

# THINK 2030

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## Sustainable consumption – policy approaches for systems change

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Informing a science-based agenda for European environmental policy post 2020, Think 2030 is a new sustainability platform by IEEP that convenes a diverse range of stakeholders to discuss and propose solutions to Europe's most pressing sustainability issues.

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# EXECUTIVE SUMMARY

Consumption is closely linked to most sustainability challenges we are currently facing. There is ample opportunity for the EU to better acknowledge the role of consumption in achieving Agenda 2030 and other internal and external commitments and goals related to sustainability, and seek to complement and balance existing policies targeting supply and production with ambitious demand-oriented interventions. Reflecting the magnitude and complexity of the challenge, we call for a holistic approach and argue that the EU should establish a regulatory context and strategy conducive to front-runners, Member State initiative and market innovation advancing more sustainable consumption.

## Background and context

If everyone on the planet consumed as Europeans do, we would need almost three Earths to support the global economy. It is an impossible equation. What is more, the ways in which most of us consume – large volumes at a high rate and along a linear trajectory – drive a range of environmental and social impacts in Europe and elsewhere. Resource scarcity, land degradation and chemical pollution are a few examples. Achieving an absolute reduction in these impacts and a fair allocation of resources requires not only addressing *what* we consume, but also how, how much and why. It is an ambitious task that will need concerted efforts by individuals, companies and policy makers.

This policy paper discusses the role of the EU in driving sustainable consumption towards and beyond 2030. It identifies challenges for doing so and potential opportunities for overcoming them. Five policy themes are suggested as particularly promising to pursue for advancing systems change and deliver necessary progress toward Agenda 2030 and other internal and external commitments and goals related to sustainability.

## Policy recommendations

Using Agenda 2030 as a starting point and based on the strong mandate for sustainability action given to policy makers by EU citizens, the post-2020 policy arena is a golden opportunity for the EU to lead by example and adopt a holistic and systemic approach to achieving sustainable consumption. EU action and Union-level collaboration should seek to encourage initiative and innovation by the private sector and at national and regional level, creating the conditions for others to follow while preventing laggards from being left behind.

In doing so, the following five policy themes are examples of particularly important mechanisms for the EU to pursue over the next few years:

- **Actively promoting a green fiscal reform, in a wider range of sectors, creating the conditions for Member States to gradually shift tax burden from labour to the use of non-renewable energy and natural resources.** This could provide important price signals in the market, adjust artificially low prices for certain resources and encourage alternative business models, such as sharing and product service systems and the consumption of more durable, low-impact products. The long-term trend in the EU is currently moving in the opposite direction and the share of environmental taxes in total tax revenues remains low. Concrete opportunities include the proposed shift to qualified majority voting for

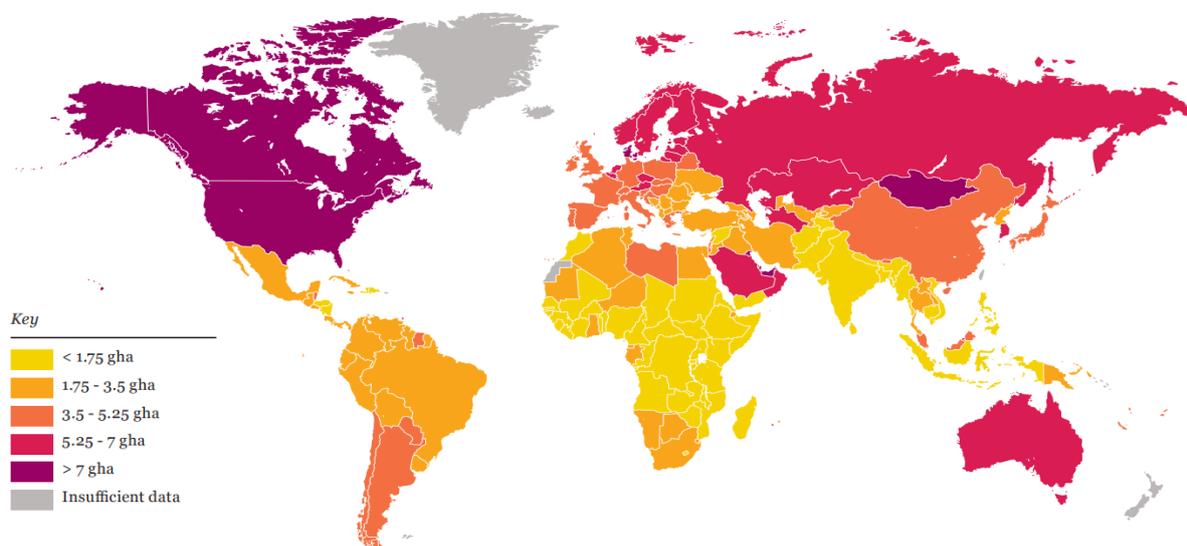
certain tax areas, the Commission's proposal to introduce more flexibility for Member States to change VAT rates, and introducing environmental tax reform as a focus in the annual European Semester process.

- **Establishing a centralised system for environmental product information to support industry and regional initiatives in the transition, steer investments and enable safe consumer choices.** This includes ensuring reliable and comparable information and metrics, a more comprehensive view of impacts of EU imports and addressing the confusion and confidence erosion currently created by the wide range of environmental claims on the internal market by establishing a robust and reliable framework for product information disclosure.
- **Providing funding to advance the sustainable consumption agenda.** This could involve funding for research into the consumption effects of new demographic and technological realities of Europe, to continue refining methods and indicators for assessing global impacts of EU consumption, support for up-scaling of successful regional initiatives, or for platforms for convening stakeholders and sharing experiences. The new Horizon Europe research and innovation programme is one potential avenue.
- **Exploring best practice and scalability of integrating behavioural insights into policies,** in collaboration with existing research teams and through support to new platforms, with the objective to find balanced and transparent ways of making the healthier, safer and more sustainable choices the easier and cheaper choices for citizens.
- **Expanding circular and green procurement guidelines to more sectors/ product groups and gradually transforming guidelines into mandatory requirements.** Given the size of public procurement in the EU economy, procurement criteria are an important complement to an expansion of the Ecodesign Directive and wider application of extended producer responsibility schemes. Public procurement could meanwhile be an effective tool to stimulate progress and innovation in the wider market. Importantly, procurement criteria should cover high-volume products and include more than energy efficiency, such as, for instance, level of reusability or other measures to reflect product longevity.

# 1 The relevance of consumption for achieving sustainable development

Consumption of goods and services is at the very heart of the challenge of achieving a more environmentally, socially and economically sustainable Europe. Here, as well as in many parts of the world, quality of life has improved at an astonishing rate over the past century, enabling more people to live better lives. Whilst certainly a remarkable achievement, this development has come at a high price for the environment and for future generations. Being the main driver of markets and technological development and therefore also of production processes and resource extraction, our consumption directly and indirectly drives pressures such as land-use change, emissions and release of toxic chemicals to the environment, in turn generating a range of environmental impacts, including fresh water depletion and pollution, land degradation and loss of biodiversity. Importantly, because the European economy is highly import-dependent, a large share of these impacts occur beyond EU borders.

In fact, the ways in which most of us consume today – large volumes at a high rate, along a linear trajectory and with significant wastage (take-make-dispose) – are not sustainable. If everyone on the planet consumed as Europeans do, we would need almost three Earths to support the global economy (Global Footprint Network, 2018). Figure 1 below illustrates the Ecological Footprint of countries around the world. To live within the available resources of the planet, the global Ecological Footprint would have to equal the available biocapacity per person, which is currently 1.7 global hectares (gha) (WWF, 2018).



*Figure 1 Global map of Ecological Footprint of consumption, 2014. Total Ecological Footprint is a function of both total population and rates of consumption. A country's consumption includes the Ecological Footprint it produces, plus imports from other countries, minus exports. Source: (WWF, 2018).*

Sustainable consumption<sup>1</sup> must be advanced in Europe in order for the Union to meet both its internal and external targets and commitments related to environmental impacts, for instance, stopping the

<sup>1</sup> Sustainable consumption (and production) was defined by the Brundtland Commission as 'the use of services and related products which respond to basic needs and bring a better quality of life, while minimizing the use of

loss of biodiversity and reducing greenhouse gas emissions. Further, consumption is not only the main driving force behind the unprecedented planetary changes we are currently witnessing (WWF, 2018), it is closely linked all the Sustainable Development Goals under Agenda 2030 and to political agendas on, for instance, nutrition, poverty and inequality (EEA, 2015; UNECE, 2018; UNEP, 2016).

It is important to formulate a common long-term vision for sustainable consumption in order to set a clear direction and to identify the best actions required today in order to make the vision a reality. The Think 2030 paper on circular economy provides a detailed 2050 vision for Europe, much of which is also an illustration of what more sustainable European consumption might look like. A more sustainable 2050 Europe has achieved an absolute reduction of global extraction and use of virgin natural raw materials related to consumption, and economic trends favour product and material longevity. Innovative business models thrive and contribute to the reduction of consumption of new products and raw materials and a continued increase in servicing models where personal ownership of many product types is no longer an aspiration. Following a significant redistribution of resources from rich to poor, our level of continued development is no longer steered by economic growth and material consumption, but by human and ecological well-being.

Advancing this vision and reducing the impacts of consumption within and outside Europe requires not only addressing *what* we consume, but how much, in what ways and why. This will require concerted efforts throughout society, including more conscious decisions by individuals, ambitious commitments by companies and incentives and legal intervention by policy makers. This paper focuses on the latter and on the role of the EU in particular.

However, although consumers and consumers' rights are a central concern for the EU (European Parliament, 2018), so far, EU-level intervention related to the impacts of consumption on sustainable development has focused on supply-side measures and on reactively addressing negative impacts of the current linear economy, including improving the resource and energy efficiency of production and end-of-life management of products. While this has contributed to efficiency gains in the production of goods and services (EEA, 2015), productivity gains and cost savings in one area often lead to increased consumption and resource use in another – a so-called 'rebound effect' – and many environmental impacts of production have simply moved with industries to non-EU countries (Azevedo, 2014; Murray, 2013; Science for Environment Policy, 2013). Demand-side measures initiated at EU-level have focused on raising consumer awareness and encouraging more reliable and comparable product information, such as the EU product labelling and quality standards, in order to enable safe and more sustainable consumer decisions. However, shifting the responsibility to the consumer has so far had limited impact and, overall, Europeans' consumption patterns have remained relatively unchanged (Backhaus et al, 2012; EEA, 2015; Rokka and Uusitalo, 2008).

The focus of EU-level intervention to date partly reflects the fact that demand-side policy measures often fall under the legal competence of Member States, and partly that many of the potential policy options for addressing consumption have not been seen as politically viable. However, the new reality of the relevance of our lifestyle choices in driving sustainability challenges and the slow progress toward achieving more sustainable consumption in Europe through existing means will require much more political attention and new policy approaches toward 2030. Progress will likely require a combination of instruments – including regulatory, market-based and information instruments – to achieve an absolute reduction of the impacts of consumption while at the same time ensuring a maintained or increased quality of life for people. Importantly, there is a need for measures targeting both private and public consumption – EU household consumption accounts for about 60% of EU GDP and public consumption (financed through tax revenues) for another 14% (EEA, 2017; European

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natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations' (Norwegian Ministry of the Environment, 1994).

Commission, 2017c). Policy measures also need to take into account socio-demographic factors and the divide between rural and urban conditions (for instance regarding availability of infrastructure), as urbanisation continues to increase in Europe (Eurostat, 2016). Further, collaboration is essential for sustainable development – so also when it comes to addressing consumption. It requires collaboration between local, regional, EU and international governance levels as well as between public and private sectors and civil society. Initiatives are already ongoing in EU Member States, driving the agenda forward. Similarly, individual firms and progressive industries have launched their own initiatives and commitments, driven by the market potential of innovation and alternative business models. The EU has an important role to play as a convenor and designer of frameworks to encourage this development in Europe, as well as a clear responsibility to help driving such change globally.

At the same time, dramatic and accelerating shifts are in motion with the introduction and spread of new disruptive technologies, digitalisation, automation, Artificial Intelligence (AI), the Internet of Things (IoT) – to mention a few of the mega trends of what is sometimes referred to as the Fourth Industrial Revolution (Schwab, 2017). This new reality is altering production, markets and consumption. The World Economic Forum has projected that consumer-centric industries will go through more change in the next ten years than they have seen in the last forty (World Economic Forum, 2018). One distinct example is the rapid development of e-commerce in the last five years, which poses both challenges and opportunities with regard to environmental impact. We also see how consumers engage more directly with producers and service providers, enabled by new technologies and digitalisation. It is likely that consumers will continue to have an increasingly important role in the market towards 2030. Public policy addressing sustainability needs to reflect these developments.

This paper focuses on the role of the EU in progressing systems change, arguing that the Union needs to better acknowledge the role of consumption in achieving sustainable development and develop a policy mix that more clearly and holistically incorporates the role of demand. The paper identifies existing barriers to progress, including the challenges posed by our current economic system and the complexities of consumer behaviour. It goes on to present opportunities for advancing an EU agenda on sustainable consumption towards 2030, as identified by sustainability think tanks in Europe, and ways in which remaining challenges may be addressed. We highlight existing successful instruments and innovative approaches applied in the EU Member States and give practical examples of product and service groups to illustrate potential solutions for achieving more sustainable consumption patterns. Finally, we make recommendations for policy action at EU-level that we consider necessary and feasible to adopt between now and 2030 to advance sustainable consumption in Europe and beyond.

*The concept of sustainable consumption can be applied to a wide range of specific policy areas, including food, transport and energy. Some of these themes are covered in other Think 2030 policy papers. This paper focuses specifically on the overarching role and key opportunities for EU-level intervention to support a system change toward more sustainable consumption.*

## 2 Accomplishments to date and ongoing initiatives at EU-level

While controlling the adverse impacts of production was an early focus of EU environmental policy (targeting pollution for instance), addressing environmental challenges from a demand perspective has received less concrete attention. The following section briefly describes the key accomplishments so far with particular relevance to sustainable consumption.

Firstly, the **7<sup>th</sup> Environment Action Programme (EAP)**, adopted in 2013 and running until 2020, outlines the broad objectives for EU policy related to the environment. It includes – as the first EU-level policy – goals on reducing environmental pressures caused by consumption, including impacts in- and outside of the EU (EEA, 2015; EU, 2014).

The current EU ambition to transform the European economy from linear to circular, originating from the **EU Action Plan for the Circular Economy (COM/2015/0614)**<sup>2</sup>, provides an important framework for addressing challenges along value chains, including consumption. The Action Plan has, for instance, initiated support to new business and consumption models through Horizon 2020 and Cohesion Policy funding and has led to the development of measures targeting specific materials and sectors, including plastics and bio-based products (European Commission, 2018a). Meanwhile, its focus on increasing recycling rates, reducing landfill and creating secondary markets for materials does not necessarily prevent rebound effects or encourage progress towards an absolute reduction in resource use.

Leading up to the 2015 Action Plan, a number of policy initiatives adopted in the past decade to various extents have acknowledged and addressed consumption as a core issue. A milestone example was the 2006 renewal of the **EU Sustainable Development Strategy (SDS)**<sup>3</sup> which identified ‘sustainable consumption and production’ as one of seven key challenges to be tackled by implementation action. Eurostat monitoring of the results of the SDS concluded in 2015 that resource productivity (the ratio between GDP and the materials used to generate it) had improved significantly since 2002 thanks to reduced material consumption. However, the report emphasised that the key driver of this trend was likely the economic recession during the global financial crisis (Eurostat, 2015; Mont, 2010).

Another important step was the 2008 **Sustainable Consumption and Sustainable Industrial Policy (SCP/SIP) Action Plan (COM(2008) 0397)**, aiming to improve the environmental performance of products, increase the awareness and demand for more sustainable goods and production technologies and to promote innovation in EU industry. The Plan makes implicit reference to lifestyles, acknowledging that ‘the challenges are directly linked to our way of life’. The adoption of the 2008 Action Plan has led to subsequent initiatives of relevance for consumption, including a revision of the EU Ecolabel and EMAS regulations, legislation on Green Public Procurement (GPP), the adoption of a Roadmap to a Resource Efficient Europe and the Eco-Innovation Action Plan, and an extension of the Ecodesign Directive (Stoerring, 2017). Nevertheless, the level of ambition of the Action Plan has been heavily criticised by NGOs and the academic community for failing to present a coherent policy and for lack of clear timeframes and measurable targets and goals (Mont, 2010).

The **flagship initiative for a resource-efficient Europe** – part of the ‘Europe 2020 Strategy’ from 2010 – provides a framework for actions in different policy areas, aiming to increase certainty for investment and innovation. It sets, for instance, a target for environmental taxation to account for

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<sup>2</sup> The circular economy is addressed in a separate Think 2030 policy paper.

<sup>3</sup> Council of the European Union (2006), [Review of the Sustainable Development Strategy \(EU SDS\)](#) — Renewed Strategy, 10917/06.

10% of total revenues from taxes and social contributions by 2020. Environmental taxes, charges and levies can support sustainable consumption by, for instance, making low-impact alternatives more competitive in the market. Such measures are already in place in several European countries across different areas, focusing mainly on energy and transport, and less on issues of pollution and resource use. Plans and initiatives are also underway in several countries to introduce new environmental taxes or to amend existing systems. Despite these trends, however, such instruments are not widely used. In the EU, revenues from environmental taxes amounted to just 2.4% of EU-28 GDP in 2017, with significant differences between Member States (Watkins et al, 2017b).

As one of the building blocks of the flagship initiative, the **Roadmap to a Resource Efficient Europe (COM(2011) 571)** provides a framework to guide policies addressing consumption and production, outlining milestones to be met by 2020 (EEA, 2015). It proposes ways to increase resource productivity and decouple economic growth from resource use and environmental impact, also taking the role of consumers into consideration. The Roadmap importantly acknowledges that ‘in some cases, cost savings made from improving the efficiency of a technology can actually induce people to consume more. This phenomenon, known as a ‘rebound effect’ must be anticipated, and accounted for, in developing policy and setting targets’. The Commission’s third Resource Efficiency Scoreboard report from 2015 concluded that some progress towards a more resource efficient Europe had been achieved, but that much more needs to be done (Humphris-Bach et al, 2015).

By setting standards for products, the **Ecodesign Directive (2009/125/EC)**<sup>4</sup> contributes to addressing efficiency as well as delivering some circularity of materials which could help address the impacts of consumption. The existing EU ecodesign regulation also provides an estimated annual financial benefits of €332 per average household (Smith et al, 2016). The Directive now covers all products which have an impact on energy consumption during use (except transport) (European Commission, 2008). The Commission’s ‘Ecodesign work plan 2016-2019’ contained a clear political mandate to revise existing product groups as well as adding new ones, and placed a stronger emphasis on the circularity of products, including durability. However, European consumer organisations have urged the Commission to be more ambitious and extend the rules to more product groups (ANEC and BEUC, 2017). The requirements have so far focused on energy efficiency, but as energy efficiency has improved, the relative significance of other environmental impacts of these products has increased and the potential of better addressing *resource* efficiency through the Directive has been suggested (Dalhammar et al, 2014).

Perhaps the most clearly demand-oriented policies at EU level to date are the voluntary instruments encouraging Green Public Procurement (GPP). The aim of the Commission’s **Communication on GPP (COM(2008) 400)** is to provide guidance on how to reduce the environmental impact caused by public sector consumption and how to use GPP to stimulate innovation in environmental technologies, products and services. The Communication set an indicative target of 50% of all public procurement complying with the common EU GPP criteria by 2010. A 2012 evaluation of the uptake of GPP showed that 26% of the most recent contracts signed by public authorities in the EU27 included all EU core GPP criteria, and 55% included at least one EU core GPP criterion (Renda et al, 2012). Since then, the Commission has produced GPP guidelines for different sectors, and in October 2017 it launched a brochure for circular procurement. There are currently over 20 EU GPP criteria, ranging from cleaning products to electricity, textiles and transport.

The **EU Ecolabel and EMAS regulations** contribute to enabling more sustainable consumption by providing comparable information related to the sustainability performance of products and services. Trustworthy labelling schemes also help encourage producers to place high quality and sustainable products on the market by allowing them to charge a premium price or to enter niche markets. As of

<sup>4</sup> Ecodesign is discussed further in the Think 2030 policy paper on the circular economy.

March 2018, over 70,000 products and services had been certified with the EU Ecolabel with the majority of licenses awarded to tourist and accommodation services (34%), hard surface cleaning products (13%) and tissue paper (8%) (European Commission, 2018d). In the 2017 Fitness Check of the Ecolabel and EMAS regulations, the Commission confirmed that the two regulations contribute to reducing the environmental impact of consumption and production, although to a limited degree. Remaining challenges include a limited level of uptake by producers and organisations (European Commission, 2017b).

Finally, international agreements and commitments provide additional frameworks and benchmarks for EU initiatives. In 2015, the UN and its member countries adopted the 2030 Agenda for Sustainable Development, including 17 **Sustainable Development Goals (SDGs)** and 169 detailed targets. SDG 12 – ‘Sustainable Consumption and Production’ – is the SDG that is the most interlinked with the other goals and its achievement is thereby a key component of achieving Agenda 2030 (UNECE, 2018). Resource productivity is one of the indicators for monitoring EU progress on SDG 12. The first Eurostat monitoring report of EU progress towards the SDGs concluded in 2017 that resource productivity in the EU increased by almost 40% between 2001 and 2016. However, the report reiterates the caution that recent drops in material consumption very likely were affected by economic fluctuation, adding that neither does this metric fully account for material flows related to traded goods (Eurostat, 2017b). In fact, as noted in the UN Sustainable Development Goals Report 2017, Europe has one of the highest per capita material footprints<sup>5</sup> in the world – over 20 metric tonnes per capita in 2010 (compared to the global average of 10 metric tonnes per capita) (European Commission (2017b); (United Nations, 2017a).

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<sup>5</sup> Material footprint: the amount of raw materials extracted globally that are used to meet the domestic final consumption demand of a country (or region) (United Nations, 2017a).

### 3 Challenges to advancing sustainable consumption in Europe

Although the roles of consumption and lifestyles have been acknowledged in some EU-wide policy initiatives and certain progress has been made, many challenges remain to achieve more sustainable consumption. This section identifies such challenges. Some may require direct policy response, while others need to be acknowledged in the design and/or implementation of wider policy to avoid unforeseen impacts. Opportunities to address these challenges are explored in the next section.

One of the key challenges lies in the fundamental nature of our economy. Modern western society is built on a **growth-based and linear economic model** which largely fails to internalise external costs of production and end-of-life – costs that are currently borne by society, the environment and inadvertently by future generations. As long as product prices do not duly reflect external costs in trustworthy and comparable ways, alternative products and services which do address such externalities (often at high cost) will continue to be at a disadvantage in the market. Overall, the existing model encourages short-term and highly wasteful consumption patterns where a decrease in consumption is inherently considered negative. The structures of our economy are designed according to an economic theory that is unsustainable. One current illustration of this is how the European Central Bank keeps its interest rates at record-low levels in order to boost lending and consumer spending<sup>6</sup>. Looking toward 2030 and beyond, in order to accommodate the human population well within the limits of the planet, ending the degradation of nature and other species and ensuring a fairer distribution of existing wealth and resources, the concepts of degrowth and sufficiency will have to be taken seriously. This includes shifting societal aspirations away from increased growth at all costs to, for instance, increased well-being and quality of life in work, education and leisure (Rijnhout and Mastini, 2018). Marginal or even considerable efficiency gains in the existing growth-based system will not be enough in the face of population increase and rebound effects.

Another fundamental challenge is posed by **political and economic realities in Europe and globally**. Various tools intended to steer and influence consumption can be seen as politically difficult to implement, such as taxes on particularly problematic products. Further, internal disagreement between Member States might delay or obstruct discussions to try to address these and other urgent sustainability challenges, while Eurosceptic movements have been urging less EU-level intervention altogether. In the meantime, other markets might take over the EU lead in the sustainability agenda. These are global challenges which require global solutions. With the EU as a follower rather than a leader of sustainable consumption towards and beyond 2030, its capacity to influence will change.

Another **key challenge relates to information**. To achieve more sustainable systems, we need a detailed understanding of how production, supply and consumption link together and how environmental and social impacts relate to and are driven by various steps of value chains. A lack of metrics and data to allow for reliable assessment of the ecological and social impacts of everyday consumption choices is a barrier for companies and innovators aiming to develop products and services with maximum benefit for both quality of life and sustainability indicators<sup>7</sup>. In particular small and medium-sized companies – who are essential innovators and pilot platforms – face this challenge (REBus, 2017)<sup>8</sup>. To some degree, a lack of coherent and reliable information also remains a barrier for

<sup>6</sup> <https://www.ecb.europa.eu/press/pr/date/2018/html/ecb.mp180913.en.html>

<sup>7</sup> We are particularly grateful to the IKEA Group for adding to our understanding of these issues.

<sup>8</sup> We are particularly grateful to the Aldersgate Group for adding to our understanding of these issues.

citizens to change their purchasing behaviour (although the primary gap for citizens is between knowledge and action).

Although availability of information on the sustainability of products and services has improved over time, there is still a great deal of opacity regarding the ecological and social impacts along the product value chain. This is often a result of the sheer complexity of modern global value chains and the lack of robust monitoring beyond tier one or sometimes tier two suppliers. Gathering and processing comprehensive information can be both difficult and costly for individual firms, and often relevant metrics (for instance to assess resource efficiency of products) are missing altogether (Tecchio et al, 2017). As mentioned, the current effort to monitor progress on achieving SDG 12 in the import-heavy EU economy is also facing this challenge, with no or few feasible means and data by which to assess the full global footprint of consumption (Eurostat, 2018b). The voluntary national reviews of Agenda 2030 implementation from individual EU Member States also emphasise the challenges of how to measure sustainable consumption (Kettunen et al, 2018).

There is meanwhile a risk that efforts to try to address information issues are not well suited to change citizens' consumption choices but instead add to the confusion and undermine confidence in sustainability claims. There is a notable **lack of coordination, credibility and comparability between the numerous sustainability labels and claims made on the EU market**. Consumers may find it difficult to distinguish between claims that have been certified by independent bodies according to a particular standard and those that are self-proclaimed and likely less stringent. This is an issue for advancing sustainable consumption, a more circular economy (e.g. to be able to trace materials in recycled products) but also for people's safety when it comes to toxicity and chemicals in products. To complicate matters further, brands often collate various external labels under a bespoke label, for instance in the fashion industry, grouping ISO Type I labels such as the Global Organic Textile Standard (GOTS) together with self-proclaimed industry initiatives such as the Better Cotton Initiative (BCI). To the consumer, these labels appear equal when in fact they are far from it<sup>9</sup>.

Although information instruments aiming to enable and encourage citizens to prioritise sustainability in their consumption behaviour have been successful on certain product segments, this approach has had limited or slow effect so far on the mainstream consumer (OECD, 2017; UNEP, 2017). Meanwhile, there is a growing scientific understanding of **the influence of behavioural aspects** on our consumption choices and patterns, showing that our decision-making is not well-explained by traditional economic theories about profit maximisation and access to information. Rather, behavioural science demonstrates how the influence of context (mental, social, and physical) and mental shortcuts can result in unpredictable outcomes in our behaviour (OECD, 2017; UNEP, 2017). Many purchasing decisions are based on subconscious routines and habits, in particular daily consumption of food, mobility and living (BMUB, 2017). For instance, people are prone to various rebound effects, as previously mentioned, which constitute major challenges for advancing sustainable consumption. People who have chosen sustainable options in one area, for instance buying organic food, might feel morally free to consume unsustainably in another, such as driving to the supermarket. The latter is sometimes referred to as moral rebound effects. Accounting for these effects in relevant policies is not always straightforward or uncontroversial (see, e.g. (Lepenies and Małecka, 2015).

A number of factors have been identified as influencing people's predisposition to sustainable behaviour, including convenience, force of habit, availability, affordability and product performance (WBCSD, 2008). Further limitations include a lack of time, knowledge about alternatives, as well as financial resources (Grandi-Nagashiro and Matsuda, 2018). Many products and services performing better in terms of sustainability often come at a higher price than conventional alternatives (which do

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<sup>9</sup> See, e.g. research from the School of Business, Economics and Law at the University of Gothenburg, Sweden <https://www.radron.se/artiklar/forskare-kedjornas-miljomarkning-oserios/>

not cover their full costs) and are thereby mainly available to more affluent consumer groups (BMUB, 2017). This may exacerbate **unequal opportunities and access to resources**. Further, while consumption of certain products and services need to go down in some countries, the opposite might be true for others (this difference exists also within countries). For instance, the level of material deprivation (inability to afford a particular standard of living that is generally considered acceptable) varies considerably across the EU (from 3% of the Swedish population to 47% of the Bulgarian population) (Social Situation Monitor, 2018). This is one illustration that the discussion about sustainable consumption has widely different connotations for the different EU Member States. Meanwhile, a higher level of inequality in a population is generally associated with more resource consumption and more waste generation (Islam, 2015), further illustrating the need to adopt an holistic approach to these issues.

Another set of challenges are posed by the **growing digitalisation of society** which is already having far-reaching consequences for consumption and consumption patterns. On the one hand, it has become easier to obtain information on sustainability, which helps raise people's awareness. Digitalisation can also enable new and potentially more sustainable business models, such as sharing and leasing. On the other hand, various digitalisation technologies may cause an overall increase in impacts such as energy consumption (e.g. data centers and blockchain applications) and the production of device components is sometimes associated with poor working conditions (e.g. conflict minerals). Further, the short innovation and production cycles of ICT devices may speed up the already fast turnover of products and so increase the demand for resources (BMUB, 2017), and the collection and sharing of consumer information and preferences has already raised significant concerns about personal integrity. Other challenges related to digitalisation include the rapidly growing role of e-commerce and the ease of buying just about anything simply by pushing a button, and having products delivered to your door step. In 2017, almost 7 out of 10 internet users in the EU shopped online, in particular for clothes, sports goods and travel (Eurostat, 2017a). The turnover of the European e-commerce industry has almost doubled since 2013, with a forecasted turnover of over €600 billion in 2018 (Ecommerce Europe, 2018). While e-commerce may offer some opportunities in terms of reducing overall environmental impacts of supply (such as using zero emission deliveries or minimising unnecessary marketing-driven packaging), it also poses a number of challenges when it comes to sustainable consumption, including encouraging unnecessary purchases and thereby increasing waste<sup>10</sup>. The new ways of consuming (and producing) made possible through digitalisation remain largely unregulated and also consumer safety needs to be a key concern going forward (Valant, 2015).

Finally, **changing demographics** pose further challenges to achieving sustainable consumption in Europe. While the predicted increase in global population within the next decades will primarily occur outside of Europe, Europe is seeing an overall ageing population who will be able to consume for longer (United Nations, 2017b). Meanwhile, single-occupant households are already the most common household type in the EU28 and the number of people living alone in Europe will increase to almost 46 million by 2025 (Eurostat, 2018a). This trend is paralleled by an increasing individualisation, most notably seen in the demand for more living space for singles (especially in cities). This leads to an increase in average square meters per person and more resource use for the construction of residential property, a higher energy consumption and demand for more household goods (BMUB, 2017). This trend is contributing to, for instance, higher levels of household food waste – 45% more food is estimated to be wasted in single households compared to the average larger household (Schweitzer et al, 2018; Verghese et al, 2015). The effects of ageing societies and individualisation trends on sustainable consumption have not yet been analysed to a great extent and there is a need to further explore this area.

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<sup>10</sup> We are particularly grateful to the IKEA Group for adding to our understanding of these issues.

## 4 Opportunities for advancing sustainable consumption

Looking towards and beyond 2030, a number of relatively untapped policy opportunities may help address the challenges described in the previous section and advance sustainable consumption in the EU. Importantly, both supply and demand will need more attention toward 2030, given the urgent need to achieve an absolute reduction in negative environmental impacts of consumption in line with the EU circular economy agenda, the Paris Agreement, Agenda 2030, and other internal and external commitments. In this section, we present what we and others see as key opportunities for advancing EU-level action, focusing on potential demand-oriented measures.

### 4.1 Environmental tax reform

Environmental tax reform can greatly support a system change toward sustainable consumption, ie the transformation from a tax system based primarily on labour, to one based on the use of energy and natural resources. Prices on the latter are currently relatively low (Plepys, Heiskanen and Mont, 2015; Rijnhout and Mastini, 2018), and often kept at artificially low levels as a result of not bearing their full costs, such as environmental or social impacts incurred during production or use.

Taxes, fees, VAT differentiation and other charges or subsidies – if carefully designed – can promote more labour-intensive business models and services contributing to closing the loop on materials and resource use, such as different Product Services Systems (PSS), leasing, or sharing. It might also help address some of the current challenges related to information by providing price signals as to what products and services are considered inferior from a sustainability point of view. Differential taxes could encourage the consumption of more durable, low-impact products, in particular if the differentiation is made salient to the consumer. A green tax reform might also generate public revenues which can be used to support various strategic priorities, including environmental objectives (Watkins et al, 2017b). However, according to the most recent monitoring report of EU progress on Agenda 2030, a shift from labour to environmental taxes is not happening in the EU, in fact the long-term trend is pointing in the opposite direction (Eurostat, 2018b).

In January 2018, the European Commission proposed to introduce more flexibility for Member States to change VAT rates. Although generally not an EU competence, if circular economy criteria are streamlined through relevant sectors or product categories, EU Member States may be able to apply a reduced tax rate or lower fees for certain schemes to reward circular economy frontrunners (European Environmental Bureau, 2018). For instance, zero VAT could be considered on the labour cost of repair and maintenance services on certain products or on the sales of second hand products. According to EEB, 77% of EU citizens would rather repair their goods than buy new ones (European Environmental Bureau and ECOS, 2018). In his 2018 Letter of Intent, as part of the priority for a deeper and fairer Internal Market, President Juncker opened up the question of identifying areas of taxation where law-making could move from unanimous to qualified majority voting. This recalled an opinion expressed by the Commission in relation to the 2003 Intergovernmental Conference on a Constitutional Treaty for the EU<sup>11</sup>, then naming ‘taxation in respect of the environment’ as one such potential area.

Promoting a greener European Semester process might be another opportunity. The priorities of the European Pillar of Social Rights have been gradually embedded in the European Semester (with topical

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<sup>11</sup> Opinion of the Commission, on the Intergovernmental Conference, document COM(2003) 548 of 17/09/2003.

themes to be selected for detailed reporting on an annual basis, and the Commission providing technical assistance, promoting benchmarking and facilitating the exchange of good practices)<sup>12</sup>. A similar approach ought to be possible in relation to sustainability<sup>13</sup>.

#### Incentivising repair services – tax deduction in Sweden

Since 2007, repairs of large household appliances performed by professionals at people's homes are tax deductible. Up to 50% of the labour costs for the repairs are deductible, up to a maximum of SEK25,000 (€2,400)/ year, or SEK50,000 (€4,800) for persons over the age of 65 (Swedish Tax Agency, 2018).

## 4.2 Including behavioural insights in policy making

It is important to understand and consider behavioural aspects when designing any environmental policy targeting consumption, for instance to ensure that interventions are well-designed and targeted and thereby improve their effectiveness. Behavioural insights can also be the basis for new measures in some cases, to complement the existing mix of measures aimed to solve particularly difficult issues. While behavioural insights have informed EU policy for almost ten years, for instance through the support of a dedicated team at the Joint Research Centre (JRC) and by acknowledging it in the European Commission 'better regulation' toolbox<sup>14</sup>, a JRC review of Behavioural Insights Applied to Policy (BIAP) in Europe has concluded that there is room for improved exchange and knowledge sharing between policy makers and behavioural scientists, urging an increased use of behavioural approaches in the EU (Sousa Lourenço et al, 2016).

According to the OECD (2017), generally promising environmental policy domains for the application of behavioural insights include waste management and resource efficiency, transport, water, and environmental compliance. The implementation of the EU's Circular Economy Package, for instance, may be supported by policy makers taking due consideration of behavioural insights, especially when it comes to the often-overlooked question of how people can be encouraged to play an active role in circular economy approaches (through repairing, recycling etc.). When looking at changing food consumption patterns, e.g. from red meat to lower impact food products or reducing food waste at the household level, behavioural insights can also play a key role.

Behavioural insights can feed into different stages of the policy making process, from the identification of the sources of problems, to the evaluation of the policy options, design of measures and the development of effective policy implementation. Acknowledging behavioural insights in policy making may involve adopting measures which require an active choice to be made where the more sustainable alternative is the easiest, and/or cheapest, choice. One example is the introduction of a plastic bag charge in Ireland in 2002. Since the introduction of the charge, which was made salient to the consumer thereby evoking an active decision whether or not to pay for a plastic bag, Ireland has witnessed a 95% decrease in the use of single-use plastic bags. The success of the policy has spurred its replication in several other Member States as well as the development of additional EU policies aimed at curbing plastic pollution (European Commission, 2017a).

It is important to note that some experts are cautious about the use of behavioural insights in policy<sup>15</sup>. For instance, Lepenies and Małecká (2015) argue that such integration requires legal safeguards in

<sup>12</sup> [https://ec.europa.eu/commission/sites/beta-political/files/european\\_pillar\\_of\\_social\\_rights.pdf](https://ec.europa.eu/commission/sites/beta-political/files/european_pillar_of_social_rights.pdf)

<sup>13</sup> We are particularly grateful to Mats Engström for adding to our understanding of these issues.

<sup>14</sup> [http://ec.europa.eu/smart-regulation/guidelines/docs/br\\_toolbox\\_en.pdf](http://ec.europa.eu/smart-regulation/guidelines/docs/br_toolbox_en.pdf)

<sup>15</sup> We are particularly grateful to the UFZ Helmholtz Centre for Environmental Research for adding to our understanding of these issues.

order to avoid misuse, such as liability for policy makers who introduce default rules that infringe rights or are in other regards violations of the constitutional order. Another suggestion is to make the use of behavioural insights conditional upon tackling particularly difficult issues with clear motivations about why they are applied.

#### Reducing food waste by targeting behaviour

Food waste is generated along the entire food supply chain, households being the main contributors – 53% of waste annually in the EU (FUSIONS, 2015). The EU REFRESH project has identified several opportunities for EU policy making to better address the generation of food waste, including by trying to change people’s behaviour via public campaigns and through contextual settings. Suggestions for designing public campaigns include: (1) emphasizing that attempting to prevent food waste is ‘normal’ behaviour, (2) convincing people that they can change their behaviour, (3) making information on planned shopping and cooking with leftovers available, and (4) providing information on storage and shelf-life at moments when people are engaged in these household practices (Wunder et al, 2018).

Find out more about the EU REFRESH project here: <https://eu-refresh.org/>

### 4.3 Information exchange: opportunities with digitalisation and innovation

A key role for the EU in achieving comprehensive and lasting shifts in consumption is to foster transparency, knowledge exchange and collaboration along product value chains. For instance, harmonisation of ecodesign and product standards may reduce confusion, support fairer competition between firms and create economies of scale for the wider uptake of more sustainable products and services. A better and more reliable understanding of the links between choice and impact, including the development of product standards for material efficiency, may also help design policies and policy instruments that will have the greatest net impact in supporting better quality of life within environmental limits<sup>16</sup>. Reliable and transparent information – as opposed to ‘greenwashing’ – could meanwhile support the growing interest among investors and shareholders to channel funds toward more sustainable solutions, for instance by forming the basis for standards and labels for green financial products. This would support the Commission’s objectives as outlined in the 2018 action plan on sustainable finance, where one of three main objectives is to ‘reorient capital flows towards sustainable investment’ (European Commission, 2018c).

From a citizens perspective, engaging and providing opportunities for changing purchasing behaviour is key. This includes providing correct, sufficient and reliable information and, importantly, combining information with awareness raising and tools to enable traceability of information and better informed sourcing and consumption, such as online databases and consumer smartphone apps. This is particularly important when it comes to disclosing potentially harmful chemicals in products (BEUC, 2017). One example is the ‘Beat the Microbead’ app which allows people to verify whether a product contains plastic microbeads by scanning the barcode with their smartphone camera. The app was initiated by the world-wide campaign with the same name, launched in 2012 by the Amsterdam-based NGO Plastic Soup Foundation, sponsored by the UN (Beat the Microbead, 2018)

Various existing and emerging digital solutions may help to further facilitate information flows throughout product value chains. These tools can, for instance, enable people to make better informed purchasing decisions, thereby potentially favouring more sustainable alternatives and sending a market signal to producers and designers about consumer preferences. Systems tailored to ensure that the necessary and correct information is provided might also help to avoid information

<sup>16</sup> We are particularly grateful to the IKEA Group for adding to our understanding of these issues.

overload, which ultimately could deter and confuse consumers rather than help and empower. To achieve their objectives, these solutions rely to a large degree on the availability and comparability of product information which may require the existence of a centralised, harmonised system of disclosing information about products placed on the internal market. Such a system should apply the same to all relevant products, or at least ensure sufficient market coverage, but it would need to be carefully designed so as to ensure a just balance between disclosure, intellectual property and liability. It is also dependent upon the development of adequate indicators. In this context, digitalisation might provide opportunities to more accurately and efficiently trace and monitor relevant data along supply chains.

While still a considerable challenge, researchers and scientists have recently developed new and more sophisticated and fine-grained models and methods (looking at a wider range of indicators) to assess the linkages between consumption and impacts throughout the value chains of products and services. For instance, the JRC managed recently to develop the first ever measure of national footprints of seafood consumption (rather than production), advocating that the sustainability of the global seafood supply is primarily determined by the collective consumption demands of different nations (Guillen et al, 2018)<sup>17</sup>. In another example, researchers in Sweden have developed a consumption-based national accounting system called PRINCE ('Policy Relevant Indicators for Consumption and Environment') to monitor the extra-territorial environmental pressures (looking at different indicators) linked to a country's consumption of goods and services (Steinbach et al, 2018). Finally, Sandström et al (2018) explore the greenhouse gas emissions of EU citizen's food consumption by linking country-level food supply statistics to a trade flow analysis, and distinguish emissions related to food production and trade using country-, and product-specific emission factors. The authors find that the footprint of an average EU citizen's food consumption – including emissions of primary production, land use change and international trade – is 1,070 kg CO<sub>2e</sub> per year. The share of animal products in the diet is the most important factor determining the size of the footprint (Sandström et al, 2018).

Digitalisation not only offers opportunities for consumers and producers, it challenges the very concept of who is who in the market. Digitalisation has spurred the notion of 'prosumers' – a hybrid role where consumers to some extent also become the producer – for instance in local and regional sharing economy projects. This term does not yet have a clear legal definition which may, as the European sharing economy scales up, create uncertainties about responsibility (Valant, 2015). If these legal uncertainties are addressed and the concept of prosumers develops further, it might support more direct, flexible and transparent ways of consuming.

### Supply chain traceability – trase.earth

The Stockholm Environment Institute (SEI) and Global Canopy have developed a free and publically available material flow platform using a variety of data sets to increase supply chain transparency for major commodities with particular risks for forests around the world. The platform – trase.earth – maps the links between consumer countries, via trading companies, to the places of production. It is based on data from customs agencies, shipping contracts and tax offices in order to also reveal the complex linkages at sub-national level.

Find out more information about the trase initiative here: <https://trase.earth/?lang=en>

<sup>17</sup> Based on their findings, the authors urge international collaboration on the long-term sustainability of all seafood production; however, they do not reflect on the role of addressing the growing consumption of seafood.

#### 4.4 Advancing the green public procurement agenda

Public procurement is worth an estimated 14% of GDP in the EU (European Commission, 2017c) and is an important part of achieving more sustainable consumption. As a significant driver of EU demand, public procurement could create investment security and stimulate innovation and trends in the wider economy for products and/or business models performing better in terms of different social and environmental aspects. Green Public Procurement (GPP) as a means for public authorities to purchase goods, services and works with a reduced environmental impact throughout their life-cycle is already applied by many public authorities in the EU and in individual Member States. In the EU, green public procurement criteria and requirements can be an important complement to the Ecodesign Directive when it comes to incentivising innovation.

Recently, the discussion on using procurement to reduce impacts of consumption was extended to the topic of circular procurement. The European Commission has defined circular procurement as the process by which public authorities purchase works, goods or services that seek to contribute to closed energy and material loops within supply chains, whilst minimising, and in the best case avoiding, negative environmental impacts and waste creation across their whole life-cycle (European Commission, 2017d).

So far, green or circular public procurement is primarily a voluntary instrument in EU Member States, and the EU has specifically promoted such procurement rules only for energy-related products and services for central administrations (Arditi and Wachholz, 2017). Adopting green procurement guidelines for a wider range of products and services (in particular high-volume products), making certain aspects of green procurement mandatory/setting minimum standards and integrating circularity into existing procurement guidelines could have large impact. For example, there is potential to better acknowledge input of secondary materials and level of reuse and recyclability of materials in public procurement. Procurement may thereby be an effective tool to spur take-back and refurbishment, in particular in the business-to-business sector (Dalhammar et al, 2014).

It is meanwhile important to acknowledge that some product supply chains are very complex, for instance textiles, and that implementing circularity requirements, for instance, will have different impacts on different stages of the chain.

##### **Herning Municipality, Denmark – expanding work wear lifespan**

In 2013, Herning Municipality developed specifications and contract performance clauses on maintenance, repair and recycling for purchasing contracts on work wear. The aim was to extend the lifetime of the uniforms of the technical operations department and improve the efficiency of their use. Through the establishment in 2015 of a service model for uniforms, including reuse and recycling contract provisions, the municipality managed to save €6,700 and over 1,000 tonnes of CO<sub>2</sub> emissions in four years (European Commission, 2016).

#### 4.5 Design of products with lower impact and longer lives

The linearity of most product value chains currently creates little incentive for producers of consumer goods to, for instance, maximise the longevity of their products. A recent assessment by the EEA noted that the effective lifetime of many consumer products is in fact shrinking, likely a result of the increasing complexity of products, shorter innovation cycles and an often conscious degradation of product qualities (such as so-called ‘planned obsolescence’) (EEA, 2018).

Some aspects of product design need to be regulated, including intentionally disruption such as planned obsolescence or harmful additives to give certain properties to plastics or textiles. Regulation, such as the EU Ecodesign Directive, is also an important and effective means by which to encourage

circular economy objectives and resource use reduction. The Directive has been relatively successful in pushing product energy efficiency, and there are significant opportunities and a strong momentum and mandate to also expand its scope to support innovation in terms of product longevity, recyclability, resource efficiency, etc.

Products which otherwise exhibit relatively superior environmental performance (adhering to certain standards) can today be promoted through EU and national labelling schemes. According to the EEB, consumer groups and green NGOs in Europe see ecodesign and the EU energy label as the perfect tools to make products last longer and minimise their environmental impact (European Environmental Bureau and ECOS, 2018). A recent survey conducted by Cardiff University found that 65% of people were frustrated by products that do not last, and 75% believe that governments should ensure that businesses sell recyclable and repairable products (Peake et al, 2018). A revision of labelling standards could give more credit to the reusability and longevity of a wider range of products. The EEB suggests that the EU should design a service repair index to be displayed on product labels in order to reward manufacturers who enable lifetime extension and repair (European Environmental Bureau and ECOS, 2018).

Extended Producer Responsibility (EPR) schemes are one policy tool which can incentivise producers to place on the market products more in line with circular economy objectives. By making producers financially responsible for the product end of life, EPR schemes are intended to promote the design of more durable, reusable and recyclable products (e.g. packaging), as well as encourage more efficient separation and collection schemes that could have a direct impact on consumption trends. However, the expected product design changes of EPR schemes have generally not been achieved (OECD, 2016) and ecodesign efforts have been largely concentrated on products requiring energy input, trying to gradually improve their energy efficiency (Dalhammar et al, 2014).

According to the OECD, linking EPR scheme producer fees more closely to the actual end-of life treatment costs of their products may help generate the intended (and needed) product design changes (OECD, 2016). Introducing eco-modulation of EPR fees (e.g. applying higher fees for non-sortable/non-recyclable packaging, or higher fees for packaging with additives that disrupt recycling) could meanwhile encourage producers toward ecodesign (Watkins et al, 2017a). There are additional product groups for which mandatory EPR schemes across the EU could be considered, in particular those with high potential for re-use and/or that currently have particularly linear value chains, such as textiles and furniture (Zero Waste Europe, 2017). Further, as pointed out by Dalhammar et al (2014), EU product-related policies have relatively high extraterritorial reach as jurisdictions outside the EU often adopt similar requirements in order to be able to export to the EU market.

Ecodesign and product circularity is explored further in the Think 2030 paper on circular economy, yet it is important to emphasise its opportunities from a consumption perspective, including how ecodesign might interact with the current barriers for advancing sustainable consumption. For instance, leasing or sharing of certain products – enabled by improved durability and reusability – may be more compatible with Europe’s increasing number of single-occupant households. Charity shops or platforms for second hand sales are one example. Further, owning a copy of every household appliance might not be feasible from a material or financial resource perspective. At the same time, a push to revise our notion of ownership may require careful consideration of how to ensure reliability of service, citizen safety/integrity and liability of service providers.

### **Circularity business model enabling more sustainable clothes consumption**

Various private sector initiatives are currently exploring ways of providing clothing as a service rather than products that you buy and own. One example is VIGGA™, a Danish clothes brand and a product service system that offers parents the ability to lease organic maternity and children's wear for a monthly fee. Once the child has grown out of one age batch of garments, the next is sent via post. Used garments are washed and mended if necessary and sent to another family in an attempt to close the loop on materials and provide an alternative to so-called fast fashion and linear business models. The initiative has won a number of design awards and is one illustration that rethinking the design of products and services has large potential beyond electrical appliances and energy efficiency.

Find out more about the initiative here: <https://vigga.us/>

## **4.6 Opportunities for policy synergies**

As achieving sustainable consumption is relevant for and involves a range of policy areas, there may be opportunities for both synergies and cost-efficiencies by adopting an holistic approach. One relevant area where synergies are possible is sustainable and healthy lifestyles. The EU INHERIT project<sup>18</sup> suggests that the areas of active mobility, plant-based diets instead of meat consumption, the use of green spaces in urban areas and energy efficient housing leading to good air quality can simultaneously reduce negative environmental impacts and lead to better health. Also, stronger synergies between the sustainability and equity discussions could be pursued. This is especially true for topics like energy usage and increasing energy efficiency in housing through retrofitting, which is strongly connected to household income, but also for sustainable and healthy food choices, where other options are often cheaper (Staatsen et al, 2017).

Synergies could, for instance, come from the development an EU-level sustainable and healthy food labelling scheme which, with a credible certification mechanism, might enable people to more easily distinguish between more sustainable and less sustainable products on the one hand, and healthy and unhealthy products on the other. EU rules on food labelling (Directive 2000/13/EC) currently aim to ensure that people receive correct information to enable informed choices about the food they buy. These requirements could be expanded also to include health aspects (BIO Intelligence Service and IEEP, 2012; Grossi et al, 2018).

Consumer goods offer another example of potential policy synergies, as packaging waste is linked to wider waste and natural resource policy, in particular the 2018 EU plastics strategy<sup>19</sup>. As 59% of the EU plastic waste generation is linked to packaging, people's behaviour plays a key role in circularity solutions to this problem, especially if higher recycling quotas of plastic are to be reached as outlined in the strategy (European Commission, 2018b). Other examples include climate policy because reduced consumption of energy or red meat, for instance, would have important knock-on effects in support of climate targets. Similarly, ambitious demand-side measures could help reduce the costs of other mitigation measures, for instance in relation to the energy system. Down-sizing demand could reduce the need to invest in carbon removal technologies (Mundaca, Ürge-Vorsatz and Wilson, 2018), the effectiveness and side-effects of which remain largely unknown.

## **4.7 Education, citizen engagement and cultural change**

In addition to opportunities for specific policy measures, evolving from the current growth-based economic system and consumption patterns into one that is more equitable and sustainable may

<sup>18</sup> [www.inherit.eu](http://www.inherit.eu)

<sup>19</sup> <http://ec.europa.eu/environment/circular-economy/pdf/plastics-strategy.pdf>

require aspects of cultural change (Jacob, Bär and Graaf, 2015). In the long term, policy agendas might therefore need to involve, for instance, encouraging alternative means by which to bring people meaning, rather than material consumption. Specific measures might range from infrastructure planning to integration policy to advertising policy. The latter is important also in the shorter term, as demand for certain products and volumes of consumption is to some extent created by commercial interests.

Digitalisation has introduced significant opportunities related to cultural change, for instance for re-thinking urbanisation and current (spatial and temporal) working patterns. If general work cultures and societal infrastructure would allow, more people might chose to work more extensively from home and live outside cities. On the one hand, a less dramatic divide between urban and rural might be conducive of more sustainable patterns of consumption and even better health. On the other, urban citizens' ecological footprints might be lower than rural citizens' footprints, illustrating the need to improve our understanding of these linkages between resource use and the opportunities created by digitalisation.

A related example is challenging the current retailing model by supporting consumer co-operative models. Such models are often the only options in remote parts of Europe and as they tend to be consumer owned they often act for the benefit of their members rather than for maximising profit<sup>20</sup>. Another example is the use of virtual reality to promote better understanding of nature and give people everywhere a better insight into environmental challenges<sup>21</sup>.

Making lesser-impact alternatives the norm and encouraging mainstream desire and demand for more sustainable solutions (such as co-operative consumption models) are important building blocks in achieving systems change. In this context, education and potentially transformative learning about how our actions impact the world is key. The EU has a supporting role for its Member States when it comes to school policy and education and could facilitate platforms for exchange of knowledge and best practice in this regard. An EU-level dialogue is furthermore important as the need for cultural change is not the same throughout the EU. However, it is important not to place too much responsibility on individuals for bringing about change. For instance, it is not certain that an improved understanding of the environmental impacts of our choices will lead to behavioural change. As we have emphasised earlier, achieving sustainable consumption requires concerted efforts, including by businesses and policy makers.

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<sup>20</sup> We are particularly grateful to Eurocoop for adding to our understanding of these issues.

<sup>21</sup> This has been explore, for instance, by researchers at Stanford University, US.

<https://e360.yale.edu/features/can-virtual-reality-emerge-as-a-tool-for-conservation>

## 5 Policy recommendations

The recommendations below focus on what could and should be done at EU level to progress towards more sustainable consumption in Europe, in light of the remaining challenges and potential opportunities identified in this paper. We emphasise that this list is by no means exhaustive of the efforts needed toward 2030, nor does it reflect policy measures that might be required at national or regional level to advance sustainable consumption.

In light of these recommendations, it is important to reflect on potential trade-offs that could be encountered when moving towards a stronger focus on the role of consumption in EU-level policy. In particular, such a shift should complement – not compromise – ambitious regulatory interventions where such are necessary<sup>22</sup>. Demand-side measures should meanwhile be a complement to supply-side measures – which has been the focus so far of EU-level intervention – as both efficiency in production and addressing consumption will be necessary to achieve Agenda 2030, the Paris Agreement, as well as EU-initiated goals and commitments related to sustainability. Another important aspect to bear in mind is the complexity of the challenges related to consumption. Consumption of some products has to drastically decline to meet certain goals (such as livestock products). This will require a particular set of approaches and actions (and sometimes different approaches for distinct issues). In other cases, such as our consumption of transport services, we need a revolution in how the service itself – mobility – is provided and thereby likely a different set of measures. The complexity of supply chains and the integrated role of consumption in society also require the attention to other potential trade-offs. One example is that reduced consumption and longer product lifetimes may effect flows of waste as a resource used by others – something that might be supported by other policies such as production of bioenergy from certain residues.

Our overarching recommendation is therefore:

**Using Agenda 2030 as a starting point, adopt an ambitious systemic EU approach to sustainable consumption, creating a regulatory context and strategic direction that is conducive to ambitious front-runner initiatives**

Consumption has a clear global dimension and is closely linked to the achievement of most of the SDGs. It therefore needs to be systematically addressed by public policy. The EU should maintain a strong role in driving global sustainable development and lead by example by acknowledging and addressing the role of demand in complement to the current focus on supply-side interventions. EU-level intervention might be best aimed at trying to encourage existing front-runners in the market or at national or regional level, creating the conditions for others to follow and preventing laggards from being left behind. A systematic and ambitious policy approach at EU level in support of sustainable consumption would provide direction, momentum and coherence both for other governance levels and for private and public innovators. Mainstreaming the role of consumption at EU level may also help avoid rebound effects and other unforeseen effects of revised and/or new policy and support a longer-term cultural shift in how we view the concept of sufficiency and the role of consumption in achieving Agenda 2030.

Importantly, given the urgency for action, existing legislation, incentives and initiatives, including those foreseen in EU roadmaps, can be the basis on which to develop a basket of measures to address sustainable consumption. New measures can be added, including pilot measures, promotion of good practice and incentives for positive business opportunities, but it is also important to improve implementation of existing measures, set more ambitious targets and rolling

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<sup>22</sup> We are particularly grateful to UFZ Helmholtz Centre for Environmental Research for adding to our understanding of these issues.

out successful measures to cover more sectors of the economy. A systematic approach might also involve facilitating platforms for discussion between relevant stakeholders to encourage sharing and learning, and regular monitoring of promising measures (for instance presented in a bi-annual progress report). Importantly, consumption-oriented policy could involve a merger of ecological and social agendas. Under the umbrella of an holistic approach to consumption, the EU might initiate work on the health and social benefits of more sustainable consumption.

The development of an 8<sup>th</sup> Environment Action Plan (EAP) could be one avenue by which to introduce this new holistic strategy for sustainable consumption.

As part of a more systemic and holistic approach to addressing consumption in the EU, specific measures are essential and will remain at the heart of EU action for the next few years. These might include:

- **Actively promoting a green fiscal reform, in a wider range of sectors, creating the conditions for Member States to gradually shift the tax burden from labour to the use of non-renewable energy and natural resources**

Promotion of an environmental tax reform would be an important component in an integrated approach to advancing sustainable consumption in Europe and would support the wider transition towards a more circular European economy. It may also support a fairer distribution of existing wealth and resources, in line with a much-needed revision of growth as the undisputed societal goal, and help internalise external costs, making more sustainable options and business models more competitive compared to less sustainable alternatives. Currently, the long-term trend in the EU is moving in the opposite direction of environmental tax reform and the share of environmental taxes in total tax revenues remains low.

The EU should set ambitious targets in support of environmental tax reform, provide guidance to Member States and identify and share best practice examples. The proposed shift to qualified majority voting for certain tax areas could provide opportunities to advance such reform, as could the Commission's proposal to introduce more flexibility for Member States to change VAT rates. The annual European Semester process should meanwhile focus more on environmental tax reform, including analysis of obstacles to such taxes at Member State level and possible ways forward<sup>23</sup>.

- **Establishing a centralised system for environmental product information to support industry and regional initiatives in the transition, steer investments and enable safe consumer choices**

Transparency is crucial to enable sustainable consumption. Establishing a robust and reliable framework for product information disclosure by which to understand the impacts of products and services (and thereby of different choices) may reaffirm citizens' confidence in labels and claims, help improve the design and effectiveness of national and regional policy and provide security and support for sustainable investments in line with the Commission's action plan on sustainable finance. A scaling up of sustainable finance and investments may in turn increase pressure on companies to perform better from a social and environmental perspective. Finally, transparency is an essential component to enable a more circular European economy, for instance to avoid adverse effects of chemicals and trace elements when promoting product recyclability.

The EU should help to ensure reliable and comparable environmental information, monitoring and metrics – including the full impacts of EU imports. The confusion currently created by the

<sup>23</sup> We are particularly grateful to Mats Engström for adding to our understanding of these issues.

wide range of more or less credible sustainability labels and claims on the EU market needs to be urgently addressed, as well as ensuring the integrity and high level of ambition of the EU Ecolabel criteria. Understanding of the external impacts of EU consumption should inform future trade agreements so as to avoid a pattern where material decoupling in Europe is made possible by exporting impacts elsewhere. Further, the existing requirements attached to EU rules on food labelling may be expanded to include sustainability and health aspects.

- **Providing funding to advance the sustainable consumption agenda, including for relevant research and front-runner initiatives**

The EU should help empower front-runners by providing access to funding, e.g. for the exploration of alternative innovative business models or the scaling up of regional successful campaigns and initiatives, such as product service systems or sharing platforms, or research to further improve our understanding of, for instance the links between public health and sustainable lifestyles. The EU should also initiate and support research into the consumption effects of new demographic and technological realities in Europe, including how political initiatives might anticipate and avoid negative impacts thereof, and to continue refining methods and indicators for assessing global impacts of EU consumption. The new Horizon Europe research and innovation programme is one potential avenue.

- **Exploring best practice and scalability of integrating behavioural insights into policies**

In collaboration with existing research teams or through support to new platforms for collaboration, the EU should continue to apply behavioural insights throughout the policy making process, provide guidance and support to Member States, acknowledge successful initiatives at national and regional level and explore best practice for the use of these insights in environmental policy. This may include, for instance, scaling up choice editing measures to make the healthier, more sustainable and safe choice the easier choice for citizens<sup>24</sup>. Linking to the previous point, the EU could also initiate or support efforts to better understand the habits and norms of different groups of people. It is meanwhile important to ensure that the application of behavioural insights in policy is balanced and fully transparent, and that it is not used to replace ambitious environmental legislation where such is necessary.

- **Expanding circular and green procurement guidelines to more sectors/product groups and gradually transforming guidelines into mandatory requirements**

Procurement criteria and requirements can be effective policy complements to the Ecodesign Directive, in particular to stimulate innovative business models for which legal standards might be a too coercive policy option. At the same time, in order to address issues such as conscious degradation of product qualities and lifetime, regulatory measures might be necessary. Green and circular procurement guidelines should be expanded, in particular for high-volume products, and requirements made mandatory or minimum standards set in order to maximise uptake and generate sufficient market signals. Importantly, procurement criteria should include more than energy efficiency, for instance, the level of reusability or other measures to reflect product longevity should be explored.

Given the size and importance of public procurement in the EU economy, procurement criteria could stimulate progress and innovation in the wider market. To ensure more comprehensive effects, however – and as part of the proposed holistic policy approach – a focus on procurement should be complemented with a revision of labelling standards in favour of product reusability and longevity, as well as development of extended producer responsibility schemes to additional product groups. The latter should focus particularly on products with

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<sup>24</sup> We are particularly grateful to Eurocoop for adding to our understanding of these issues.

high potential for re-use and/or that currently have particularly linear value chains, such as textiles and furniture. Finally, more advanced eco-modulation of producer fees might encourage producers towards ecodesign and a wider uptake of servicing business models.

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