

Draft for discussion at
the Think2030
conference

**THINK
2030**

Curbing the multi-planet economic model through a low-carbon circular economy

How can the European Green Deal
address overconsumption?



Institute ^{for}
European
Environmental
Policy

THINK 2030

Launched by IEEP and its partners in 2018, Think2030 is an evidence-based, non-partisan platform of leading policy experts from European think tanks, civil society, the private sector, and local authorities.

Think2030's key objective is to identify science-policy solutions for a more sustainable Europe.

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THE REPORT SHOULD BE CITED AS FOLLOWS

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Introduction

Considering planetary boundaries, the ways that we consume today are not sustainable. In the simplest terms we would need almost three earths to support the global economy if European consumption patterns were replicated throughout the planet.

Products and materials are consumed in huge volumes every year, at a high rate, often along a linear trajectory (take-make-dispose), and with significant wastage. While astonishing disparities remain between affluent overconsumption on the one hand, and high levels of material deprivation¹ on the other; on a per capita-basis, Europeans consume 14 tonnes of raw material each year². This results in an “ecological footprint”³ of 4.3 global hectares (gha) per person in the EU, to compare with the global biocapacity of 1.7 gha per person⁴.

Unsustainable consumption is Europe’s number one barrier to stopping the ongoing dramatic loss of biodiversity and the continued degradation of natural ecosystems⁵. It is an equally important barrier to achieving carbon neutrality by 2050 – an estimated 45% of Europe's total carbon emissions come from how we make and use products, and how we produce food⁶.

This multi-planet, take-make-use-dispose economy also comes at a high price for future generations and for other countries. It directly and indirectly drives pressures such as land-use change, emissions, and release of toxic chemicals to the environment. Notably, as the European economy is highly import-dependent, the lion share of these impacts occurs in other parts of the world⁷. According to the European environment

¹ Eurostat (2020). Living conditions in Europe - material deprivation and economic strain. Retrieved 16 September 2020; URL.

² Measured as annual global material footprint, or raw material consumption (RMC); from Eurostat (2019). Material flow accounts statistics - material footprints. Retrieved 16 September 2020; URL.

³ The biologically productive area required to provide space for food growing, fibre production, timber regeneration, absorption of carbon dioxide emissions from fossil fuel burning, and accommodating built infrastructure (Global Footprint Network).

⁴ European Environment Agency (2020). Ecological footprint of European countries. Retrieved 21 September 2020; URL.

⁵ Gerritsen, E. and Underwood, E. (2019). What the Green Deal means for Europe's biodiversity. Retrieved 16 September 2020; URL; and Allen, B. and Charveriat, C. (2018). A meaty challenge. Retrieved 16 September 2020; URL.

⁶ Ellen MacArthur Foundation (2019). Completing the Picture: How the Circular Economy Tackles Climate Change.

⁷ EEA (2020) SOER. Copenhagen; and IRP (2019). Global Resources Outlook 2019: Natural Resources for the Future We Want. Oberle, B., et al. A Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya.

state and outlook 2020, between 30 and 60% of the environmental pressures associated with European consumption occurs outside the Union, while reductions on certain environmental pressures can be seen within Europe. In other words, whereas our domestic material efficiency is improving, our material footprint is not and remains largely linked with economic growth. This signals a risk of material leakage in Europe's consumption.

Overall, if Europe is to reach its domestic and external targets and commitments related to the environment and to social justice, including the United Nations Agenda 2030 for Sustainable Development, it must pay much more attention to consumption. "Greening" of products and production processes – although very important – will not be enough. The EU's efforts are particularly important as its shift to a circular economy has inevitable implications at the global scale. In addition to the global movements of recyclable waste, a shift to circular systems results in changes to primary and secondary resource flows, including the demand for and trade in these resources.

Global energy consumption has grown 25 times from 1800 to the present day, the global use of materials (i.e. metals, fossil fuels, minerals and biomass) increased tenfold between 1900 and 2009 (Krausmann et al., 2009). Two main dynamics characterise these trends: newly industrialising countries are building new infrastructure, and high-income countries are outsourcing the more material and energy intensive stages of production. The global demand for land is projected to grow, particularly as 25 % to 100 % more food may be required globally by 2050, depending on socio-economic and technical assumptions (Hunter et al., 2017).⁸ Changes in the way we use land; the expansion and intensification of agriculture; and unsustainable trade, production and consumption which increase contact between wildlife, livestock, pathogens and people will lead to an increase in likelihood of pandemics such as covid-19.⁹

Coupled with population growth and increased wealth (i.e. over 3 billion people are expected to join the middle class by 2030), mega trends, such as growing digitalisation and clean energy transitions, foresee an increasing need for raw materials, including in developing economies, which are projected to account for more than half of all global consumption by 2030¹⁰. In 2014, there were already more phones (7.22 billions) than humans (7.19 billions)¹¹. If increased consumption is met with today's business models, even with the continuation of current patterns of relative resource decoupling, resource

⁸ <https://www.eea.europa.eu/publications/drivers-of-change>

⁹ <https://ipbes.net/pandemics>

¹⁰ McKinsey & Co (2019) Globalization in transition: the future of trade and value chains

¹¹ <https://www.independent.co.uk/life-style/gadgets-and-tech/news/there-are-officially-more-mobile-devices-people-world-9780518.html>

use would triple by 2050 compared to a 2000 baseline¹². Research shows that material footprint (i.e. the quantity of materials to be mobilised in order to meet the consumption of a country) has increased globally¹³. The EU has a considerable contribution to this trend, with the estimated per capital material footprint from high-income countries – such as the EU Member States – being considerably higher than any of the other income groups.

Against this backdrop, the 2018 Think2030 conference identified overconsumption as the single most important problem facing the European Union. The scale of the challenge is immense: each European will have to reduce by 80% the amount of natural resource they currently use for nutrition, housing, mobility and leisure by 2050. This means a reduction of material footprint per capita by 1 tonne annually during the next 32 years. This can be achieved through a combination of efficiency and sufficiency measures. Greater efficiency is required to reduce the material footprint of everyday consumption, while sufficiency (i.e. reducing overall consumption) will also be needed for those items whose footprint cannot be brought to an acceptable level by efficiency only. The sole increase of circularity of materials within ever expanding economic systems may not be compatible with the goal of reducing environmental pressures and protecting natural capital.

In light of this challenge, the 2018 Think2030 conference recommended a **comprehensive European policy for sustainable consumption, covering nutrition, mobility, housing and lifestyles, as a complement to the current circular economy package, and aiming at an 80% reduction in per capita material footprint by 2050.**

This paper attempts to analyse whether the green deal is fit for purpose in terms of tackling overconsumption and what else needs to be done to start bending the curve of unsustainable over-consumption.

¹² <https://files.wri.org/s3fs-public/elephant-in-the-boardroom.pdf>

¹³ Wiedmann, T. (2015) The material footprint of nations and International Resource Panel (2019) Natural resources for the future we want Factsheet and Summary for Policy-makers

State of play since 2018: What has changed?

Since the 2018 Think2030 conference, a lot has changed, yet much remains the same. There is a new Commission in place committed to implement a “Green Deal” for Europe and a European Parliament election has passed, seeing record-results for the Greens. We are in a global pandemic that has come to reveal the fragility of modern supply chains, but also illustrate our ability to act with resolution when absolutely necessary. The current strategic direction remains dominated by increased economic growth. The Commission presented the European Green Deal as the EU’s new “growth strategy”, talking about boosting economic growth decoupled from resource use. However, most businesses’ growth is still based on more people buying more things, and there is no compelling evidence to suggest that decoupling works at the scale necessary¹⁴.

The role of consumption has been partly acknowledged by the Green Deal, and other legislative initiatives.

A few examples include:

- The European Commission’s President, Ursula von der Leyen, emphasised in her Agenda for Europe after taking office that “We need to change the way we produce, consume and trade”¹⁵.
- As part of the implementation of the European Green Deal, the Commission published in March 2020 a Circular Economy Action Plan (2020). It acknowledges the need to keep the EU’s resource consumption within planetary boundaries, transform consumption patterns and reduce consumption footprints. For instance, the Action Plan suggested a widening of the EU Ecodesign Directive beyond energy related products, which could help close the policy gap in terms of ecodesign requirements of products that are not energy related. The Directive currently imposes some standards and requirements in terms of product longevity, although it only applies to energy-related products. Beyond the acknowledgement of potential job impacts, the Action Plan missed a clear commitment to trying to ensure a fair balance of access to resources. There are significant inequalities within Europe to take into consideration, for instance with regard to level of material deprivation. While large parts of Europe need

¹⁴ Parrique T., Barth J., Briens F., C. Kerschner, Kraus-Polk A., Kuokkanen A., Spangenberg J.H., (2019). Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability. European Environmental Bureau; Brussels; and EEA (2020). SOER. Copenhagen.

¹⁵ Von der Leyen, U. (2019) A Union that strives for more - My agenda for Europe. Page 7. URL: https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf

- to reduce their material consumption in absolute terms, some regions need to increase their consumption of certain products and services.¹⁶
- The Green Deal mentions making a “greater use of green budgeting tools to help redirect public investment, consumption and taxation to green priorities and away from harmful subsidies”.
 - The green deal also mentions the role of carbon pricing to encourage behaviour changes and repeats the Commission’s earlier proposal to enable EU Member States set more flexible VAT rates. However, the Green Deal’s main references to consumption are still for the EU to “ensure that consumers can make informed choices about the products and food they buy”, i.e. relying on consumer awareness and assuming that better information will lead to more sustainable consumption.
 - The Farm to Fork Strategy (2020) acknowledges that “Current food consumption patterns are unsustainable from both health and environmental points of view” and recognises the need for food systems to reduce their environmental and climate footprint. However, specific focus is on production, in contrast to consumption¹⁷.
 - The Commission’s evaluation of the 7th Environment Action Programme (EAP) in 2019 noted that “the sustainable and circular management of resources in developed countries may need a reduction in consumption”¹⁸. However, most of the indicators tracking consumption in Europe are not going in the right direction.
 - The Council of the EU has invited the Commission to present an “ambitious and focused” 8th EAP proposal in early 2020 and has highlighted the need to accelerate the transition toward sustainable consumption patterns¹⁹. The Commission’s proposal of the 8th Environment Action Programme (EAP) included as a thematic priority objective, “reducing environmental pressures from production and consumption, in particular in the areas of energy, industrial development, buildings and infrastructure, mobility and the food system” as well as provide an opportunity to the Commission’s Joint Research Centre and the European

¹⁶ Pantzar, M. and Suljada, T. (2020). Delivering a circular economy within the planet’s boundaries: An analysis of the new EU Circular Economy Action Plan. Institute for European Environmental Policy (IEEP) and Stockholm Environment Institute (SEI): Brussels and Stockholm.

¹⁷ Meredith, S., Allen, B., and Schefer, G. (2020). Farm to fork strategy: The first step towards an EU sustainable food and farming policy framework? Retrieved 16 September 2020; URL.

¹⁸ European Commission (2019) Commission Staff Working Document - Evaluation of the 7th Environment Action Programme to 2020. SWD(2019) 181 final. Part 2/2, page 245. URL: https://eurlex.europa.eu/resource.html?uri=cellar:175e1aeb-76fc-11e9-9f05-01aa75ed71a1.0001.02/DOC_2&format=PDF

¹⁹ Council of the European Union (2019) The 8th Environment Action Programme - Turning the Trends Together. Council conclusions. Page 8. URL: <https://www.consilium.europa.eu/media/40927/st12795-2019.pdf>.

Environment Agency to explore planetary boundaries and the Union consumption footprint.²⁰

- The EESC adopted an Own-initiative opinion, "Towards an EU strategy on sustainable consumption" that notably highlights the need for a comprehensive approach on sustainable consumption to provide a framework for Member States and for the private sector to address both household consumption and public sector consumption. The opinion effectively links
- The Climate Law mentions the question of consumption solely considering the importance of energy production and consumption on greenhouse gas emissions.
- The chemicals strategy points to the need for stronger policy and financial support to address the slow progress of harmful chemical substitution. It aims to develop and promote sustainable-by-design criteria for chemicals, and increase information on chemical content to help boost the uptake of a market for secondary raw materials.

According to the EEA's 2020 Outlook, Europe has made some progress in relation to resource efficiency and the circular economy. Over the period 2003 to 2018, the EU economy grew (in terms of GDP) by 23.4%, while gross available energy (GAE) fell by 6.0% and domestic material consumption (DMC) fell by 4.8%. The observed trends, however, need to be interpreted with caution, as they might not be entirely due to the success of environmental policies. It is likely that the drop in DMC from 2008 onwards was strongly influenced by the economic crisis. Since the beginning of the economic recovery in 2013, DMC has increased by 6.8%. However, despite the recent increase, in 2018 total DMC was still 15.1% lower than in 2007, the year before the economic crisis began. This development was mostly caused by ups and downs in construction activities, which account for the lion's share of total material use but contribute, in relative terms, much less to the EU economy. In 2018, 220.7 million tonnes of toxic chemicals were consumed in the EU. Since 2004, the total consumption of toxic chemicals has declined by 8.8%. However, this trend has reversed over the past five years and consumption increased by 1.9% between 2013 and 2018. While average CO₂ emissions from new cars are not falling fast enough to meet the target, increases in energy demand may further prevent the EU from meeting its energy efficiency targets^{21,22}. The slow pace of progress recorded by the EEA implies a need to go beyond incremental efficiency improvements, and address the challenges posed by the many interlinkages between society's use of resources, economic activities, behaviours and ways of living.

²⁰ <https://ec.europa.eu/environment/pdf/8EAP/2020/10/8EAP-draft.pdf>

²¹ <https://www.eea.europa.eu/publications/soer-2020-executive-summary>

²² <https://ec.europa.eu/eurostat/documents/3217494/11011074/KS-02-20-202-EN-N.pdf/334a8cfe-636a-bb8a-294a-73a052882f7f>

While the references above are highly welcome, they fall far short of the change in approach which is required. In fact, EU's approach to sustainable consumption remains largely the same. The safety and sustainability of production process and of products and services was an early focus of EU rules and regulations, as well as dealing with materials that become waste, and there is now a relatively well-established supply-oriented policy framework in place. As we identified in our 2018 paper, the EU has focused less on policies targeting demand, largely because such interventions are generally Member State matters (notably taxes). Here below is a review of key consumption indicators established through the Green Deal and monitored through Eurostat (to be added in the next version of the paper)

EU-level policies that target demand have focused primarily on citizens' roles as consumers and on using information-based policy tools, such as product eco-labelling, to try to influence consumer behaviour. This has placed the burden of responsibility on people to make more sustainable choices, but it has not necessarily provided them with accessible or affordable alternatives from which to choose²³. It has furthermore problematically placed the responsibility for the transformational shift required on citizens' role as consumers, while market and societal levers remain set on encouraging increased levels of material consumption.

Unfortunately, the approach to date has had limited effect on unsustainable consumption. In fact, there is little evidence to suggest that improved information about products' environmental performance, such as eco-labels, result in real-life changes in purchasing behaviour²⁴, let alone at the scale required. Instead, the primary drivers of consumer choices be them household, private sector or public) are price and convenience²⁵ (as well as producer-driven incentives). Meanwhile, various rebound effects, subconscious routines, and habits influence and drive citizens' purchasing decisions. Addressing over-consumption in Europe and beyond comes down to creating the societal context and levers to reduce consumption where needed and possible, and consuming better. This takes form of complementing efficiency-oriented policies with sufficiency policies.²⁶

²³ EESC (2020). Towards an EU strategy on sustainable consumption (own-initiative opinion), Adopted on 18/09/2020, Reference: NAT/789-EESC-2020.

²⁴ I.e. concrete behavioural changes, as opposed to people's stated willingness to change behaviour (research on the latter has been summarised by LE Europe, VVA Europe, Ipsos, ConPolicy and Trinomics (2018). Behavioural study on consumers' engagement in the circular economy. Brussels.

²⁵ LE Europe, VVA Europe, Ipsos, ConPolicy and Trinomics (2018). Behavioural study on consumers' engagement in the circular economy. Brussels.

²⁶ Parrique T., Barth J., Briens F., C. Kerschner, Kraus-Polk A., Kuokkanen A., Spangenberg J.H., (2019). Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability. European Environmental Bureau; Brussels; and EEA (2020). SOER. Copenhagen.

The European Environmental Agency's 2020 State of the Environment Report mentions that, "Europe needs to rethink not just technologies and production processes but also consumption patterns and ways of living". It emphasizes that "Europe will not achieve its sustainability vision of 'living well, within the limits of our planet' simply by promoting economic growth and seeking to manage harmful side-effects with environmental and social policy tools."

The Covid-19 crisis and its associated "lockdown" responses has an impact on our consumption. It has resulted in people abstaining from previous practices, or altering and substituting them; they have also learned and adapted to new practices and ways to coordinate and organize everyday lives within the home. As a second wave of infections hit Europe, different potential recovery scenarios impacting how and what we consume are and will be dependent on the individual and collective choices of citizens, businesses and organisations across sectors and spheres of influence.²⁷ The EU COVID recovery offers a unique opportunity to re-think the economy and steer continued development by human and ecological well-being, rather than by economic growth and material consumption.

²⁷ Boons, F.A. et al. (2020). *Covid-19, changing social practices and the transition to sustainable production and consumption*. Version 1.0; (May 2020). Manchester: Sustainable Consumption Institute.

Key challenges and opportunities for the European Green deal

There is no one-size-fits-all solution to support a pathway towards low-impact consumption patterns²⁸ and interventions may need to be tailored to national or even local contexts. One of the most important roles of the EU, therefore, is to support Member States in this transition by creating an overall framework and strategic direction for achieving a European geared towards a more balanced and fair distribution of resources, within the boundaries of the planet.

Moving beyond consumer awareness: price signals, choice editing and regulation of marketing

Product labelling can be important, but policy makers cannot continue to expect or place the burden of responsibility on citizens to change the market towards sustainability. The 2021 legislative proposal for a sustainable product policy, promised by the Commission in the 2020 Circular Economy Action Plan, offers an opportunity to better acknowledge the role of producers in addressing unsustainable consumption, including introducing norms and bans to counteract unsustainable consumption. The aim should be to make the healthy, safe, and more sustainable choices the most affordable and accessible to citizens. It is also necessary to tackle the proliferation of the misleading green claims on the market.

Current price signals are not right. Taxes are traditionally used to address demand and consumption, but fiscal policy is controlled primarily at Member State level or state level and not an EU competence. Undertaking green fiscal reforms 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. Revenue from environmental taxes amounted to just 2.4% of EU-28 GDP in 2017, with significant differences between Member States. Those that are in place apply primarily to energy and transport. Prices are also not right to support markets for secondary materials. As long as primary raw materials are cheaper than reused goods or secondary raw materials, policy interventions to deliver a more circular economy will have little impact.

²⁸ IRP (2019). Global Resources Outlook 2019: Natural Resources for the Future We Want. Oberle, B., et al. A Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya.

There are some things the EU can do on price levels. The on-going revision of the VAT Regulation is an opportunity to provide clear criteria on how Member States can introduce reduced VAT rates for sustainably produced products and for services that can reduce the negative impacts of consumption, such as repair or sharing services.

By integrating indicators such as domestic material consumption per capita in environmental sustainability scoreboard, the European Semester can also become a key instrument for operationalising the SDGs and implementing the European Green Deal.²⁹

Urgently needed reforms should also cover the removal of environmentally harmful subsidies – such as those on fossil fuels, which are by definition linear and Member States have already committed to removing.

According to IEEP's calculations³⁰, an additional €381 billion of revenues in "pollution dividends" could be generated to support affected workers, households, countries and regions. Pollution dividends would also produce additional benefits for the health and well-being of European citizens in the form of reduced pollution and environmental degradation.

Ensuring that the economic cost of pandemics is factored into consumption, production, and government policies and budgets. Enabling changes to reduce the types of consumption, globalized agricultural expansion and trade that have led to pandemics – this could include taxes or levies on meat consumption, livestock production and other forms of high pandemic-risk activities.³¹

Eco-efficiency versus eco-sufficiency: defining the right balance

Making better use of the materials that already exist in the economy thus can take EU industry halfway towards net-zero emissions. In the European Commission's 'Roadmap 2050', one-quarter of the CO₂ emissions remaining mid-century were from industry, especially from heavy industry producing basic materials. Discussions of industry emissions have focussed on the supply side: reducing the emissions from the production of steel, cement, chemicals, etc. Far less attention has been given to the demand side: how a more circular economy could reduce emissions through better use and reuse of the materials that already exist in the economy. A more circular economy can make

²⁹<https://ieep.eu/publications/green-deal-for-all-sustainability-and-equity-between-people-regions-countries-and-generations>

³⁰ <https://ieep.eu/news/the-eu-can-generate-additional-381-billion-to-support-covid-19-recovery-show-ieep-calculations>

³¹ <https://ipbes.net/pandemics>

deep cuts to emissions from heavy industry: in an ambitious scenario, as much as 296 million tonnes CO₂ per year in the EU by 2050, out of 530 in total – and some 3.6 billion tonnes per year globally.³²

Material efficiency is vulnerable to rebound effects because monetary savings can lead to an increase in consumption—savings from use of peer-to-peer lodging (e.g., AirBnb) can lead to more travel and GHG emissions. Policy instruments that directly or indirectly raise the cost of production or consumption, e.g., taxes or cap-and-trade systems, can reduce rebound effects. Resource efficiency, resources management, material efficiency, circular economy or consumption side instruments notably appear as explicit mitigation measures in the (I)NDCs of Japan, India, China, and Turkey.³³ Moving away from efficiency and decoupling and embracing sufficiency as a guiding principle could be a fundamental ingredient in reducing environmental pressures. This paradigm shift mentioned in the EESC's opinion, could be best captured by policies promoting shared goods, reusing and repairing products, as well as a shift towards healthier and more sustainable diets and sober lifestyles away from consumerism³⁴.

Negative spill-over effects of Europe's economic and industrial policies on third countries' decarbonisation pathways: There is a need to measure the net carbon and materials embedded into exports and imports, to assess if a reduction in domestic material consumption is not dwarfed by an increase in net imports of unsustainable products.

Spurring the creation of new business models

The World Resource Institute's Elephant in Boardroom publication (2017), argued that companies that wish to thrive in the future will need to embrace fundamentally different ways of meeting consumer needs as current business models cannot meet the massive demand increase emerging in the 21st century without devastating environmental consequences. Business can undertake this paradigm shift by looking openly and honestly at their dependency on natural resources and the associated limits on business growth; using their influence to change the conversation with key stakeholders; and, transform the business to one that will thrive in a resource-constrained environment.³⁵

³² <https://materialeconomics.com/publications/the-circular-economy-a-powerful-force-for-climate-mitigation-1>

³³ IRP (2020). Resource Efficiency and Climate Change: Material Efficiency Strategies for a Low-Carbon Future. Hertwich, E., Lifset, R., Pauliuk, S., Heeren, N. A report of the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya.

³⁴ EESC (2020). Towards an EU strategy on sustainable consumption (own-initiative opinion), Adopted on 18/09/2020, Reference: NAT/789-EESC-2020.

³⁵ <https://files.wri.org/s3fs-public/elephant-in-the-boardroom.pdf>

Most businesses' growth is still predicated on more people buying more goods. Without a change to current business models in which growth is predicated on selling more goods to more people, environmental stresses will pose increasing business risks and costs. While climate change has gradually been integrated in business strategies, as exemplified by over 1000 companies taking science-based climate action³⁶, reducing consumption has become the new elephant in the room as it challenges traditional business models.³⁷

Alternative business models cannot easily compete with linear ones. In general, alternative business models based on circularity, servicing, etc. are still very much the exception in Europe and are often struggling to compete with linear solutions. The 2021 legislative proposal for a sustainable product policy should aim to achieve a more level playing field for alternative business models with lower environmental and social impacts, to create an economy where product and material longevity and service delivered is premised instead of the number of items sold. There is a need to challenge the notion of private ownership as being the norm. Further, in order to enable reuse and a repair economy, there is a need for regulation to prevent premature obsolescence³⁸. It will also be important that the Commission forcefully follows through on the commitment made in the Circular Economy Action Plan to introduce mandatory Green Public Procurement (GPP) criteria and targets in sectoral legislation and phase in mandatory reporting on GPP. With public sector spending making up a large share of the EU economy, procurement rules can be very effective in supporting innovative, less harmful business models.

Equity

Addressing unsustainable consumption through policy interventions is highly complex. For instance, the overall approach by policy makers need to factor in differences between rural and urban conditions as well as socio-demographic factors. In fact, there are three key dimensions to keep in mind in the European Context: intracountry equity (affecting every EU citizen), intercountry equity (aiming at a greater convergence in living standards amongst countries and regions) and intergenerational equity (equitable burden and benefit-sharing between age groups and between generations).³⁹

³⁶ <https://sciencebasedtargets.org/companies-taking-action/>

³⁷ <https://files.wri.org/s3fs-public/elephant-in-the-boardroom.pdf>

³⁸ EESC (2014). Towards more sustainable consumption: industrial product lifetimes and restoring trust through consumer information, Adopted on 13 October 2013, Reference: CCMI/112-EESC-2013-1904.

³⁹ <https://ieep.eu/uploads/articles/attachments/3b534d44-4434-4ec7-af0b-7f6eb6c37882/Green%20Deal%20for%20All%20-%20FINAL%20PP.pdf?v=63756080686>

Increasing the sustainability of consumption should not come at the expense of other societal objectives such as social justice, health and quality of life. Sometimes there will be a win-win: a greener approach to travel for work might for instance improve work life balance and reduce exposure to air pollution. Reducing meat consumption is likely to improve the health status of those individuals whose consumption goes beyond what is recommended as part of a healthy diet. Sometimes, there might be trade-offs, which needs to be addressed through carefully crafted policies: for instance, taking into account challenges linked with the availability, suitability and affordability of more sustainable products will be essential.

According to IEEP, each European will have to reduce by 80% the amount of natural resource they currently use for nutrition, housing, mobility and leisure by 2050. This means a reduction of material footprint per capita by 1 tonne annually during the next 32 years⁴⁰. A study assessing the impacts of production and consumption of the European Union in 2010 by means of life cycle assessment (LCA)-based indicators and compared with the PBs led to fairly similar conclusions. For example, food consumption represents 35% of the total carbon footprint of an average EU citizen, being equal to approximately 3.4 tonnes CO₂eq per year. However, to meet the PB on climate change, a limit of around 1 ton of CO₂eq per citizen per year (985 kg) has been set. Distributing equally the effort of impact reduction among sectors of consumption would mean a target of CO₂ eq emission per citizen for food equal to 350 kg, meaning a 90% reduction compared to the current situation, basically a factor 10.⁴¹

While large parts of Europe need to reduce their material consumption in absolute terms, some regions need to increase their consumption of certain products and services. For instance, the level of material deprivation (the inability to afford a particular standard of living that is generally considered acceptable) varies from 3% of the Swedish population to 47% of the Bulgarian population⁴². The ongoing revisions of the reporting under the EU semester process could be one avenue to take this into account. Country reports are now to include territorial just transition plans, including a roadmap on how and where the EU just transition fund could provide support. Further elements will be added to the reporting in coming semester cycles⁴³. Such elements could include further analysis of the transition challenges in relation also to access to resources

⁴⁰ The unit used is the material footprint per capita, taking the current footprint of Europeans of 40 tonnes per capita per year as the baseline (upper boundary level, based on literature from Groezinger 2009; SPREAD consortium 2012) and the objective of 8 tonnes per capita by 2050 (based on literature from Lettenmeier et al, 2012; Bringezu, 2009; Kotakorpi et al, 2008).

⁴¹ <https://www.sciencedirect.com/science/article/pii/S0301479720306186>

⁴² Social Situation Monitor (2018) Research findings – Social Situation Monitor – Material deprivation and risk of poverty. URL: <http://ec.europa.eu/social/main.jsp?catId=1050&intPagelD=1989&langId=en>

⁴³ According to Paolo Gentiloni, Commissioner for Economy in ENDS: <https://www.endseurope.com/article/1675270/eu-governments-told-green-economies>.

or material inequalities. Changing the nature of demand away from unsustainable goods and services and intentionally slowing growth, without compensating for the loss of income, could undermine the growth agenda (SDG 8) and impact efforts to reduce inequality (SDG 10). However, all the interventions in this category would have a potent impact on advancing the environmental SDGs (6, 7, 12, 13, 14, and 15).⁴⁴

Replacing the fossil-fuel economy

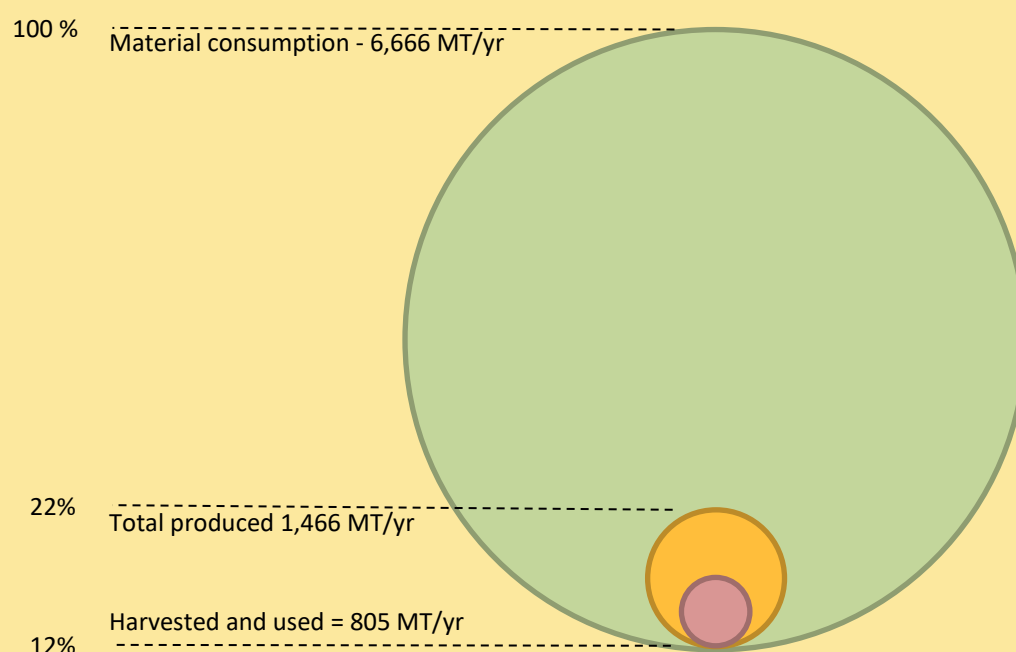
Another key challenge pertains to the composition of consumption. As the world is moving away from fossil fuels, new materials are being used to fuel global consumption. Barring a more sustainable consumption of materials, there is a risk that this shift will lead to unsustainability with catastrophic consequences on other planetary boundaries. The delivery of a wider circular economy (i.e. where overall consumption is reduced and based on principles of reuse and recycling) is a precondition of a successful and sustainable evolution of the bioeconomy.

⁴⁴ <https://www.mdpi.com/2071-1050/12/13/5404/htm>

Box 1. Consumption at the centre of a circular bioeconomy

Replacing Europe's entire bioeconomy 1:1 would require generating roughly 5x (or 500%) more biomass – which is impossible. Additionally, this assumes that all of it would be harvested each year – which is also not possible. For the bioeconomy to actually work, it is vital to reduce our consumption and ensure that it is circular. It is relevant to mention that the expansion of biofuels and the increased use of biomass as an alternative feedstock to fossil-based chemicals is likely to increase competition for land and rise in food prices.

Consumption vs Production in the Europe's Bioeconomy



Sources: Eurostat (env_ac_mfa) and (demo_gind); JRC (2018) Biomass production, supply, uses and flows in the European Union. First results from an integrated assessment. doi:10.2760/539520

Policy recommendations

Addressing over-consumption will be complex. Importantly, to achieve the scale of change needed in the limited time available, moving beyond consumer awareness and exploring regulatory intervention will be critical.

1- A comprehensive European policy for sustainable consumption, covering nutrition, mobility, housing and lifestyles, as a complement to the current circular economy package, and aiming at an 80% reduction in per capita material footprint by 2050.

The development of such policy could be kickstarted through a communication on sustainable consumption, to be developed as part of Europe's strategy for promoting a European Way of Life, as part of Europe's new consumer agenda, which calls for empowering consumers during the green transition. Such a comprehensive policy has already gained traction as exemplified by the EESC's opinion on sustainable consumption, as well as the EEA's call to extend the coverage of long-term policy frameworks to other systems and issues, such as food, chemicals and land use.

2. Mainstreaming sustainable consumption challenges across relevant communications or legislations. For the 2021 work programme of the European Commission, this includes:

- **Resilience and Recovery plans**, which should promote a green recovery, which primarily focuses on investments rather than consumption as a main lever.
- **The Sustainable products policy initiative**, including a revision of the **Ecodesign Directive**. Key issues within this file would be to find a way to operationalise the vision according to which all products that are available on the European market by 2030 should be sustainable by speeding up and expanding the product scope of eco-design processes; exploring product bans; using economic instruments to change price signals (differential VAT rates, public procurement).
- **Circular electronics** including improving the collection, reuse and repair of mobile phones, laptops and other devices as well as **new design requirements and consumer rights for electronics**.
- **The "Fit for 55 Package"** which will cover everything from renewables to energy efficiency first, buildings, as well as land use, energy taxation, effort sharing and emissions trading and a wide range of other pieces of legislation.

- **Measures on smart and sustainable transport**, including a revision of the Regulation on the trans-European transport network and of the Directive on intelligent transport systems.
- **Zero pollution action plan for water, air and soil** and within it, the consumption of potentially harmful chemical products
- Measures to reduce the **risk of products associated with deforestation** on the EU market.
- Follow up to the **EU biodiversity strategy for 2030** and **farm to fork strategy**, notably to **boost organic production** and to reduce the **risk of products associated with deforestation** on the EU market

3. Address key drivers of overconsumption

- **Awareness raising:** Do a better job at raising consumers awareness regarding **the impacts of overconsumption on pollution, health and well-being** as part of communication campaigns on the green deal directed towards consumers and citizens. These campaigns should tackle both the **volume of consumption, its composition** (promoting low-carbon nutrition, mobility, housing and lifestyles) but also sustainability and equity challenges linked with **luxury consumption**.
- **Marketing and advertising:** The regulation of advertising may create less consumption overall, as well as promote more sustainable consumption of goods and services. Galbraith [107] famously coined the term “producer-created demand” whereby through advertising, supply and demand are not in fact independent entities. Advertising needs to be regulated.⁴⁵ Examples of such regulations already exist such as the tobacco convention but also new frameworks regarding marketing towards children. An occasion to start this debate might be created by the evaluation of the ‘**New Legislative Framework for Products**’ on a common framework for the marketing of products and the accreditation and CE marking provisions (REFIT). Another approach would be to challenge the marketing and advertising industry to make clear pledges as part of the climate pact.
- **Digitalisation**, taking the development of 2030 digital targets as an opportunity to address drivers of overconsumption and explore what eco-efficiency but also eco-sufficiency means for the digital economy.

⁴⁵ <https://www.mdpi.com/2071-1050/12/13/5404/htm>

4. **Provide incentives and support – and address remaining barriers – to genuinely circular and “disruptive” business models** which are aligned with both ecoefficiency and ecosufficiency through Horizon Europe, Better Regulation (as it applies to ecoinnovation) and public procurement.
5. **Promote a more circular bioeconomy**, by including bioeconomy as a key sector within the Circular Economy Action plan and by ensuring that the bioeconomy action plan is consistent with “Europe’s materials budget”.
6. **Spill over effects:** Develop clear EU-level targets to reduce the Union’s ecological footprint with respect to use of material in absolute terms.

The European Commission missed the opportunity to do so in the CEAP, so policy-makers need to urgently explore such targets in the development of the sustainable product policy legislative initiative. At the sector-level, the EU’s global footprint can be calculated using existing reporting by Member States (through the European System of National and Regional Accounts), paired with established accounting tools that track material transactions between countries across global supply chains (environmentally extended multi-regional input-output models) .

Eurostat has initiated work on this through its project, Full International and Global Accounts for Research in Input-Output Analysis (FIGARO). In Sweden, SEI has helped develop such a method which has led to the global emissions footprint (consumption-based emissions) included as official statistics, meaning that Statistics Sweden now reporting annually. Using the same method, this would also be possible for Eurostat using existing statistics without any additional policy frameworks. Keeping track of consumption footprints globally, which requires good supply chain data and accounting, is increasingly recognised as critical to an inclusive transition to sustainability, including in the UN Sustainable Development Goals where material footprint is included as an indicator.