

ACTION AGENDA

INFORMING SUSTAINABLE CONSUMER CHOICES IN E-COMMERCE



**CONSUMERS
INTERNATIONAL**

COMING TOGETHER
FOR CHANGE

ACKNOWLEDGEMENT

The project was led by Consumers International, supported by Amazon, and implemented in partnership with the International Institute for Sustainable Development (IISD). It gathered insights and inputs from a global, multi-stakeholder group of experts and practitioners representing multilateral agencies, policymakers, consumer protection authorities, civil society actors, labelling bodies, and e-commerce platforms.

We would like to express our gratitude to individuals in the following organisations for sharing expertise in support of our research and/or giving feedback on draft recommendations, whilst noting that the recommendations in this report do not necessarily reflect the views of these organisations: the UN Conference on Trade and Development and its Working Group on Consumer Protection in E-Commerce; the UN One Planet network's Consumer Information Programme; the UN Environment Programme; the Organisation for Economic Co-operation and Development's Committee on Consumer Policy; the International Organisation for Standardisation's Consumer Policy Committee; the Association of Southeast Asian Nations' Committee on Consumer Protection; the International Trade Centre; France's Ministry of Ecological Transition; Germany's Federal Ministry for Environment, Nature Conservation and Nuclear Safety; the European Commission's Directorate-General for Justice and Consumers; Chile's Ministry of Economy; Brazil's Ministry of Economy; Costa Rica's Ministry of Agriculture and Livestock; the UK's Competition and Markets Authority; Colombia's Superintendency for Industry and Commerce; Poland's Office of Competition and Consumer Protection; Chile's Servicio Nacional del Consumidor; Barbados' Department of Commerce and Consumer Affairs; Switzerland's Federal Consumer Affairs Bureau; Peru's Directorate of the National Authority for Consumer Protection and National Institute for the Defence of Free Competition and the Protection of Intellectual Property; Costa Rica's Dirección de Apoyo al Consumidor; Mexico's Federal Consumer Protection Agency; the Swedish Consumer Agency; South Africa's National Consumer Commission and National Consumer Tribunal; the Netherlands' Authority for Consumers and Markets; New Zealand's Commerce Commission; the Korea Consumer Agency; the Hungarian Competition Authority; the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); the United States' Environmental Protection Agency; the UN High Level Climate Champions; WWF; Client Earth; Akatu Institute; ISEAL; the Global Ecolabelling Network; HEJ-Support; the NYU Stern Center for Sustainable Business; Digital Goes Green; Adelphi; Ecos; the Cambridge Institute for Sustainability Leadership; Rede Empresarial Brasileira de Avaliação de Ciclo de Vida; the China Academy of Consumer Rights Protection Law; the National Law School of India; the Green Digital Finance Alliance; the Swedish Environmental Research Institute; the China Environmental Certification Centre; Good Environmental Choice Australia; the British Standards Institution; the Institut Marocain de Normalisation (IMANOR); the World Federation of Advertisers; Edelman; the International Council for Advertising Self-Regulation; the US National Advertising Division; Can Marketing Save the Planet; GlobeScan; IpsosMori; Quantis; Accenture; the World Business Council for Sustainable Development; the Consumer Goods Forum; the Sustainable Apparel Coalition; Philips DA; Danone; the European Brands Association; Nestle; PepsiCo ; JD.com; Ecommerce Europe; Finch; Vipshop; the China Chain Store & Franchise Association ; Which?-UK; the Consumers Council of Canada; Fundación Ambio; Citizen Consumer and Civic Action Group; the Danish Consumer Council; the Hong Kong Consumer Council; the Federation of Malaysian Consumers Associations; the Norwegian Consumer Council; BEUC; ANEC; Consumer Voice; Tribuna; Consumers Korea; Foundation for Consumers Thailand; and Consumer Reports. Our special thanks to the 77 representatives who took part in our multi-stakeholder workshops and the 44 nominated experts who responded to our online survey.

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.

INTRODUCTION

The growth of e-commerce is reshaping the way we consume globally. This poses both risk and opportunity for sustainability. The online information environment, with its scale, avenues for co-creation and personalisation, and commercialisation, could push consumers towards more unnecessary and unsustainable purchases. But with the right interventions, e-commerce players can leverage these unique aspects to empower better informed, more sustainable consumption at scale.

This Action Agenda establishes the key steps e-commerce players can take to avoid the risks and build on the opportunities of the online environment for informing sustainable choices. These are to:

- 1. Collaborate to create data commons for product sustainability**
- 2. Work with third-party sellers and manufacturers to standardise, streamline, and verify sustainability information**
- 3. Plan interventions to shift consumer behaviours online**

These recommendations are focussed on large e-commerce platforms, which dominate business-to-consumer retail sales globally. For example, Amazon accounts for 38% of market share in Europe, Mercado Libre for 51% in Latin America, Shopee for 48% in Southeast Asia, Jumia for 45% in Africa, Taobao for 32% in China (Webretailer, 2021). With size comes power and responsibility to shift the marketplace in decisive ways. The approach in this document is shaped by a commitment to consumer protection and empowerment principles, as detailed at the international level by the United Nations Guidelines for Consumer Protection (UNCTAD, 2016). Actions should not undermine the level of protection enjoyed by consumers in any way, for example with regards to data privacy.

E-COMMERCE AND SUSTAINABLE CONSUMPTION

The growth of e-commerce

E-commerce's share of total retail sales globally could rise to 23.6% by 2025 from less than 18% in 2020 (eMarketer, 2022). Already, at least 1.5 billion people purchase consumer products and services through e-commerce platforms (UNCDF, 2021). Recent growth has been accelerated by the Covid-19 pandemic, with the shift most prominent for women, highly educated consumers, and consumers aged between 25 and 45 years old (UNCTAD and Netcomm Suisse, 2020). But penetration varies by income-level and region: in 2020, online shoppers totalled 53% of the population of high-income countries, 16% in upper middle income, 5% in lower middle income and 2% in low-income countries (UNCTAD, 2020).

Sustainable consumption impacts

The impact of this unprecedented growth on sustainable consumption is as yet unclear. On the one hand, there are concerns that the dominant business model of e-commerce is encouraging hyper- or over-consumption (Ignini, 2022; Tiwari & Singh, 2011). Singles' Day, Black Friday, and Cyber Monday are prominent examples of primarily online shopping 'events' during which environmentally damaging amounts of purchases are encouraged under the spell of discounts and limited time. Behavioural studies have found a positive correlation between Internet use and material aspiration levels (Lohmann, 2015), driven in large part by the influence of online advertising and social media use (Stephen, 2016; Kamal et al., 2013). The environmental impacts of increased consumption via e-commerce are potentially more significant, given that the products sold most online also fall within categories with the highest environmental impact (Consumers International and IISD, 2023a). On the other hand, e-commerce provides ample opportunities to promote positive consumer behaviours that are not available in brick-and-mortar retail (EDF, 2020; Ecommerce Europe, 2021). These include empowering consumers to participate in circular business models and changing the online choice architecture to make sustainable choices easier and more attractive.

The role of information

Information provision will be key to determining the nature of e-commerce's evolving impact on sustainable consumption. E-commerce is fundamentally re-shaping consumer information, by providing greater but more diffused information access, offering avenues for co-creation, personalising information to individuals, and commercialising information environments with advertising. These changes pose certain key risks to consumers: an increase in misleading online sustainability claims undermines consumer trust in sustainability information in general; too much or badly presented information can lead to information overload; and the socialisation, commercialisation, and personalisation of information can lead to greater pressures towards over-consumption, for example driven by social norm bias or aggressive marketing.

There is, however, a potential to harness these aspects of the online information environment in ways that make informed consumer choices on the basis on sustainability easier and more attractive. Field data from the United States already suggests that sustainability-marketed products outperform conventionally marketed products by a greater margin online than offline (Kronthal-Sacco and Whelan, 2021). In the future there is scope for e-commerce to deliver information in innovative ways that educate and motivate as well as inform, supporting sustainable choice-making at scale whilst building consumer trust and understanding. E-commerce platforms should consider the balance of risk and opportunity posed by key trends before planning interventions (Figure 1), especially since the nature of online information is continuing to change with the growth of new virtual environments such as Extended Reality.

Figure 1. How is e-commerce shaping the future of sustainability information?

TREND IN ONLINE INFORMATION PROVISION	RISKS 	OPPORTUNITIES 
<p>Access and dispersal. The internet both increases and diffuses information access: consumers receive more information from a larger variety of sources. Shopping is increasingly an omni- or multi-channel experience in which consumers encounter information across multiple sites, including from online marketplaces, search engines, direct brand websites, social commerce, reviews sites, and across multiple devices (IpsosMori, 2022). The place consumers learn about a product is not necessarily where they buy the product, with 75% of consumers favouring online marketplaces for pre-purchase research (Bloomreach and Forrester, 2021).</p>	<p>Information is cognitively difficult to absorb if it is present in excess, for example if it takes up too much attention space (OECD, 2018). Excessive sustainability information provision across multiple channels in e-commerce may cause consumers to tune it out altogether.</p> <p>Sustainability information optimised for one device may not be easily readable on another, such as a mobile phone.</p>	<p>Consumers may be able to self-verify sustainability information by comparing sources against each other.</p> <p>Consumers' preference for researching product attributes online before they decide to buy increases the potential of accurate online product sustainability information to influence choices.</p>
<p>Co-creation. When shopping or searching online, consumers rely more heavily on information provided by strangers because they cannot always inspect product quality before purchasing. Peer-to-peer interaction in online forums, reviews, and popularity rankings shifts the role of online consumers from users of information to co-creators (Cooper et al., 2022).</p>	<p>Fake or fraudulent social information significantly undermines consumer decision-making and trust (BrightLocal, 2022).</p> <p>Platforms now integrate social information into their infrastructure to stimulate purchasing: if presented misleadingly, it can make it difficult for consumers to know who and what to trust (CMA, 2022).</p> <p>Social media peer content may also promote overconsumption through invoking social norm bias. Carbone and Duffy (2014) found that experimentally manipulated social information about peers' consumption led to increased consumption levels. The approval of products on social media (giving "likes") has been found to increase their purchase (Lee et al., 2015), and so has joining brand communities on social media (Goh et al., 2013).</p>	<p>Co-creation has the power to democratise sustainability information, engaging consumers that find a more scientific-technical register unappealing.</p> <p>Co-created information can also communicate underreported sustainability aspects that are closely linked to consumer use, such as real-world longevity of products.</p> <p>It is possible to use the social norm bias triggered by peer-to-peer communication to promote sustainable consumption. For example, Foster et al. (2010) found that social comparison on Facebook can lead to reduced energy use and Zhao et al. (2019) found that consumers' engagement with their peers on social media was directly tied to increasing sustainable apparel purchase intentions.</p>

<p>Algorithmic personalisation. Online commerce makes it possible to adapt information to users' interests and past behaviours through personalisation (Pariser, 2011). Over half of consumers in one survey indicate that a personalised online shopping experience is important to them, especially targeted discounts and messaging (Bazaarvoice, 2021).</p> <p>Online businesses can also show thousands of consumers slightly different versions of a website and analyse their impact from millions of consumer data points, including time spent on the page, buttons clicked and subsequent actions (CMA, 2021).</p>	<p>Personalisation has been linked to the promotion of over-consumption. For example, banner adds personalised by retargeting receive more clicks than non-personalised banner adds (Bleier and Flisenbeiss, 2015).</p> <p>There is a risk that personalised product recommendations and related information could lock consumers into previously unsustainable shopping patterns.</p> <p>Algorithmic personalisation also poses more general consumer protection risks, including privacy invasion, opaque personalised pricing, discrimination against personal characteristics, and reduced information diversity (Consumers International, 2022; CMA, 2022).</p>	<p>Personalised sustainability information that targets messages according to consumers' interests, values and habits can help to correct behavioural biases that often stand in the way of consumer action, for example by proving the salience of the issues to them personally (UNEP, 2017).</p>
<p>Online advertising and influencer content. Consumers online are more exposed to advertising content than offline (Frick et al., 2020), which has been shown to have significant impacts on consumption motives and behaviour (Stephen, 2016). The internet's commercialisation of social interactions has also intensified advertising exposure when we are most susceptible. This is typified by the significant and increasing impact of paid social media influencers on consumer purchasing behaviour (Jayanto et al., 2021).</p>	<p>The saturation of online shopping environments with advertising is linked to the promotion of over-consumption. Not only online sales but also over-the-counter sales of clothing are positively linked to online advertisement expenditures, with larger returns than traditional advertising (Dinner et al., 2014).</p> <p>This is exacerbated by the mixing of the worlds of social media with advertising. 66% of consumers now say their purchase decisions are often driven by influencers and 64% say that influencers even help them discover new brands (Sideqik, 2022).</p>	<p>Online advertisement could foster more sustainable consumption, especially when it avoids aggressive marketing strategies and promotes the reduction of new product purchases (Bocken and Short, 2016; Gossen et al., 2019).</p>

A concerted and collaborative effort is needed from all marketplace stakeholders to help realise these opportunities and reduce the risks. E-commerce platforms are well placed to galvanise such marketplace-wide shifts, given their relationship with millions of consumers on the one hand, and with thousands of sellers and suppliers on the other.

There are three main opportunity areas. First, platforms can plan for the future by taking steps towards a more joined-up and comprehensive data ecosystem on product sustainability. Second, they can optimise the presentation of data already available and standardise across their platform, by working in collaboration with third-party sellers. Third, platforms can implement, test, and refine changes to the online choice architecture to promote sustainable consumer behaviours.

ACTION ONE

COLLABORATE TO CREATE DATA COMMONS FOR PRODUCT SUSTAINABILITY

E-commerce's toolkit of innovations

Consider the ways in which e-commerce platforms can communicate to consumers about product sustainability that are unavailable to physical retailers. Consumers International's global roundtables and expert survey in 2022 identified the following as the most impactful possible innovations:

- Filter and flag systems to help identify sustainable products in search results
- Placing more sustainable options higher in rankings, search results, and recommendations
- Calculating and communicating the aggregative impact of a consumer's shopping basket
- Enabling consumers to track the changing impact of their purchasing decisions over time
- Recommending sustainable product alternatives when the most unsustainable products are selected
- Scored digital labelling system showing the relative sustainability performance of different products
- Tool to allow consumers to compare the relative sustainability performance of different products within a single category

Data availability and accessibility

The most important factor preventing platforms from integrating these aspects into their sites is the availability and accessibility of comprehensive, trustworthy sustainability data on products. To implement them in a robust and reliable way, especially those that require ranking the relative performance of products, e-commerce platforms require a database that integrates quantitative and qualitative sustainability indicators across different environmental dimensions on a product-by-product basis. The challenge for platforms is that such a resource does not currently exist.

It may be possible to introduce sustainability filter systems without a comprehensive database, for example by utilising keyword searches, but this has a high risk of misleading consumers willingly or unwillingly (UNEP, 2022). Similarly, initiatives like the Green Consumption Assistant, funded by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety, have created scored product sustainability databases via algorithmic data scraping, largely for information on certifications (Jäger et al., 2022). This allows them to present online consumers with sustainability scores on products via a browser extension (Lehmann, 2022). However, this approach is limited given the difficulty of ranking different sustainability certifications and given that only a relatively small proportion of products sold on e-commerce platforms are certified at all.

Establishing a roadmap

The starting point for action should be setting an expectation for granular, accurate and verified primary data on product sustainability. The end point is that e-commerce platforms integrate such information from disparate sources to create an operable database enabling sophisticated and effective consumer communications. A key challenge is that information asymmetries and data unavailability are problems suffered by actors all along the value chain. Beyond securing access to and integrating the product sustainability data that already exists, e-commerce platforms will need to work with a variety of external stakeholders to fill gaps where there is no data at all. The task of collecting, managing, and stitching together a data landscape on product sustainability is by definition a collaborative one.

Various barriers prevent the establishment of full transparency across whole value chains. Typically, these include:

- Data locked in siloes within complex value chains
- High costs for cross-company data sharing
- Inconsistency or inaccuracy in data collection methodologies
- Inconsistency or room for interpretation in standards for data exchange
- Risk of exposing sensitive or competitively relevant data
- A lack of interoperability of technology solutions
- Bureaucratic and costly manual methods for data sharing

Sources: SINE, 2022; Accenture, 2021; WBCSD, 2021.

Steps to achieve

Product-level data is often competitively relevant and therefore treated as highly confidential by many companies. Many businesses are wary of lock-ins by the main software providers, which may lead them to lose control over sensitive information (SINE, 2022). E-commerce platforms may be well placed to support efforts towards data commons for sustainability – an interoperable and secure cross-industry standard for data exchange and analyses – rather than a centralized software architecture.

E-commerce platforms could aim to create a community of practice amongst their sellers and suppliers. Reciprocity is the key principle: actors should only be able to access data if they also provide data or if the increased value pool is distributed fairly. This principle can help to align incentives between actors, inducing a flywheel effect that fosters data integrity and creates more value as more actors partake. In addition to creating incentives for participation, platforms can leverage their role as marketplace gatekeeper to disincentivise non-participation. For example, their commercial agreements could set clear guarantees for the provision of data, and purchase orders can include requests for input into a data commons (Accenture, 2022). Setting additional requirements for participants, such as use of a shared KPI in calculations for every data exchange, can promote the achievement of higher data quality standards over time (WBCSD, 2021).

ACTION TWO

WORK WITH THIRD-PARTY SELLERS AND MANUFACTURERS TO STANDARDISE, STREAMLINE, AND VERIFY SUSTAINABILITY INFORMATION

Avoiding information overload

Without the constraints of a store shelf, it may appear easy to provide ever greater transparency to consumers in online settings. This assumption overlooks the potentially negative effects of excessive or difficult to understand information, however. When faced with too much information, or complex, poorly presented, and badly structured information, consumers may tune it out altogether (OECD, 2018). Behavioural studies reveal that this effect, called information overload, can cause consumers to disengage by ignoring certain types of information, relying on intuition, or deferring a decision. When shopping online as opposed to physically, consumers tend to be more motivated by simplifying their choices to avoid information overload (Leenheer et al., 2014; Benartzi and Lehrer, 2017).

Optimising information provision

E-commerce platforms should aim at providing better information, rather than simply more. Despite knowledge gaps, the existing literature is clear that the manner in which sustainability information is presented to consumers has a significant impact on the resulting consumer behaviours (CMA, 2021, Konsumentverket, 2020). Platforms should focus on making the digital opportunity as streamlined and frictionless possible, ensuring that the consumer is reached by easy-to-understand information at the right time and in the simplest possible way.

In the absence of a comprehensive data commons on product sustainability, e-commerce platforms can experiment with ways to optimise communications using sustainability data that already exists. This is by necessity a collaborative task since the data in question is held by manufacturers and sellers about the products they make and sell or by labelling bodies about the products they certify. As marketplace gatekeepers, online retailers have the power to incentivise good and disincentivise bad practice among sellers and manufacturers that provide information on the platform. They can also collaborate with international stakeholder groups committed to improving sustainability communication, such as the UN One Planet network's Consumer Information Programme, which last year updated its Guidelines to include recommendations for e-commerce (UNEP, 2022).

There are many ways in which online platforms can optimise their design, from making subtle changes to visual elements, to simplifying how information is structured and presented, and experimenting with the timing of when these changes are made (Figure 2). The principle of iterative innovation is central. Measuring the effectiveness of interventions, for example through A/B testing or field trialling, enables progressive improvements to be made. In e-commerce, experimentation and optimisation can be aided by algorithms, which analyse the impact of the design of the environment based on millions of data points from consumers ('clickstream data'), including time spent on the page, buttons clicked and subsequent actions. The speed and scale of data collection and analysis available could facilitate the optimisation of sustainability information provision in real time. Building an evidence base for the impact of sustainability information can also help platforms prove the business case for sustainability to their third-party sellers and stakeholders, leading to a flywheel effect.

Addressing the methodological deficit in studies of sustainable consumer behaviour.

Currently, there is a lack of detailed, empirical evidence on the effects of different types of sustainability information on online shopping behaviour. Most of the existing literature is survey-based, using self-reported measures or intention as a proxy for behaviour. This is not the strongest foundation on which to draw trends or plan interventions, given the often-observed gap between what consumers say and what they do on sustainability (Carrington et al., 2010; Moser & Kleinhüchelkotten, 2018; Nguyen et al., 2019). E-commerce platforms are able to directly test the behavioural impacts of different types of sustainability information provision by running direct experiments on their sites and publishing the results. Key questions that need interrogating include the following:

- **Greenwashing.** Research shows that perceived greenwashing can have a negative impact on brand reputation and decrease purchase intentions of a brand's product (Chen et al., 2013; Akturan, 2018; Szabo & Webster, 2021). What are the conditions that can lead to greater perceived greenwashing? Are certain types of sustainability information (for example those that use vague terms) more likely to lead to perceived greenwashing?
- **Consumer trust.** Research shows that if people trust that sustainability information is true, they will be more likely to purchase the product (see for example, Taufique et al., 2017). What are the key factors (for example, third-party certification) that lead consumers to trust the sustainability information they receive?
- **Sectoral differences.** Most existing behavioural studies on the impacts of sustainability claims are sector specific, making it difficult to assess the differences between different types of products and sectors (CMA, 2021). Are certain sectors more likely to see greater behavioural effects from sustainability information?
- **Demographic differences.** Segmentation studies have found wide variation in sustainability attitudes between different types of consumers. Are there any differences in behavioural impact between different types of consumers (for example behavioural greens vs. more reluctant adopters, different demographics, ages)? Are there any consumer groups particularly susceptible to the effects of sustainability claims?
- **Form and context.** Are certain ways of presenting online sustainability information (colour, length, placement) more effective than others in leading to purchases? What is the impact of explicit vs. implicit elements of presentation on consumer behaviour? What is the threshold for information overload for online consumers and what are the most effective ways of preventing this (layering, grouping, filtering, streamlining)?
- **Other consumer behaviours.** What impact does the presence of sustainability claims have on outcome measures other than purchasing behaviour, such as decision-making time, willingness to pay more, and brand or product attitude?

Figure 2. How can e-commerce platforms standardise, streamline, and verify the information provided to consumers by third parties?

CHANGE	STEPS TO ACHIEVE	BENEFITS
<p>Standardise the presentation of sustainability information provided by third-party sellers and manufacturers.</p>	<p>Providing templates and guidance for sellers and manufacturers on how, where, and when to present product sustainability information on the platform.</p> <p>Providing sellers and manufacturers with a common sustainability glossary explaining and defining sustainability terms and their appropriate use.</p>	<p>Sustainability information provided using consistent terminology and structure across the whole platform will enable consumers to compare different products more easily based on their sustainability attributes. It is far easier to accomplish this standardisation at platform level than at the level of individual sellers or products.</p> <p>Consistent terminology that makes sustainability information machine readable can help search engines to identify sustainable products, for example for automated purchasing processes.</p>
<p>Make sustainability information more distinctive.</p>	<p>Provide presentation guidelines to sellers and manufacturers, based on empirical evidence on the best ways to promote consumer behaviour change.</p>	<p>Sustainability information can be made more accessible, clear, and effective if it is animated and visual, for example using graphics or videos.</p>
<p>Require the disclosure of certain types of sustainability information, especially where needed to meet regulatory requirements.</p>	<p>As marketplace gatekeepers, e-commerce platforms can make it compulsory for sellers to provide certain forms of information to access the service. An analogue is Apple’s and Google’s app stores, which require developers to make certain information about privacy available in a standardized way.</p>	<p>Where regulation sets mandatory information disclosures, platforms can help to lessen the enforcement burden through ‘compliance by design’ approaches with their third-party sellers and manufacturers. This is especially the case where third-party sellers are exporting into a consumer market so may not be aware of national regulatory requirements.</p>
<p>Ensure sustainability claims made on the platform are reliable and compliant with consumer law.</p>	<p>Carry out algorithm-based site surveillance to ensure sustainability claims do not use terms which are misleading by definition (such as ‘eco-friendly’).</p> <p>Carry out random checks on the reliability of sustainability claims made by third parties.</p> <p>Provide clear guidelines on how to make reliable sustainability claims, drawing on established international principles and guidance from relevant national consumer protection authorities.</p>	<p>A lack of trust is already the main reason for people to avoid shopping online (CIGI, 2019). This is likely exacerbated by the fact that 60% of consumers say they have lost trust in the sustainability information provided by companies due to perceptions of greenwashing (Ernst and Young, 2021).</p>

Verify products using third-party certifications.

Create an automated system to verify that labelled products have valid certifications **regularly**.

Work with certifying organisations and licence holders to ensure product entries in their databases use a common identifier, such as a Global Trade Item Number (GTIN). This standard code is currently often missing, preventing automated verification procedures.

Consumers have more **confidence** in third-party verified labels than any other (Compare Ethics, 2020). It is therefore crucial that products claiming certification are genuine, to avoid further damaging consumer trust.

Group reliable certifications into an umbrella label.

Use a public-led **benchmarking** initiative, such as Germany's Siegelklarheit scheme (2022), to select the best certifications to include.

Integrate roll-out with the platform's product recommender system, search filters and search engine to increase **visibility**.

Test the effect of the scheme on sustainable purchasing behaviour and other consumer behaviour metrics.

Given the number of labels, representing widely variant levels of stringency, consumers often struggle to distinguish between them or understand their meaning (Accenture, 2021; European Commission, 2021). An umbrella label that consists only of the most stringent labels can help reduce the **interpretative burden** on consumers.

Umbrella labels are an example of **layered** information, with the precise certification and underlying criteria used a click away (UNEP, 2022). This can mitigate the risk of information overload.

Proving the link between participation in the scheme and sales could change the balance of **incentives** for producers to seek certification on products, which carries a significant cost burden.

ACTION THREE

PLAN INTERVENTIONS TO SHIFT CONSUMER BEHAVIOURS ONLINE

How we think and behave

Understanding human behaviour is crucial to achieving sustainable consumption. How do people decide which product to purchase? Do they follow through or do they change their mind at the last minute? How are their decisions affected by contextual factors?

Behavioural science commonly makes a distinction between purely rational, deliberative thought processes on the one hand and more automatic processes driven by unconscious biases on the other. Deliberative thinking is when a consumer consciously calculates the trade-offs among competing product attributes, such as price, product quality, and performance. But behavioural biases can have a huge influence on the decisions that are ultimately made. For example, we intuitively weight losses higher than equivalent gains, and prioritise the present over the future. We are also strongly influenced by context, including sometimes superfluous or misleading information (Kahneman, 2011; Kahneman and Tversky, 1981). Most consumers exhibit multiple behavioural biases, such as social norm bias and overconfidence, which tend to be relatively stable over time (Stango and Zinman, 2020). However, there are substantial variations across individuals in the number of biases displayed, even within similar demographic groups (Chen, 2013; Stango and Zinman, 2020).

Recognising the influence of behavioural biases is crucial to explaining why consumers' intention to shop sustainably does not always translate into action, often called the intention-action gap (Carrington et al., 2010; Moser and Kleinhüchelkotten, 2018; Nguyen et al., 2019). GlobeScan (2021) found that while 47% of consumers globally indicated that they were willing to undertake major lifestyle changes to be more sustainable, only 23% undertook them in reality. Similarly, IBM and NRF (2022) found that while roughly 50% of consumers say they would pay a premium for sustainable products, only 31% acted on this intention. This phenomenon is not a result of consumers lying in surveys. Despite real intentions and values, something else is getting in the way. Something in consumers' surroundings, or a feature of the choice itself, is preventing intention from becoming action.

Consumer behaviours online

E-commerce significantly alters how consumers think and make decisions, in ways that could make the intention-action gap on sustainability wider.

- In terms of deliberative thinking, e-commerce has led many consumers to prioritise evaluative criteria other than sustainability. Consumer surveys highlight that across different product categories, price, quality, and convenience are often the most important reasons why they shop online (McKinsey, 2021; Accenture, 2019). The increased number of product offerings, the ease of comparing prices, and the increased personalization of e-commerce may encourage consumers to prioritize factors that may conflict with sustainability in their decision-making.
- Consumers are also more likely to rely on automatic thought processes in an online setting. In online environments we are quicker to act, have shorter attention spans, scan and skim rather than read, and are more likely to rely on the recommendations of strangers (Firth et al., 2019; Benartzi and Lehrer, 2015; Duggan and Payne, 2011; Delgado et al., 2018). There are also several differences in how online markets operate which can exacerbate behavioural biases. We can now buy products and access information within minutes. While providing clear benefits, these seamless and expedient processes may induce more impulsive purchasing behaviour by consumers.

How can online businesses ensure that their interventions are ethical?

Interventions that utilise behavioural insights are usually called ‘nudges’. A nudge can be defined as ‘any aspect of the choice architecture that alters people’s behaviour predictably without forbidding any option or significantly changing their economic incentives’ (Thaler and Sunstein, 2008). Research suggests that nudges can be highly effective in overcoming some of the biases that may otherwise prevent consumers from making more sustainable choices. In online environments, nudges can be combined with hyper-granular data collection of consumers’ consequent behaviour and machine learning algorithms. The speed and scale of data collection, experimentation, and targeted personalisation allows online businesses to optimise green digital nudging in real time, increasing their impact.

A key challenge for decision-makers is distinguishing the fine line between positive influence and negative manipulation. While some online choice architecture practices are almost always harmful, others may be harmful only in certain circumstances (CMA, 2022). Effective digital green nudging may from another perspective be seen as dark commercial patterns, business practices which subvert or impair consumer autonomy, decision-making, or choice (OECD, 2022). Dark patterns are a greater concern than analogous practices offline, given online businesses’ ability to repeatedly run experiments to hone user interfaces, consumers’ heightened susceptibility to deception online, and the scale of consumers reachable. Sunstein (2015) has suggested that an effort to influence people’s choices counts as manipulative ‘to the extent that it does not sufficiently engage or appeal to their capacity for reflection and deliberation’. With any act of deceit, people almost inevitably feel betrayed once they are informed of the truth. The same is true of manipulation. Once the full context is revealed, those who have been manipulated tend to ask: why wasn’t I allowed to decide for myself? This can be the case even if the decision you have been manipulated into taking is one you recognise is in your best interests. But the subjectivity of ‘sufficiently’ in Sunstein’s definition highlights the difficulty of judging where the line is.

Ethical nudging consists of two key principles.

- The first is **transparency**. To the greatest degree possible, the consumer should be made aware of the behavioural techniques used. However, studies suggest that nudging conducted without the participant’s knowledge or prior information tend to be more effective (Santos Silva, 2022). Platforms should collaborate with other stakeholders, including independent consumer organisations, to agree a fair equilibrium between transparency and effectiveness (Consumers International and IISD, 2023b; Meske and Amojó, 2020).
- The second is **control**. Can consumers explicitly give permission for their data to be used in ways that nudge them towards more sustainable choices, for example through defaults options? Consumer organisations already utilise the statutory provisions in some jurisdictions which allow a consumer to delegate a third party to exercise data rights on their behalf (Consumer Reports, 2022). Can this be extended to the use of data for green digital nudging? Allowing consumers to intervene meaningfully in how their data is used will increase trust and unlock iterative improvements.

Figure 3. Planning effective behavioural interventions.

BEHAVIOURAL BIAS	E-COMMERCE INTERVENTION TO MITIGATE OR LEVERAGE
<p>Default bias, or the tendency to stick to the status quo.</p>	<p>Selecting more sustainable choices as default settings, such as click- and-collect options close to home or work rather than same day home delivery (OECD, 2022b).</p> <p>Make sustainable products higher in product searches, rankings, and recommendations.</p>
<p>Present bias, or the tendency to focus disproportionately on immediate costs and benefits and discount future impacts.</p>	<p>Highlight product sustainability features linked to long-term cost benefits, for example through total cost of ownership or cost-per-use calculations in product descriptions.</p> <p>Reframe online checkout by explaining that a more sustainable but more expensive product may eventually lead to savings (Sunstein, 2014).</p>
<p>Social norm bias, or the tendency to be influenced by the behaviour of your peers, especially in moments of uncertainty.</p>	<p>Highlight others' positive behaviours in online communications. Arce, Oerlemans and Van Stroe-Biezen (2013) found that participants who received information about a peer's choice were three times more likely to choose sustainable products.</p> <p>Make the private action public, leveraging the spotlight effect whereby people overestimate the extent to which actions are noticeable to others, as well as the commitment bias, in which people want to live up their word among peers (White et al., 2013; Consumers International and IISD, 2023a).</p>
<p>Salience bias, or the tendency to act only if you can see the impact of your actions.</p>	<p>Tailoring messages to an individual's attitudes and priorities by leveraging the personalisation possible in online settings.</p> <p>Providing feedback on the positive impact of choices made can help to establish positive feedback loops and quantify the impact of choices.</p>
<p>Hassle factors, when small tasks are disproportionate barriers to follow-through, whether real or just perceived.</p>	<p>Make the sustainable choice easy by removing friction wherever it appears in the online choice architecture.</p> <p>Add friction for unsustainable choices, by reminding consumers about the impact of their choices at different points in the shopping journey (Michels, 2022; Sachayan, 2022).</p>
<p>Loss aversion, or the the tendency to prefer avoiding losses to acquiring equivalent gains.</p>	<p>Highlight the financial loss of buying unsustainable products that last less time by providing cost-per-use information or reframing the online checkout (Sunstein, 2014).</p> <p>Communicate the loss incurred by the unsustainable choice with messaging about negative externalities.</p>

Habit bias, or the tendency to stick to established routines.

Predefined consumer profiles, computer-generated recommendations based on past purchase patterns, and “quick buy” options in online shopping environments risk locking consumers into previous habits. This can be mitigated by giving consumers new powers over how their data is used.

Enabling consumers to track progress and changes in their environmental impact over time can establish new habitual routines.

CONCLUSION

At the global level there are serious and worsening challenges with consumer sustainability information that are undermining the strategic role it could play in promoting sustainable consumption (Consumers International, 2023). These issues are in many ways exacerbated and complicated by the rise of e-commerce. However, the opportunities raised by e-commerce are arguably even more significant. The size of the sustainable consumption challenge – trillions of products, produced in millions of locations, sold to billions of consumers globally – calls for a wholesale shift of engrained behaviours among manufacturers, consumers, and retailers alike. E-commerce could be one of the triggers of this radical shift, as it reshapes consumption habits worldwide.

This report has outlined a set of three actions that e-commerce platforms can take to grasp the opportunity for change. The manner in which these actions is carried out is critical to ensuring their success: the how is as important as the what. This is for three main reasons: the number and diversity of different stakeholders that need to be brought along; the size of current knowledge gaps on consumer behaviours; and the essential consumer rights that could be put at risk. These issues can be addressed by enacting the principles of reciprocity, iterative innovation, and humility, respectively. Reciprocity, because establishing mutual benefit can align incentives between diverse actors, inducing a flywheel effect that creates more value as more actors partake. Iterative innovation, because only a continuous process of testing and improving can demonstrate the effects of sustainability information on consumer behaviour and enable a step-change in progress. Humility, because the precise dangers posed to consumers by online environments are evolving and not fully defined: approaches which build in consumer protection by design will need to be created in collaboration with consumer advocates and policymakers.

BIBLIOGRAPHY

- Accenture. (2019). Chemicals global consumer sustainability survey. <https://newsroom.accenture.com/news/more-than-half-of-consumers-would-pay-more-for-sustainable-products-designed-to-be-reused-or-recycled-accenture-survey-finds.htm>
- Accenture. (2021). Impact Index for fashion. https://www.accenture.com/_acnmedia/PDF-167/Accenture-Retail-Fashion-Impact-Index.pdf
- Accenture. (2022). Net Zero Playbook for Consumer Industries. <https://www.theconsumergoodsforum.com/wp-content/uploads/2022/11/Accenture-Net-Zero-Playbook-for-Consumer-Industries.pdf>
- Akturan, U. (2018). How does greenwashing affect green branding equity and purchase intention? An empirical research. *Marketing Intelligence & Planning*, 36(7), 809-824. <https://doi.org/10.1108/mip-12-2017-0339>
- Bazaarvoice. (2021). Get personalization right or risk driving shoppers away. <https://media.bazaarvoice.com/personalization-ebook.pdf>
- Benartzi, S., & Lehrer, J. (2015). *The Smarter Screen: What Your Business Can Learn from the Way Consumers Think Online*. London: Hachette UK.
- Bleier, A., & Eisenbeiss, M. (2015). The importance of trust for personalized online advertising. *Journal of Retailing*, 91(3), 390–409. <https://doi.org/10.1016/j.jretai.2015.04.001>
- Bloomreach and Forrester. (2021). The State of Commerce Experience 2021: An annual study on the latest digital commerce trends and global consumer shifts. <https://visit.bloomreach.com/state-of-commerce-experience>
- Bocken, N., & Short, S. W. (2016). Towards a sufficiency-driven business model: Experiences and opportunities. *Environmental Innovation and Societal Transitions*, 18, 41–61. <https://doi.org/10.1016/j.eist.2015.07.010>
- BrightLocal. (2022). Local Consumer Review Survey. <https://www.brightlocal.com/research/local-consumer-review-survey/>
- Carbone, E., & Duffy, J. (2014). Lifecycle consumption plans, social learning and external habits: Experimental evidence. *Journal of Economic Behavior & Organization*, 106, 413–427. <https://doi.org/10.1016/j.jebo.2014.07.010>
- Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why Ethical Consumers Don't Walk Their Talk: Towards a Framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behaviour of Ethically Minded Consumers. *Journal of Business Ethics*, 97(1), 139–158. <https://doi.org/10/b4nbn7>
- Chen, Y.S., & Chang, C.H. (2013). Greenwash and Green Trust: The Mediation Effects of Green Consumer Confusion and Green Perceived Risk. *Journal of Business Ethics*, 114, 489–500. <https://doi.org/10.1007/s10551-012-1360-0>
- CIGI. (2019). CIGI-Ipsos Global Survey on Internet Security and Trust. <https://www.cigionline.org/cigi-ipsos-global-survey-internet-security-and-trust/>
- Compare Ethics. (2020). Consumer Trust in Sustainability Survey. <https://compareethics.com/building-trust-sustainability>
- Competition and Markets Authority (CMA). (2021). Making environmental claims: a literature review. https://assets.publishing.service.gov.uk/media/60a66ab18fa8f520c6cb686a/MGC_Literature_review_-_pdf
- Competition and Markets Authority (CMA). (2022). Online Choice Architecture: How digital design can harm competition and consumers. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066524/Online_choice_architecture_discussion_paper.pdf

Consumer Reports. (2022). Introducing Permission Slip, the app to take back control of your data. <https://digital-lab.consumerreports.org/2022/11/16/introducing-permission-slip/>

Consumers International. (2023). The State of Sustainability Information: critical trends, trade-offs, and solutions. <https://www.consumersinternational.org/news-resources/publications/page/1>

Consumers International and IISD. (2023a). E-commerce and Product Sustainability Information: An overview of policies and practices. Consumers International. <https://www.consumersinternational.org/news-resources/publications/page/1>

Consumers International and IISD. (2023b). Policy Action Framework: Improving Product Sustainability Information in E-Commerce. Consumers International. <https://www.consumersinternational.org/news-resources/publications/page/1>

Cooper, G., Green, N., Burningham, K., Evans, D., & Jackson, T. (2012). Unravelling the threads: Discourses of sustainability and consumption in an online forum. *Environmental Communication*, 6(1), 101–118. <https://doi.org/10.1080/17524032.2011.642080>

Delgado, P., Vargas, C., Ackerman, R., & Salmerón, L. (2018). Don't throw away your printed books: A meta-analysis on the effects of reading media on reading comprehension. *Educational Research Review*, 25, 23-38. <https://doi.org/10.1016/j.edurev.2018.09.003>

Dinner, I. M., Van Heerde, H. J., & Neslin, S. A. (2014). Driving online and offline sales: The Cross-Channel effects of traditional, online display, and paid search advertising. *Journal of Marketing Research*, 51(5), 527–545. <https://doi.org/10.1509/jmr.11.0466>

Duggan, G. B., & Payne, S. J. (2011). Skim reading by satisficing: evidence from eye tracking. *Proceedings of the SIGCHI conference on human factors in computing systems*.

Ecommerce Europe. (2021). *Collaborative report on sustainability and e-commerce*. <https://ecommerce-europe.eu/wp-content/uploads/2021/06/Collaborative-Report-on-Sustainability-and-e-Commerce-June-2021-2nd-edition.pdf>

eMarketer. (2022). Global E-commerce Forecast 2022. <https://www.emarketer.com/content/global-ecommerce-forecast-2022>

Environmental Defense Fund (EDF). (2020). The Roadmap to Sustainable E-commerce. https://business.edf.org/files/EDF018_Playbook_fnl_singlepg.pdf

Ernst and Young. (2021). EY Future Consumer Index: 68% of global consumers expect companies to solve sustainability issues. https://www.ey.com/en_gl/news/2021/06/ey-future-consumer-index-68-of-global-consumers-expect-companies-to-solve-sustainability-issues

Firth, J., Torous, J., Stubbs, B., Firth, J. A., Steiner, G. Z., Smith, L., & Sarris, J. (2019). The “online brain”: how the Internet may be changing our cognition. *World Psychiatry*, 18(2), 119-129. <https://doi.org/10.1002/wps.20617>

Foster, D., Lawson, S., Blythe, M., & Cairns, P. (2010). Wattsup?: Motivating reductions in domestic energy consumption using social networks. In *Proceedings of the 6th Nordic Conference on Human-Computer Interaction: Extending Boundaries* (178–187). http://eprints.lincoln.ac.uk/id/eprint/3155/1/Wattsup-NordiCHI_080710.pdf

Frick, V., Matthies, E., Thøgersen, J., & Santarius, T. (2020). Do online environments promote sufficiency or overconsumption? Online advertisement and social media effects on clothing, digital devices, and air travel consumption. *Journal of Consumer Behaviour*, 20(2), 288-308. <https://doi.org/10.1002/cb.1855>

GlobeScan. (2021). Healthy and sustainable living global consumer insights. <https://3ng5l43rkzc34ep72kj9as1-wpengine.netdna-ssl.com/wp-content/uploads/2021/10/GlobeScan-HSL-Highlights-Report-2021.pdf>

Goh, K.-Y., Heng, C.-S., & Lin, Z. (2013). Social media Brand Community and consumer behavior: Quantifying the relative impact of user- and marketer-generated content. *Information Systems Research*, 24(1), 88–107. <https://doi.org/10.1287/isre.1120.0469>

- Gossen, M., Ziesemer, F., & Schrader, U. (2019). Why and how commercial marketing should promote sufficient consumption: A systematic literature review. *Journal of Macromarketing*, 39(3), 252–269. <https://doi.org/10.1177/0276146719866238>
- IBM and NRF. (2022). Research insights. Consumers want it all – hybrid shopping, sustainability, and purpose-driven brands. <https://www.ibm.com/downloads/cas/YZYLMLEV>
- Ignini, M. (2022). The Truth About Online Shopping and its Environmental Impact. <https://earth.org/online-shopping-and-its-environmental-impact>
- IpsosMori. (2022). Beyond omnichannel to convergent commerce ecosystems. <https://www.ipsos.com/en/beyond-omnichannel-convergent-commerce-ecosystems>
- Jäger, S., Greene, J., Jakob, M., Korenke, R., Santarius, T., & Biessmann, F. (2022). GreenDB: Toward a Product-by-Product Sustainability Database. *arXiv preprint arXiv:2205.02908*
- Jayanto, V., Fabiola, J., Hasim, H., & Tunjungsari, H. (2021). The Influence of Online Influencers on Consumer Purchase Intention. *Proceedings of the 3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities*. <https://doi.org/10.2991/assehr.k.220404.301>
- Kahneman, D., & Tversky, A. (1981). The Framing of Decisions and the Psychology of Choice. *Science*, 211, 453-458. <https://doi.org/10.1126/science.7455683>
- Kahneman, Daniel. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.
- Kamal, S., Chu, S.-C., & Pedram, M. (2013). Materialism, attitudes, and social media usage and their impact on purchase intention of luxury fashion goods among American and Arab Young generations. *Journal of Interactive Advertising*, 13(1), 27–40. <https://doi.org/10.1080/15252019.2013.768052>
- Konsumentverket (Swedish Consumer Agency). (2020). *Barriers for e-commerce consumers to choose environmentally sustainable products*. <https://www.konsumentverket.se/globalassets/publikationer/hallbarhet-och-miljo/underlagsrapport-2020-9-hinder-for-ehandelskonsumenten-valja-miljomassigt-hallbara-produkter-konsumentverket.pdf>
- Kronthal-Sacco, R. & Whelan, T. (2021). Sustainable Market Share Index. <https://www.stern.nyu.edu/sites/default/files/assets/documents/Final%202021%20CSB%20Practice%20Forum-%207.14.21.pdf>
- Lee, K., Lee, B., & Oh, W. (2015). Thumbs up, sales up? The contingent effect of Facebook likes on sales performance in social commerce. *Journal of Management Information Systems*, 32(4), 109–143. <https://doi.org/10.1080/07421222.2015.1138372>
- Leenheer, J., Mikola, N., Elsen, M., Wagt, M., & Lloyd, L. (2014). Study on the effects on consumer behaviour of online sustainability information displays. European Commission. <http://dx.doi.org/10.2759/52063>
- Lehmann, C. (2022). Scaling sustainability advice: options for generating large-scale green consumption recommendations. <https://green-consumption-assistant.de/wp-content/uploads/GCA-Working-Paper-I-Scaling-Sustainability-Advice.pdf>
- Lohmann, S. (2015). Information technologies and subjective well-being: Does the internet raise material aspirations? *Oxford Economic Papers*, 67(3), 740-759. <https://doi.org/10.1093/oep/gpv032>
- McKinsey. (2021). For US consumers, price and quality outweigh environmental concerns. <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/for-us-consumers-price-and-quality-outweigh-environmental-concerns>
- Meske, C., & Amojó, I. (2020). Ethical guidelines for the construction of digital nudges. *Proceedings of the 53rd Hawaii International Conference on System Sciences*. *Ethical Guidelines for Digital Nudging (arxiv.org)*.
- Michels, L. (2022). Empowering Consumers to Make Environmentally Sustainable Online Shopping Decisions: A Digital Nudging Approach. *Hawaii International Conference on System Sciences*.

- Moser, S., & Kleinhüchelkotten, S. (2018). Good Intentions, but Low Impacts: Diverging Importance of Motivational and Socioeconomic Determinants Explaining Pro-Environmental Behavior, Energy Use, and Carbon Footprint. *Environment and Behavior*, 50(6), 626–656. <https://doi.org/10/gdqzvm>
- Nguyen, H. V., Nguyen, C. H., & Hoang, T. T. B. (2019). Green consumption: Closing the intention-behavior gap. *Sustainable Development*, 27(1), 118–129. <https://doi.org/10.1002/sd.1875>
- OECD. (2018). Improving Online Disclosures with Behavioral Insights. https://www.oecd-ilibrary.org/science-and-technology/improving-online-disclosures-with-behavioural-insights_39026ff4-en;jsessionid=HZFiMxmOCYi83kD38-ZRRkSpViHG90luH7avny.ip-10-240-5-84
- OECD. (2022). Dark Commercial Patterns. <https://www.oecd-ilibrary.org/docserver/44f5e846-enpdf?expires=1673391065&id=id&accname=guest&checksum=9F90C236233DDC131FDFBA9715C474F3>
- Pariser, E. (2011). *The filter bubble. What the internet is hiding from you*. London: Penguin Press.
- Pelozo, J., White, K., & Shang, J. (2013). Good and Guilt-Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes. *Journal of Marketing*, 77(1), 104–119. <https://doi.org/10.1509/jm.11.0454>
- Salazar, H., Oerlemans, L. A. G., & van Stroe, S. (2013). Social influence on sustainable consumption: Evidence from a behavioural experiment. *International Journal of Consumer Studies*, 37(2), 172-180. <https://doi.org/10.1111/j.1470-6431.2012.01110.x>
- Sanchayan, B. (2022). What works best in promoting climate citizenship? A randomised, systematic evaluation of nudge, think, boost and nudge. <https://doi.org/10.21203/rs.3.rs-1534312/v1>
- Santos Silva, M. (2022). Nudging and other behaviourally based policies as enablers for environmental sustainability. <https://www.mdpi.com/2075-471X/11/1/9>
- Sideqik. (2022). The 21st Century Social Circle. <https://go.sideqik.com/ebooksocialcircle>
- Siegelklarheit. (2022.) Targeted information. Conscious shopping. Sustainable action. <https://www.siegelklarheit.de/en/>
- SINE. (2022). Data Commons for Sustainability. https://uploads-ssl.webflow.com/6262a2a7735ff102899431ef/626643a8776abb0974771ff2_220425_Data_Commons_Final.pdf
- Stango, V., & Zinman, J. (2020). We are all behavioral, more or less: A taxonomy of consumer decision making. <http://www.nber.org/papers/w28138>
- Stephen, A. T. (2016). The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology*, 10, 17–21. <https://doi.org/10.1016/j.copsyc.2015.10.016>
- Sunstein, C. (2016). Fifty Shades of Manipulation. *Journal of Behavioral Marketing*, 213. <http://dx.doi.org/10.2139/ssrn.2565892>
- Szabo, S., & Webster, J. (2021). Perceived Greenwashing: The Effects of Green Marketing on Environmental and Product Perceptions. *Journal of Business Ethics*, 171, 719–739 (2021). <https://doi.org/10.1007/s10551-020-04461-0>
- Taufique, A. & Polonsky, M. (2017). The influence of eco-label knowledge and trust on pro-environmental consumer behaviour in an emerging market. *Journal of Strategic Marketing*, 25(7), 511-529. <https://doi.org/10.1080/0965254X.2016.1240219>
- Thaler, R.H. & Sunstein, C.R. (2008). *Nudge: improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
- Tiwari, S., and Singh, P. (2011). Environmental impacts of e-commerce. *International conference on environment Science and engineering*, 8, 202–207. <http://ipcbee.com/vol8/45-S10040.pdf>

UNCTAD and Netcomm Suisse. (2020). Covid-19 and E-commerce: Findings from a survey of online consumers in 9 countries. https://unctad.org/system/files/official-document/dtlstictinf2020d1_en.pdf

UNCTAD. (2016). *United Nations guidelines for consumer protection*. https://unctad.org/system/files/official-document/ditccplpmisc2016d1_en.pdf

UNCTAD. (2020). The UNCTAD B2C e-commerce index 2020: Spotlight on Latin America and the Caribbean. https://unctad.org/system/files/official-document/tn_unctad_ict4d17_en.pdf

United Nations Capital Development Fund (UNCDF) (2021). Estimates of Global E-Commerce 2019 And Preliminary Assessment of Covid-19 Impact on Online Retail 2020. https://unctad.org/system/files/official-document/tn_unctad_ict4d18_en.pdf

United Nations Environment Programme (UNEP). (2017). Consuming Differently, Consuming Sustainably: Behavioural Insights for Policymaking. <https://sustainabledevelopment.un.org/content/documents/2404Behavioral%20Insights.pdf>

United Nations Environment Programme (UNEP). (2022). Guidelines for Providing Product Sustainability Information in E-commerce. <https://www.oneplanetnetwork.org/knowledge-centre/resources/guidelines-providing-product-sustainability-information-e-commerce-7>

WBCSD. (2021). Pathfinder Framework: Guidance for the accounting and exchange of product life cycle emissions. https://www.carbon-transparency.com/media/oymlyn4n/pathfinder-framework-version-1_final.pdf

Webretailer. (2021). The World's Top Online Marketplaces 2021. <https://www.webretailer.com/b/online-marketplaces/>

Zhao, L., Lee, S.H. & Copeland, L.R. (2019). Social media and Chinese consumers' environmentally sustainable apparel purchase intentions. *Asia Pacific Journal of Marketing and Logistics*, 31(4), 855-874. <https://doi.org/10.1108/APJML-08-2017-0183>



CONSUMERS INTERNATIONAL

COMING TOGETHER
FOR CHANGE

Consumers International brings 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.

Consumers International is a charity (No.1122155) and a not-for-profit company limited by guarantee (No. 04337865) registered in England and Wales.

consumersinternational.org

[@consumers_int](https://twitter.com/consumers_int)

[f /consumersinternational](https://www.facebook.com/consumersinternational)