/>

⁸⁶ <https://www.consumerreports.org/environment-sustainability/introducing-consumer-reports-green-choice-fron-our-president-april-2021/>

⁸⁷ <https://www.consumersinternational.org/media/368882/green-action-fund-2021-successful-grantees.pdf>

⁸⁸ <https://www.forbes.com/sites/forrester/2021/01/21/empowered-consumers-call-for-sustainability-transformation/?sh=2585b3c72042>

in the first place: **69% of consumer advocates say that ‘availability’ is a key barrier to consumers buying manufactured goods with a lower carbon footprint in their country.**⁸⁹

Consumer advocates will continue to demand bold action from industry players, to reduce their energy demand and increase the rate of materials recycling.

“Companies can no longer expect to put high carbon products on the market and expect society to pay for the external costs of the carbon associated with their production, use and disposal.” - Which?-UK⁹⁰

Self-regulation, in the form of voluntary targets to decarbonise, supplier agreements and codes of conduct, should be encouraged. However, it will not be enough: recent research that shows fewer than one in four of the world’s largest companies are on track to meet basic climate change targets.⁹¹ **Three quarters of consumer advocates think stricter regulation of producers is needed to lower the carbon impact of manufactured goods.**⁹² For example, eco-design regulations for consumer goods can drive product improvements and remove the least sustainable products from the market. Finally, international standards which embed robust net-zero goals across all sectors are crucial for businesses to accelerate their climate action.⁹³

3. Promote innovation and investment in a more circular materials economy

- Introduce robust ‘Right to Repair’ legislation
- Strengthen laws against planned obsolescence, and set product standards on durability

Our global economy is based on linear production and consumption, also known as ‘take-make-waste’, which has been a key contributing factor to climate change. Industry needs to transform how it uses materials.⁹⁴ A circular economy in materials would design out emissions before production begins, by minimising waste and pollution and keeping products and materials in use. For example, the clothes industry contributes to around 10% of global greenhouse gas emissions due to its long supply chains and energy intensive production - more than the global aviation and shipping industry combined.⁹⁵ The rise of new modes of consumption, based on sharing, lending or leasing, rather

⁸⁹ Consumers International Global COP26 Membership Survey, 2021

⁹⁰ <https://www.which.co.uk/policy/sustainability/8178/supporting-consumers-in-the-transition-to-net-zero>

⁹¹ <https://edition.cnn.com/2021/04/21/business/corporate-emissions-climate-crisis/index.html>

⁹² Consumers International Global COP26 Membership Survey, 2021

⁹³ <https://www.iso.org/news/ref2726.html>

⁹⁴ <https://ellenmacarthurfoundation.org/how-the-circular-economy-tackles-climate%20change>

⁹⁵ <https://www.weforum.org/agenda/2020/01/fashion-industry-carbon-unsustainable-environment-pollution/>

than ownership, have the potential to significantly reduce fashion's climate impact. Seemingly simple activities by groups of consumers, such as 'clothes-swapping', can be the entry point to a deeper transformation of values and norms.⁹⁶

Businesses should embed the circular economy in their strategies and design these principles into their products. For instance, removing hazardous chemicals from products is a precondition of recycling. Consumer advocates can guide consumers in the transition to a circular economy and advocate for the necessary consumer rights and protections. Government action is needed to incentivise the uptake of circular economy solutions and to put in place the necessary infrastructure for these solutions to work. Standards and regulations which support best-practice and facilitate universal adoption of circular innovations are needed. Eco-design rules can make products greener and more durable from the design phase. Robust 'Right to Repair' legislation can ensure a more attractive, affordable and accessible route to products repairs for consumers. Finally, laws against planned or programmed obsolescence have the potential to open the space for consumer class actions.

SPOTLIGHT: CONSUMER ADVOCATES FOR A CIRCULAR ECONOMY

Consumer advocates everywhere are taking action to extend the lifetime of products:

- *Que Choisir in France have taken legal action against Nintendo for the premature obsolescence of one of their controllers, which was backed up by BEUC at the European level.*
- *Consumer advocates across Europe have joined the PROMPT consortium (Premature Obsolescence Multi-stakeholder Product Testing programme), which aims to help reduce resource depletion and prevent waste.*
- *Consumers International members in Belgium, Spain, Italy and Portugal are pursuing class actions against Apple for premature obsolescence.*
- *CHOICE in Australia are campaigning for right to repair, advocating for a new labelling scheme for durability, and rolling out information in reviews to help people consider refurbished models.*

What we eat

What we eat - and how we grow it - is a major driver of climate change. The global food system is estimated to contribute around 30% of greenhouse gas emissions, more than half of which can be attributed to livestock production.⁹⁷ If diets continue along current trajectories, the livestock sector will use up around half of our total 1.5 degrees Celsius-consistent carbon budget by 2030 and 37% of

⁹⁶ https://cdn.naturskyddsforeningen.se/uploads/2021/10/04084111/Anthology-of-Sustainable-Consumption_digital.pdf

⁹⁷ <https://www.carbonbrief.org/experts-how-do-diets-need-to-change-to-meet-climate-targets>

a budget consistent with 2 degrees Celsius.⁹⁸ Consumers switching diets to lower-emissions, plant-based alternatives could go a long way to reducing overall emissions, particularly in high- or medium-income countries.⁹⁹ But many barriers exist that make it difficult to follow this in practice. Action from all stakeholders in the food value chain is needed to support consumers to make dietary changes and to improve the sustainability of agricultural production upstream.¹⁰⁰ Consumers International and its members call on governments worldwide to:

1. Communicate sustainable dietary guidelines to consumers

- Introduce and align national dietary guidelines to emissions reductions
- Communicate guidelines to consumers through labelling and education

Consumers cannot be expected to make significant changes to their diets, some of which represent long-held cultural norms, if they are not fully informed about why some changes need to take place.

Two thirds of consumer advocates say that consumers are unaware of the climate impacts of their diets.¹⁰¹ National dietary guidelines are a strong basis for consumer education and information and can facilitate the setting of food standards and policy development.¹⁰² It is crucial that dietary guidelines reflect the latest scientific advice on emissions reduction and that they are updated regularly. Even where guidelines are already in place, more needs to be done to promote consumer awareness, including through proper investment in education. **85% of consumer advocates think their government should commit to consumer education programmes to help consumers switch to diets with a lower carbon footprint.**¹⁰³ Interventions should be informed by the best behavioural science. Research points to several effective approaches: consumers being ‘nudged’ by being given pre-portioned meal sizes;¹⁰⁴ consumers receiving reminders to reduce consumption;¹⁰⁵ consumers presented with the carbon footprint information of meal choices.¹⁰⁶ Labelling schemes are therefore central to helping consumers make lower environmental impact food choices.¹⁰⁷

⁹⁸ Harwatt, 2019

⁹⁹ Bajželj et al., 2014

¹⁰⁰ <https://foodsystems.community/wp-content/uploads/2021/09/consumers-call-for-action-at-the-united-nations-food-systems-sum-c19855f0584537ca9f6443e4022d70e6.pdf>

¹⁰¹ Consumers International Global COP26 Membership Survey, 2021

¹⁰² <https://www.fao.org/nutrition/education/food-based-dietary-guidelines>

¹⁰³ Consumers International Global COP26 Membership Survey, 2021

¹⁰⁴ Friis et al., 2017

¹⁰⁵ Carfora et al., 2017

¹⁰⁶ Brunner et al., 2018

¹⁰⁷ <https://www.consumersinternational.org/media/314552/how-consumer-organisations-can-contribute-to-more-sustainable-food-systems.pdf>

2. Support the development of sustainable food production

- Align agricultural policies and subsidies to 1.5 degrees Celsius trajectory
- Create and promote frameworks to connect consumers directly with producers

Consumers are only one actor in large and complex food systems: changes by actors upstream to more sustainable and low carbon modes of agricultural production are needed to reach climate targets. Public subsidies for agricultural producers can incentivise agro-ecological practices, and climate-smart land-use policy can help to free up land for nature-based solutions which increase carbon sequestration, such as tree planting. Strengthening local food systems can also help reduce environmental impact, while boosting consumer engagement and providing greater transparency. Governments should therefore support the creation of shorter value chains, which connect consumers directly with producers (especially small-scale and agro-ecological producers) and thereby avoid the costs incurred in long and fragmented value-chains. In developing countries, digital technologies can provide a ‘leapfrogging’ effect to sustainable, efficient and transparent food value-chains.¹⁰⁸

Action by all stakeholders is needed to reduce the climate impacts of food loss and waste. A third of all food produced for human consumption is lost or wasted, generating as a result more than four times as much annual greenhouse gas emissions as aviation.¹⁰⁹ Tackling food loss and waste is a clear example of a win-win for both climate and the economy. For example, in sub-Saharan Africa, the World Bank estimates that just a 1 percent reduction in post-harvest losses could lead to economic gains of \$40 million each year.¹¹⁰ Action is needed to reduce household food waste, but the burden of this process cannot be left to consumers. Greater investment in education and circular economy solutions, developed with consumer organisations, can ensure more consumers are recycling food waste and packaging. To support this, stronger action to enforce and incentivise the reduction of food loss and waste at all stages of the value chain is needed, which could include legislation requiring retailers to donate safe, unsold food products to vulnerable communities, instead of destroying it.¹¹¹

SPOTLIGHT: CONSUMER ADVOCATES FOR SUSTAINABLE AGRICULTURE

Consumer advocates are not only advocating for sustainable and regenerative and agriculture, but spearheading grassroots movements that put theory into practice:

¹⁰⁸ <https://www.mercycorpsagrifin.org/2021/09/28/introducing-the-digital-marketplace-playbook/>

¹⁰⁹ <https://www.wri.org/insights/whats-food-loss-and-waste-got-do-climate-change-lot-actually>

¹¹⁰ <https://openknowledge.worldbank.org/handle/10986/34521>

¹¹¹ <https://zerowasteurope.eu/library/france-law-for-fighting-food-waste/>

- *Via Organica in Mexico run workshops and training on organic food planting, including helping rural communities plant agaves and acacias for carbon sequestration.*
- *Consumer advocates in Malaysia, Togo, Zimbabwe, Zambia, Pakistan, Rwanda, Ecuador, Peru and elsewhere are training consumers to grow organic kitchen gardens with multiple co-benefits for health and environment, connecting agro-ecological farmers with local consumers at itinerant food fairs, and setting up community platforms to share seeds and manure amongst rural households.*
- *Mumbai Grahak Panchayat in India have run a collective buying scheme for four decades, which facilitates the purchasing and delivery of local food over 30,000 families.*

3. Ensure traceability and transparency along the food value chain

- Support the provision of accurate consumer information on food provenance
- Promote digital tools which enhance traceability at all stages of the value chain

Long and complex food value chains exhibit many information asymmetries, where one stakeholder in the value chain has better information than others. This can make it difficult to establish trust in information about product sustainability attributes. Consumer advocates champion transparency in supply chains, with clear information on the provenance of all food products, including record of social and environmental harms. This information would allow for improved consumer information on sustainability, as well as incentivising change throughout the value chain, and enabling governments to clamp down on bad practices. Consumer expectations for greater transparency, in particular in high-income countries, are rising.¹¹² Joined-up action from businesses and government is needed to deliver these improvements.

Creating transparency requires a business to both gain *visibility* into its supply chain and to properly *disclose* information to consumers. While traceability systems exist for food safety, attention is now being drawn to the need for an augmented traceability system that provides information on environmental concerns. Digital solutions such as blockchain are rapidly gaining momentum in the agri-food sector.¹¹³ All stakeholders, including consumers, should be consulted in the design and implementation of traceability initiatives, to ensure that the relevant trade-offs and stakeholder needs have been adequately considered. Consumer organisations can also be engaged to ensure that the information gathered by new traceability systems is disclosed to consumers in a relevant and accessible way. However, it is important that enhanced transparency is available to all actors in the marketplace, to incentivise change upstream in the value chain.

¹¹² Kraft et al., 2018

¹¹³ <https://openlink.com/en/insights/articles/blockchain-food-traceability-can-revolutionize-the-industry/>

How we live

Our homes emit carbon in two ways: when we build them (using manufactured cement, steel, and iron) and when we use them (with heating and air-conditioning). When buying or renting a new home, consumers should feel confident that it was built to the highest low-carbon standard. When heating or cooling homes, consumers should feel confident that the technologies they are using maximise efficiency and minimise emissions and bills. Consumers International and its members call on governments worldwide to:

1. Provide low-carbon homes for all consumers

- Introduce building regulations and codes that minimise emissions in new construction
- Establish energy efficiency standards for new homes and support retrofits for old ones

Buildings alone account for almost 40% of all human greenhouse gas emissions in the world, and more than half of these come from residential properties.¹¹⁴ There are two areas of government intervention that can minimise this.

The first is ensuring that new homes are built in as emissions-efficient a way as possible. Stricter building regulations and green building codes that minimise emissions in construction are potentially impactful interventions. Technical innovation in manufacturing, such as the use of low carbon cement, can have a big impact, given cement manufacturers produce 5-7% of all carbon emissions.¹¹⁵ Consumers may be well placed to advocate for change in cases such as this, as the costs to end consumers are often lower than the costs to those involved in specific stages of the production (for example, where low carbon cement may increase costs to cement companies by 100%, the end costs to consumers of buying a home made with low carbon concrete is only 3% more).¹¹⁶ As a member of the awarding committee of the label 'ILTIZAM', for example, Consumers International's member in Morocco is able to propose new criteria of eligibility for energy efficiency in construction.¹¹⁷

The second is ensuring that homes are built and fitted with energy efficiency in mind. Improving energy efficiency, both in new homes and by retrofitting old ones, not only reduces energy costs, but is also a major opportunity for individuals to reduce their carbon impact. For example, 'Passive

¹¹⁴ <https://futurecities.catapult.org.uk/housing-innovation-map/low-carbon-houses/>

¹¹⁵ <https://www.newscientist.com/article/2185217-the-future-with-lower-carbon-concrete/>

¹¹⁶ <https://www.weforum.org/reports/the-net-zero-challenge-fast-forward-to-decisive-climate-action>

¹¹⁷ <https://www.consumersinternational.org/members/members/federation-nationale-des-associations-du-consommateur-maroc-fnac/>

House' buildings allow for heating and cooling related energy savings of up to 90% compared with typical building stock and over 75% compared with average new builds.¹¹⁸ It is unlikely that market mechanisms will be able to drive costly and unprofitable efforts like retrofitting homes: government investment in this area is key. Consumer advocacy organisations will be a vital partner and are well placed to see the links between housing rights and consumer and environmental rights. CHOICE in Australia, for example, has partnered with other not-for-profits to deliver advocacy on the quality of homes, including rental properties and repairs, with a focus on whether people have the ability to heat or cool properties in an affordable way.¹¹⁹

2. Help consumers adopt low carbon home heating technologies

- Ensure all consumers, including the poorest, can switch to low-carbon heating technologies
- Put in place robust consumer protections on new technologies

In countries where home heating is a necessity, governments should prioritise a fair heat deal that supports all consumers to switch to low-carbon technologies. Poorer consumers will not be able to afford to make the change without significant financial assistance. **4 in 5 consumer advocates say that 'cost' is a main barrier to consumers adopting low-carbon forms of household heating and cooling.**¹²⁰ Policies should be tested and reviewed regularly to ensure that all households have the right balance of incentives and that inequities are mitigated.

Governments in the position to do so should expand the financial support available, for example through predictable and well-advertised grants and low-cost loans. Policy-makers should ensure that enhanced support schemes are made available for the poorest and most vulnerable consumers. Cooperation with national consumer organisations is required to put in place robust consumer protections on new technologies.¹²¹ It is key that consumers have confidence in the safety and reliability of novel products and their installation. Finally, consumer information and education has a crucial part to play. **Half of consumer advocates say consumers are unaware of the climate impacts of domestic heating and cooling.**¹²² Consumers require accessible and reliable guidance on the changes they need to make and why.

Low-carbon heat networks, or district heating, are one of the most cost-effective ways of reducing carbon emissions from heating. By taking heat from a central source to a number of homes, they

¹¹⁸ https://passipedia.org/basics/what_is_a_passive_house

¹¹⁹ <https://www.healthyhomes.org.au>

¹²⁰ Consumers International Global COP26 Membership Survey, 2021

¹²¹ <https://www.which.co.uk/policy/sustainability/8178/supporting-consumers-in-the-transition-to-net-zero>

¹²² Consumers International Global COP26 Membership Survey, 2021

provide an opportunity to exploit larger scale and often lower cost renewable and recovered heat sources that otherwise cannot be used. Government investment in this area could avoid the need for every individual household to purchase expensive technologies such as heat pumps. However, it is vital that consumer advocacy's concerns over differences between protections granted to consumers relying on district heating and those who have an electricity or gas supply contract are addressed.¹²³ This is particularly important because district heating suppliers operate under natural monopoly, with consumers unable to switch supplier.

3. Help consumers adopt efficient home cooling technologies

- Encourage urban areas to be designed with natural cooling
- Introduce stricter efficiency standards and consumer protections for cooling technologies

There are 1.6 billion residential air conditioners in use today. Most households in countries with warmer climates have not yet purchased their first air conditioner (AC), and ownership could rise to 5.6 billion by 2050, as temperatures rise and costs decrease. Without a change in approach, this would mean energy demand for cooling tripling by mid-century, to the equivalent of 25% of today's current total power consumption.¹²⁴ For example, in Indonesia and India, business-as-usual cooling growth would mean AC contributes over 40% of peak power demand over the course of a year by 2050, up from 10-15% today.¹²⁵ This challenge is particularly severe in cities, where urban heat island effects lead to greater extremes of temperature.

A concerted effort by governments can manage demand for cooling in a warming world, while increasing access to a wider range of consumers. Higher efficiency standards, technological advances such as combining cooling equipment and cold storage to manage peak demand, simple solutions such as cool roofs and off-grid solutions in remote areas, and developments in regulation, finance and business models, such as 'cooling as a service', all have a key role to play. Each raise a plethora of consumer issues: it is vital that consumer organisations participate in the development of new standards and schemes and that modern consumer protections are formulated to support the transition in household cooling.

¹²³ https://www.beuc.eu/publications/beuc-x-2021-017_heat_decarbonisation.pdf; https://www.akeuropa.eu/sites/default/files/2019-12/8_Policy%20Brief%20District%20Heating%20and%20Cooling.pdf; <https://www.which.co.uk/policy/housing-utilities/363/turning-up-the-heat-getting-a-fair-deal-for-district-heating-users-which-report>

¹²⁴ <https://www.carbonbrief.org/guest-post-why-demand-for-cooling-could-make-the-world-hotter>

¹²⁵ <https://www.iea.org/topics/energy-efficiency>

How we spend and save

Building a global finance sector that operates in line with net zero targets is a central component of a successful transition. Billions of consumers worldwide rely on financial services daily to access their money, savings, pensions, loans and more. Effectively leveraging consumers in the transformation of financial services can accelerate the transition to net zero.

As advisers to the public, and custodians of their money, the financial sector has great influence over whether a person's money is invested in ways that help build a sustainable future. At present, the majority of banks, investment and pension funds are still heavily invested in fossil fuels and high carbon industries. With the impact of climate change we now know the continuation of this investment model is neither economically nor environmentally sustainable.

How we spend and save is a broad topic, spanning retail financial products and services, consumer information as well as broader financial business practices. Interventions are required in each of these areas to better support consumers. Consumers everywhere have a right to understand the climate impact of the financial services they rely on, easy access to financial services that are climate positive, along with assurances that their savings will be protected against climate risk. Consumers International and its members call on governments worldwide to:

1. Promote net zero aligned financial services as the default option for consumers

- Align financial services to robust international net zero standards, backed up by regulation
- Support employers to ensure employee pensions are net zero aligned as default

Consumer attention is being increasingly directed towards sustainable purchasing, but most consumers are unaware of how their savings are being invested and used in the global market. Although global data on this issue is limited, studies from developed economies make clear that consumer comprehension of the role of finance in climate change is also low. For example, in a survey of 2,002 UK investors and non-investors, Which?-UK found very low comprehension rates of what sustainable investing is in practice, with only 21% able to identify the definition of Environmental Social Governance (ESG).¹²⁶ This is despite 4 in 10 of the investor groups surveyed claiming to hold ethical investments and 42% of all respondents saying that fund managers should put pressure on companies to act more responsibly. Half of respondents said ethical investing terms should be regulated.

When seeking financial advice or opening a new account of any kind, net zero aligned financial services should be the default that is offered to consumers. All barriers to consumers assessing the

¹²⁶ <https://www.which.co.uk/news/2020/08/is-ethical-investing-just-too-difficult/>

impact of their financial services must be removed. Effective policy making and regulation to enforce such a change will incentivise banks and fund managers to prioritise the creation of products and investment portfolios that are in line with the net zero targets. For long term investments such as pensions, it is often unclear as to where money is invested and its associated climate impact. Automatic enrolment into net zero aligned pension funds will enable consumers to be confident in the positive impact of their funds, while also enabling large scale investment into climate and biodiversity solutions.

2. Communicate the sustainability impact of financial services to consumers

- All financial services providers to provide, clear, credible, and comparable information on the climate impact of their services
- Environmental reporting definitions to be internationally standardised to enable more consistent monitoring

The progress made in the growth of sustainable finance is removed from the experience of the everyday consumer in how they understand and interact with financial services. Consumers are disconnected from the impact of how their savings, pensions and investments are used in the market and their associated impact on climate. As ever more consumers worldwide are both gaining access to financial services through digital innovation, along with becoming increasingly concerned about the impact of climate change, it is imperative that consumers are able to access sustainable financial services and understand their impact.

If all financial service providers supplied clear, credible and comparable information on the climate impact of their services, consumers could utilise such information to choose a service that is in line with their concerns for the climate. For example, a 2020 report by ShareAction highlighted the importance of awareness and education for asset managers and their staff in spearheading climate positive investment.¹²⁷ International standardisation would support such action by allowing for consistent monitoring of progress made. For businesses included in such portfolios, this would represent significant pressure to increase investment in decarbonising supply chains.

3. Ensure considerations of climate impact are part of all financial decisions

- Implement climate due diligence requirements for financial providers
- Support consumers with financial advice and education aligned to net zero

Fossil fuels and high carbon industry have long been understood to be a 'safe' investment, broadly stable in the market with reliable growth. This economic assumption can no longer stand.

¹²⁷ <https://api.shareaction.org/resources/reports/Point-of-no>Returns.pdf>

Meanwhile, renewable energy and low carbon innovation, previously labelled as risky and unscalable, has shown itself to be highly competitive in the marketplace.¹²⁸

There is an urgent need for financial providers to fully consider the safety and security of continued investment in fossil fuel production and other high-carbon investments. This should apply not only to stranded asset risk, but also the continued funding of climate change and the long-term stability of the market. The implementation of climate due diligence requirements for financial providers would enable and incentive a pivot to climate positive investments that will prioritise long term growth and limit climate risk.

In the world of financial services and investing, the power and impact of consumers is often minimised or not carefully considered. As a tool for stimulating significant changes in the market, if consumer-facing financial services can easily reflect and embody the desires for sustainability and climate action that consumers have, enormous change could be made through economic incentives that motivate business shifts towards net zero aligned business models.

¹²⁸ <https://www.irena.org/publications/2021/Jun/World-Energy-Transitions-Outlook>

COP26 AND BEYOND

On the long road towards a net zero world, the 2021 Conference of Parties represents only one step. This is a unique opportunity to develop a co-ordinated and cohesive global plan of action, but the real challenge will be putting this plan into practice at all levels. The consumer principles and calls to action outlined in this statement must be at the heart of this climate strategy, ensuring that consumer rights and needs are a priority, not an afterthought, in the policy process.

However, the role of consumers and consumer advocates must continue beyond COP26. The success of this process will be determined by what comes next: the implementation, monitoring, and enforcement mechanisms that turn commitments into tangible action. Consumer advocates bring a wealth of expertise on the day-to-day realities of building more sustainable marketplaces and can offer an essential perspective on the solutions needed. It is no longer viable for climate strategy to be governed without the input of those who will in practice be carrying it out - by eating, travelling, living and shopping differently. Consumer interests and voices must be built into governance structures, both to ensure that the carbon transition is fair and to ensure that it happens at all. Delivering this transformation will not be easy and can only be achieved through co-operation between all stakeholders in the global economy, working in partnership to achieve lasting and meaningful change.

ANNEX I: CONSUMERS INTERNATIONAL'S WORK IN THIS AREA

For over 60 years Consumers International has championed the rights of consumers, bringing together over 200 member organisations from more than 100 countries. Consumers International has general consultative status at the United Nations and represents the global consumer voice at international decision-making events and negotiations.

- Represents the global consumer voice at the intergovernmental group of experts on consumer policy and competition at UNCTAD. We played a leading role in bringing the consumer voice to the 2015 review of the UN Guidelines for Consumer Protection.
- Co-leads the Consumer Information Programme of the UN One Planet network.
- Holds a collaborative agreement with the World Health Organization and with the Food & Agriculture Organization (FAO).
- Hosted the first G20 Consumer Conference in 2017 and 2018 at request of G20 Presidency.
- Considered a 'Special Economic Group' and provides consumer input to OECD papers and proposals throughout the year and participates at its committee on consumer policy.
- Sits on the consumer policy committee (one of the three high-level groups at the International Organization for Standardization); currently involved in the development of multiple standards. Represents the consumer voice at Codex Alimentarius.
- Represents the consumer viewpoint at the World Trade Organisation through variety of approaches including Consumer Trade Dialogue.
- Connects with and joins multi-national consumer networks and groups, for example the International Consumer Protection and Enforcement Network (ICPEN).

Alongside Consumers International's work on the international stage, we also have a long history of working to achieve sustainable consumption and production patterns, across a range of sectors. Some select examples of Consumers International's work on sustainability include:

United Nations Guidelines for Consumer Protection (UNGCP)

Following a successful campaign by Consumers International, the UNGCP were originally adopted by the UN General Assembly in 1985, with subsequent revisions and updates in 1999 and 2015 to ensure they are in line with the real challenges faced by people around the world and the urgency of environmental action. The guidelines are now understood as the international benchmark for good practice in consumer protection. The 2015 revision of the guidelines saw over 90% of Consumers International's recommended changes being implemented, including protections for consumers in financial services, energy and privacy.

Green Action Week

The annual Green Action Week campaign assists Consumers International members in developing countries to carry out campaigns that expand access to sustainable goods and services by promoting cultures of community sharing and collaboration. Consumers International has led this project for over a decade.

World Consumer Rights Day

The consumer movement has marked 15th March with World Consumer Rights Day every year since 1983, as a means of raising global awareness about consumer rights and needs. Previous years have seen focus on plastic pollution (2021), sustainable consumption (2020), diets (2015), energy (2006) and water (2004).

Consumer Information Programme for Sustainable Consumption and Production (CI-SCP)

Consumers International co-leads the Consumer Information for Sustainable Consumption and Production Programme (CI-SCP), one of six programmes of the UN One Planet network. The Programme supports the provision of quality sustainability information on goods and services, such as ecolabels, claims made in advertising and marketing, voluntary standards, product declarations and more.

Can I recycle this? report, 2020¹²⁹

The report, developed by Consumers International in collaboration with the United Nations Environment Programme, provides a global mapping of existing standards, labels and claims on plastic packing. Labels and claims were assessed against the five fundamental principles of the UN Guidelines for Providing Product Sustainability Information.

Global consumer advocacy statement on food, 2021¹³⁰

Consumers International launched a global consumer advocacy statement at the UN Food Systems Summit, outlining a series of key calls to action on behalf of consumers worldwide.

Promoting healthy and sustainable diets in South Asia and Latin America, 2021¹³¹

¹²⁹ https://www.oneplanetnetwork.org/sites/default/files/unep_ci_2020_can_i_recycle_this.pdf

¹³⁰ <https://www.consumersinternational.org/media/368841/consumers-call-for-action-at-the-united-nations-food-systems-summit.pdf>

¹³¹ <https://www.consumersinternational.org/media/368848/report-promoting-healthy-and-sustainable-diets-in-south-asia.pdf>; <https://www.consumersinternational.org/media/368898/health-on-the-table-eng.pdf>

Working with a group of consumer advocacy organisations in South Asia and Latin America, Consumers International produced two reports outlining how governments in the respective regions can encourage and empower consumers to follow healthy and sustainable diets.

Digital Marketplace Playbook, 2021¹³²

In partnership with members of the Innovation Lever of the UNFSS, Consumers International produced a Digital Marketplace Playbook with practical use cases on innovative digital and data advances across food systems. The aim was to enable the development and scale of innovative business models that are directly linked to government, farmer, market, and consumer needs.

¹³² <https://www.mercycorpsagrifin.org/2021/09/28/introducing-the-digital-marketplace-playbook/>

REFERENCES

- Akenji, L., Lettenmeier, M., Koide, R., Toivio, V., & Amellina, A. (2019). *1.5-Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints*. Retrieved from <https://pub.iges.or.jp/pub/15-degrees-lifestyles-2019>.
- Aldred, R., Woodcock, J., & Goodman, A. (2020). 'Major investment in active travel in Outer London: impacts on travel behaviour, physical activity, and health'.
- Byars, M., Wei, Y. and Handy, S. (2017). *State-Level Strategies for Reducing Vehicle Miles of Travel*. Berkeley.
- Creutzig, F., Fernandez, B., Haberl, H., Khosla, R., Mulugetta, Y., & Seto, K. C. (2016). 'Beyond Technology: Demand- Side Solutions for Climate Change Mitigation'. *Annual Review of Environment and Resources*, 41(1), 173–198.
- CSO Equity Review. (2018). *After Paris: Inequality, Fair Shares, and the Climate Emergency*. Retrieved from <http://civilsocietyreview.org/report2018/>.
- Dubois, G., Sovacool, B., Aall, C., Nilsson, M., Barbier, C., Herrmann, A., & Dorner, F. (2019). 'It starts at home? Climate policies targeting household consumption and behavioral decisions are key to low-carbon futures'. *Energy Research & Social Science*, 52, 144-158.
- Fouquet, R., & O'Garra, T. (2020). The Behavioural, Welfare and Environmental Effects of Air Travel Reductions During and Beyond COVID-19. *SSRN Electronic Journal*.
- Girod, B., D.P. Van Vuuren, and E.G. Hertwich. 2013. "Global Climate Targets and Future Consumption Level: An Evaluation of the Required GHG Intensity." *Environmental Research Letters* 8 (1).
- Gore, T., & Alestig, M. (2020). 'Confronting carbon inequality in the European Union: Why the European Green Deal must tackle inequality while cutting emissions'. Oxfam. Retrieved from <https://www.oxfam.org/en/research/confronting-carbon-inequality-european-union>.
- Gössling, S. & Humpe, A. (2020). 'The global scale, distribution and growth of aviation: Implications for climate change', *Global Environmental Change*, (65).
- Hardt, L., P. Brockway, P. Taylor, J. Barrett, R. Gross, and P. Heptonstall. (2019). 'Modelling Demand-Side Energy Policies for Climate Change Mitigation in the UK.' London: UK Energy Research Centre.
- Hedenus, F., S. Wirsenius, and D.A. Johansson. 2014. 'The Importance of Reduced Meat and Dairy Consumption for Meeting Stringent Climate Change Targets.' *Climatic Change* 124 (1–2): 79–91.
- Helen Harwatt (2019) Including animal to plant protein shifts in climate change mitigation policy: a proposed three-step strategy, *Climate Policy*, 19 (5), 533-541.
- Hertwich, E.G. & Peters, G. (2009). 'Carbon Footprint of Nations: A Global, Trade-Linked Analysis' *Environmental Science & Technology* 43 (16): 6414-6420.
- Hills, 'Getting the measure of fuel poverty', Final report of the fuel poverty review. CASE report, Centre for analysis of social exclusion. London School of Economics, 2012.

Ivanova, D., Barrett, J., Wiedenhofer, D., Macura, B., Callaghan, M., & Creutzig, F. (2020). Quantifying the potential for climate change mitigation of consumption options. *Environmental Research Letters*, 15(9).

Kraft, T., Valdés, L., Zehng, Yanchong, Zheng. (2018). 'Supply Chain Visibility and Social Responsibility: Investigating Consumers' Behaviors and Motives'. *Manufacturing & Service Operations Management*, 20(4).

Malier, H. (2019). 'Greening the poor: the trap of moralization'. *British Journal of Sociology*, 70 (5): 1661-1680.

Newell, P., Daley, F., & Twena, M. *Changing our ways? Behaviour change and the climate crisis: The report of the Cambridge Sustainability Commission on Scaling Behaviour Change*. Retrieved from <https://www.rapidtransition.org/wp-content/uploads/2021/04/Cambridge-Sustainability-Commission-on-Scaling-behaviour-change-report.pdf>.

Ostrom, E. (2010). 'Polycentric systems for coping with collective action and global environmental change'. *Global environmental change*, 20(4): 550-557.

Rees, W., & Moore, J. (2013). 'Ecological Footprints, Fair Earth-Shares and Urbanization'. In R. Vale & B. Vale, *Living within a Fair Share Ecological Footprint*. Routledge.

Rosenstock, T., Lubberink, R., Gondwe, S., Manyise, T., Dentoni, D. (2020). 'Inclusive and adaptive business models for climate-smart value creation'. *Current Opinion in Environmental Sustainability*, 42.

Schroeder, P., & Anantharaman, M. (2017). "Lifestyle Leapfrogging" in Emerging Economies: Enabling Systemic Shifts to Sustainable Consumption'. *Journal of Consumer Policy*, 40(1), 3-23.

Scoones, I., Leach, M., & Newell, P. (2015). (eds). *The Politics of Green Transformations*. Abingdon: Routledge.

Shove, E. (2003). *Comfort, cleanliness and convenience: The social organization of normality*. Oxford: Berg Publishers.

Sovacool, B. K., & Griffiths, S. (2019). 'The cultural barriers to a low-carbon future: A review of six mobility and energy transitions across 28 countries'. *Renewable and Sustainable Energy Reviews*.

Stephenson, J., Barton, B., Carrington, G., Gnoth, D., Lawson, R., & Thorsnes, P. (2010). 'Energy cultures: A framework for understanding energy behaviours'. *Energy policy*, 38(10), 6120-6129.

Stern, P. C., & Gardner, G. T. (1981). 'Psychological research and energy policy'. *American psychologist*, 36(4).

United Nations Environment Programme (UNEP). (2020). *Emissions Gap Report 2020*. Nairobi.

Unruh, G. (2000). Understanding carbon lock-in. *Energy Policy*, 28(12), 817-830.