

POLICY OPTIONS FOR A CIRCULAR ECONOMY

AN EEB REPORT AND RECOMMENDATIONS
FOR THE ITALIAN MINISTRY FOR THE
ENVIRONMENT, LAND & SEA



EUROPE'S LARGEST NETWORK
OF ENVIRONMENTAL CITIZENS
ORGANISATIONS



Authors: Stephane Arditi and Carsten Wachholz
European Environmental Bureau (EEB)

Boulevard de Waterloo 34 | B-1000 Brussels | Belgium
Tel.: +32 (0)2 289 1090 | E-mail: eeb@eeb.org

Website:
www.eeb.org

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MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE



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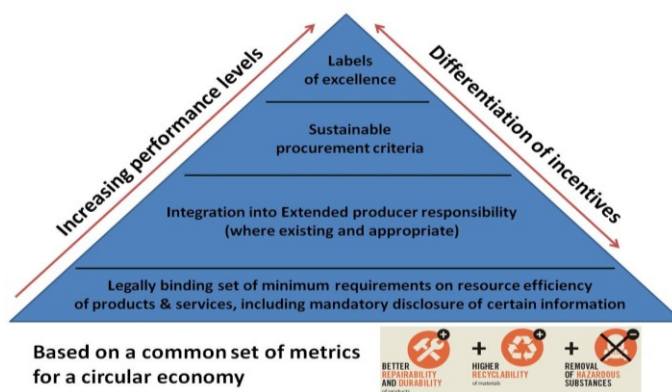
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Executive summary

This report presents product policy ideas and suggests recommendations on how to implement them to increase the 'circularity' of products and materials in our economy. The focus is deliberately restricted to product policy, though this is only one dimension among others for transiting to a circular economy. It is obvious that addressing only the supply side is not enough. Complementary approaches targeting the demand side and innovative business models are also necessary. Nevertheless, the EEB strongly believes that product policy can make a major contribution.

An integrated system of environmental performance classes

A first and pivotal idea, according to the EEB, is to design and adopt a more integrated approach for defining and implementing our product policy at European level. It would consist in aligning the methodologies and measurement standards used for setting the requirements and verification procedures of the environmental performances of products and services placed on the European market. The graph distinguishes different levels of environmental performances linked to different instruments and tools as they exist at European level, but all based on a common set of metrics.



Promoting longer product lifetimes through consumer legislation

Another option is to use the Consumer Sales Directive (1999/44/CE) to allow longer legal warranty periods, according to the expected lifetime of products with full burden of proof on the manufacturer in case of failures during that period. We also suggest considering a more systematic display of free warranty periods to differentiate companies offering free commercial warranty beyond the legally required one and to create a competition on the durability dimension.

Avoiding hazardous substances in a circular economy

We call on policymakers to ensure a legal framework that protects human health and the environment from materials and products recovered from waste. Notably, this would require appropriate sorting and decontamination of waste before it can be recovered. Better information flow is also needed along the supply chain, such as for second hand products, when a manufacturer takes back a product for refurbishing or when a product is finally discarded and needs to be treated by a waste operator.

Harmonising product information

An EU harmonised product information system would 'centralise' and 'optimise' the reporting and use of legally required information. The initial focus should be on existing legal obligations, building on mandatory information that manufacturers must provide, systematically or on request. Product tags, such as a label or QR code linking to more detailed online information, could also be considered to make the information easily accessible and usable in the supply chain, for example by linking them to an EU-wide database, something currently foreseen in the revision of the EU Energy Labelling Directive.

In addition to these overall framework conditions, this report also suggests improvement points for individual product policy instruments, namely:

- The Ecodesign Directive
- Extended producer responsibility
- Green public procurement
- The taxation system

The following table recapitulates the short-term recommendations and improvements to be implemented over time:

Short-term recommendations	Longer term improvements
<ul style="list-style-type: none"> • Ensure that mobile phones are added to the Ecodesign Working Plan as an iconic example to demonstrate how the policy can deliver on resource use aspects; • Set a collaboration between EU member states and progressive business to kick-start the definition of horizontal Ecodesign requirements for the market uptake of recycled plastics under the EU Ecodesign Directive; • Establish mandatory information requirements for producers to facilitate and promote longer lifetimes and maintenance, repair and reuse, remanufacturing and recycling for all implementing measures under the Ecodesign Directive, but also at national level if the EU level fails to deliver; • Fulfil the request from the Environmental Council (conclusions 20 June 2016¹) to conduct an analysis of potential design requirements for non-energy related products which are currently outside the scope of the Ecodesign Directive but could benefit from the same type of regulatory approach; • Support ambitious minimum requirements for Extended Producer Responsibility (EPR) schemes to be established in both the EU Waste Framework Directive and the Packaging and Packaging Waste Directive, including EU-wide criteria for the modulation of EPR fees; • Implement large scale pilots on circular procurement and set up incentive and support structures for public procurers, e.g. based on the experience from the Circular Procurement Academy in the Netherlands; • Pressure the European Council to discuss the Commission's proposal for legal guarantees and other aspects of contracts for online and other distance sales in the context of the EU Circular Economy Package; • Push for the introduction of a lifespan approach to differentiate the legal guarantee period for different products with the burden of proof to be put on the manufacturer. Reject the current proposal from the European Commission to fix two years as a general maximum period for legal guarantees on all tangible goods; • Support the extension of an EU database for all products covered by Ecodesign and energy label, as it exists in other economies, building on the database now agreed under energy label reform in 2016/2017, and allowing for the integration of supplementary relevant information on durability, reparability, recyclability and other environmental performances. 	<ul style="list-style-type: none"> • Follow up on the implementation of the Ecodesign Working Plan 2016-2019 and scrutinise each upcoming preparatory study for new or revised product regulations to see if aspects of reparability, durability and recyclability have been duly investigated; • Evaluate the performance of the existing EPR schemes at national level and how their governance and financial structure could be improved, including the possible integration of deposit schemes, voucher systems or reuse programmes; • Establish a mandatory 'best value for money' principle instead of the lowest price only in all public procurement at national level and make use of the new circular economy related EU criteria for GPP and Ecolabel, such as for computers or furniture, when updating the national criteria; • Define clear criteria and metrics to evaluate circularity and sustainability of business models, building on public and corporate procurement experiences striving to promote circular economy; • Align and finally integrate the approaches of the different EU studies investigating the same product groups to develop consistent classes of environmental performances which could then be used for setting, for example, Ecodesign requirements, Green Public Procurement and Ecolabel criteria; • Reduce taxation for contractually repairable and upgradable products and for reuse and repair activities; • Review all forms of financial or taxation schemes to discourage products and services that hinder reuse, repair, remanufacturing and recycling; • Integrate a lifespan approach towards the system of legal and commercial guarantees in national consumer legislation, encouraging better repair options and availability of spare parts instead of replacement of the product or financial compensation in case of product failures; • Develop adequate standards and tools so that economic operators have access to sufficient information on the presence, location, concentration of hazardous chemicals in products and materials recovered from waste; • Set up a pilot programme to design and test the use of an EU harmonised product information system in specific sectors and value chains such as appliances, furniture or automotive that could start as collaboration between interested member states leading to a European integrated solution; • Ensure a higher share of environmental taxes to achieve at least the 10% of total revenues

¹ <http://www.consilium.europa.eu/en/press/press-releases/2016/06/20-envi-conclusions-circular-economy/>

	<p>envisaged in the Europe 2020 strategy and outline a further shift away from labour taxes to resources and pollution at national level;</p> <ul style="list-style-type: none"> • Advocate for more ambitious indicators within the framework of the European Semester to align the general economic policies in EU member states with clear objectives in the field of resource efficiency and the circular economy.
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Sintesi

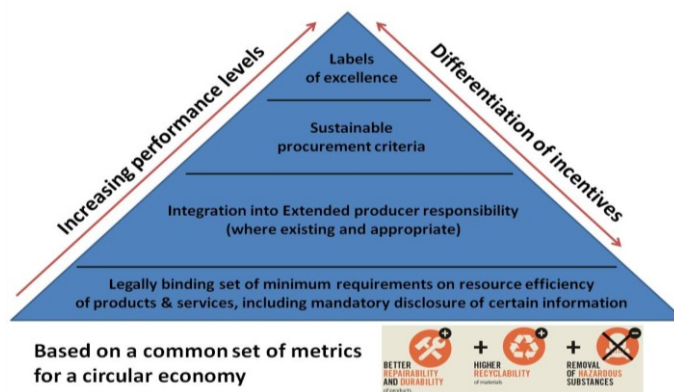
Questo rapporto fornisce idee sulle politiche di prodotto e suggerisce raccomandazioni su come implementarle ai fini di migliorare la "circolarità" dei prodotti e dei materiali nella nostra economia. L'attenzione è deliberatamente ristretta alle politiche di prodotto, nonostante siamo consapevoli che si tratta soltanto di uno degli aspetti importanti per passare a una economia di tipo circolare.

È ovvio, infatti, che occuparsi solamente dell'offerta non è sufficiente: sono necessari anche approcci complementari indirizzati alle politiche della domanda e ai modelli di business innovativi.

Tuttavia è ferma convinzione di EEB che le politiche di prodotto possano portare un contributo determinante ed è per questo che abbiamo optato per questo approccio.

Un sistema integrato per le classi di prestazioni ambientali

Una prima e fondamentale idea, a nostro parere, è quella di ideare ed adottare un approccio più integrato per definire e implementare le politiche di prodotto a livello europeo. Si tratterebbe di allineare le metodologie e gli standard di valutazione usati per definire sia i requisiti che le procedure di controllo delle prestazioni ambientali dei prodotti e dei servizi immessi nel mercato europeo. Il grafico distingue livelli differenti di performance ambientali legati a diversi strumenti e così come sono presenti oggi a livello europeo, e li inserisce in una scala di misurazione comune.



Promuovere un allungamento della vita media dei prodotti attraverso la legislazione sui consumatori

Un'altra opzione è quella di usare la Direttiva **1999/44/CE su taluni aspetti della vendita e delle garanzie dei beni di consumo** per consentire di allungare le garanzie legali, in base alla vita media prevista dei prodotti, con pieno onere della prova a carico del produttore nel caso di difetti che emergessero durante il periodo di garanzia. Consigliamo inoltre di prendere in considerazione una maggiore pubblicizzazione di periodi gratuiti di garanzia, per differenziare le aziende che offrono garanzie commerciali gratuite oltre il termine di legge e per favorire una competizione sul piano della durevolezza dei prodotti.

Evitare sostanze pericolose nell'economia circolare

Facciamo appello ai decisori politici perché assicurino un quadro normativo che protegga la salute umana e l'ambiente da materiali e prodotti recuperati dai rifiuti. .

È noto che è necessaria un'adeguata separazione e decontaminazione del rifiuto prima che questo possa essere trasformato. Inoltre è importante migliorare il flusso di informazioni lungo la catena produttiva, in particolare nel caso dei prodotti di riuso, quando un produttore ritira un prodotto dal mercato per ricondizionarlo o quando un prodotto viene infine buttato e dev'essere trattato da un operatore del settore rifiuti.

Armonizzare le informazioni di prodotto

Un sistema europeo uniforme di informazioni relative ai prodotti centralizzerebbe e ottimizzerebbe il *reporting* e l'uso di informazioni obbligatorie per legge. L'impegno iniziale dovrebbe concentrarsi sugli obblighi legali esistenti, partendo dalle informazioni obbligatorie che i produttori devono necessariamente fornire, in maniera sistematica o a richiesta. Misure di identificazione dei prodotti, come le etichette o i QR Code che rimandano a maggiori informazioni reperibili online, possono inoltre costituire un buon espediente per rendere le informazioni più accessibili e utilizzabili lungo tutta la catena di produzione, collegandole ad esempio ad un database europeo, previsto tra l'altro nell'attuale testo di revisione della Direttiva sull'Etichetta Energetica.

In aggiunta a queste considerazioni più generali, questo rapporto suggerisce alcuni punti di miglioramento per strumenti specifici relativi a politiche di prodotto. Nello specifico:

- la direttiva progettazione ecocompatibile
- la responsabilità estesa del produttore
- gli acquisti verdi
- il sistema di tassazione

La seguente tabella ricapitola le raccomandazioni a breve termine e i miglioramenti da implementare nel tempo:

Raccomandazioni nel breve termine	Miglioramenti nel medio-lungo termine
<ul style="list-style-type: none"> • Assicurarsi che i telefoni cellulari siano aggiunti al piano di lavoro della direttiva progettazione ecocompatibile come esempio iconico, per dimostrare come questa misura possa portare risultati anche sotto il profilo del consumo di risorse; • Attivare una collaborazione tra gli Stati Membri e alcune aziende all'avanguardia con lo scopo di promuovere la definizione di requisiti orizzontali nella progettazione ecocompatibile per fare decollare l'uso delle plastiche riciclate nel quadro della direttiva progettazione ecocompatibile; • Stabilire per i produttori dei requisiti di informazione obbligatoria che facilitino e promuovano un'estensione della vita utile dei prodotti e la loro manutenzione, riparazione, riuso, ricondizionamento e riciclo, non solo secondo le misure di implementazione della direttiva progettazione ecocompatibile, ma anche a livello nazionale qualora dovesse venire meno l'impegno a livello UE; • Dare seguito alla richiesta del Consiglio Ambiente (conclusioni del 20 giugno 2016²) di condurre un'analisi su potenziali requisiti di progettazione per i prodotti non correlati all'energia che sono attualmente esclusi dall'ambito di applicazione della direttiva progettazione ecocompatibile ma che potrebbero beneficiare dello stesso tipo di approccio normativo; • Supportare obiettivi ambiziosi per i requisiti minimi relativi agli schemi di responsabilità estesa dei produttori (EPR) che verranno definiti dalla direttiva quadro sui rifiuti e dalla direttiva su imballaggi e rifiuti da imballaggio, inclusa l'introduzione di criteri europei per il calcolo dei canoni EPR; • Attuare su larga scala progetti pilota di acquisti "circolari" e stabilire incentivi e strutture di sostegno per chi si occupa di acquisti pubblici partendo, ad esempio, dall'esperienza dell'Accademia degli acquisti circolari nei Paesi Bassi; • Esortare il Consiglio Europeo a discutere la proposta della Commissione per la garanzia 	<ul style="list-style-type: none"> • Proseguire con l'implementazione del piano di lavoro della direttiva progettazione ecocompatibile 2016-2019 e vagliare, in ogni successivo studio preparatorio relativo a nuovi e rivisti regolamenti sui prodotti, che aspetti come riparabilità, durabilità e riciclabilità siano stati opportunamente analizzati; • Valutare le performance degli schemi EPR esistenti a livello nazionale e come la loro amministrazione e la struttura finanziaria possano essere migliorate, includendo la possibile integrazione di schemi di deposito, sistemi <i>voucher</i> e programmi di riuso; • Stabilire il principio obbligatorio "miglior rapporto qualità-prezzo", al prezzo più basso, in tutti gli acquisti pubblici a livello nazionale; avvalersi, inoltre, dei nuovi criteri UE sull'economia circolare per GPP ed Ecolabel, ad esempio per computer ed elettrodomestici, al momento di aggiornare i parametri nazionali; • Definire criteri e parametri chiari per valutare la circolarità e sostenibilità dei modelli di impresa, basandosi sulle esperienze degli appalti pubblici e privati che si impegnano per promuovere l'economia circolare; • Uniformare e infine integrare gli approcci di differenti studi europei riguardanti le stesse categorie di prodotti per sviluppare classi omogenee di prestazioni ambientali; Queste potranno successivamente essere usate per fissare, ad esempio, requisiti progettazione ecocompatibile, acquisti verdi e parametri Ecolabel; • Ridurre la tassazione per prodotti riparabili e aggiornabili da contratto e per le attività di riuso e riparazione; • Rivedere tutte le forme incentivi o di sgravi fiscali per scoraggiare prodotti e servizi che ostacolano riuso, riparazione, ricondizionamento e riciclo; • Integrare nella legislazione nazionale sui consumatori l'idea di un sistema di garanzie legale e commerciale per l'intero ciclo di vita: in questo modo si promuoverebbero le migliori opzioni di riparazione e disponibilità di pezzi di ricambio a scapito della sostituzione del

² <http://www.consilium.europa.eu/en/press/press-releases/2016/06/20-envi-conclusions-circular-economy/>

<p>legale e altri aspetti contrattuali per gli acquisti online e la vendita a distanza, nel contesto del pacchetto europeo sull'economia circolare;</p> <ul style="list-style-type: none"> • Spingere per l'introduzione di un approccio basato sulla vita utile dei prodotti diversificando il tempo di validità della garanzia legale per prodotti differenti con l'onere della prova a carico del produttore. Rifiutare l'attuale proposta della Commissione Europea di fissare a due anni il periodo massimo di garanzia legale per tutti i beni materiali; • Supportare l'ampliamento di un database europeo per tutti i prodotti coperti da progettazione ecocompatibile ed etichetta energetica, come già fatto in altre economie mondiali, basandosi sul database pattuito secondo la riforma dell'etichetta energetica (2016/2017) e permettendo l'integrazione di informazioni aggiuntive su durabilità, riparabilità, riciclabilità e altre prestazioni ambientali. 	<p>prodotto o della compensazione pecuniaria in caso di guasti;</p> <ul style="list-style-type: none"> • Sviluppare standard e strumenti adeguati che consentano agli operatori economici l'accesso a informazioni sufficienti riguardo la presenza, l'ubicazione e la concentrazione di sostanze chimiche pericolose in prodotti e materiali recuperati dai rifiuti; • Configurare un programma pilota per progettare e testare l'uso di un sistema europeo omologato di informazione sul prodotto in specifici settori: per iniziare una collaborazione tra stati membri interessati a raggiungere una soluzione europea integrata, si potrebbero considerare filiere come quelle di elettrodomestici, mobili e autovetture; • Garantire una più ampia quota di fiscalità verde, tale da raggiungere almeno il 10% delle entrate totali previste nella strategia Europa 2020 e delineare a livello nazionale un ulteriore spostamento del carico fiscale dal lavoro al consumo di risorse; • All'interno del piano di lavoro del semestre europeo promuovere indicatori più ambiziosi per uniformare, con obiettivi chiari, le politiche economiche generali degli stati membri nell'ambito dell'uso efficiente delle risorse e dell'economia circolare.
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1. Introduction

1.1 Policy background

The EU's 7th Environmental Action Programme to 2020 is entitled 'Living well, within the limits of our planet' and guided by a long-term vision: "In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society".³

Today, Europe depends on the import of many natural resources that are needed for our everyday consumer products. So it makes sense to find ways to reduce the use of these materials and keep them in circulation for as long as possible. If the EU wants to become serious about cutting its environmental footprint linked to resource consumption, products must be a key part of any meaningful political strategy. As one of the fastest growing sectors, electrical and electronic products appear as the obvious first candidates. Though the principles of a more circular economy could equally be applied to the textiles, furniture or construction sector.

Europe's consumption patterns are summarised in the figure below. *This may in fact underestimate the real impact, since the methodology does not consider all environmental impacts linked to extraction and manufacturing*⁴.

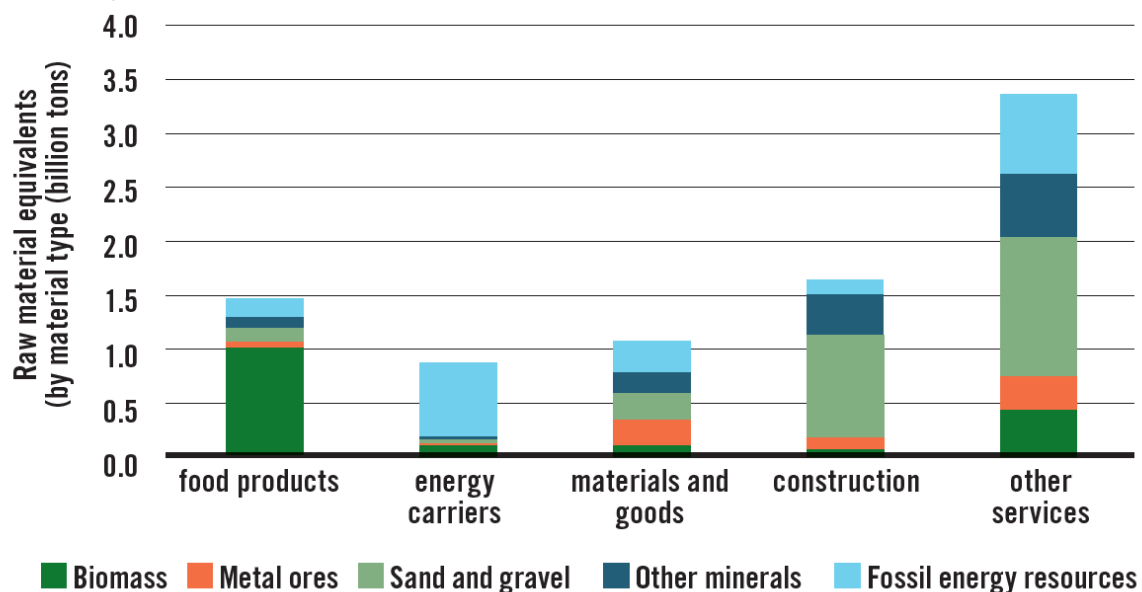


Figure 1: Raw material consumption (RMC) for various fields of use in the EU27⁵

A large number of the product categories that could be addressed through product policy measures are encompassed within the field of 'materials and goods', covering around 13% of Europe's total resource

³ <http://ec.europa.eu/environment/action-programme/>

⁴ It is worth noting that the RMC indicator still does not consider all environmental impacts linked to extraction and manufacturing. The EEB advocates for the use of total material consumption (TMC)⁴, which also encompasses unused material flows, such as mining tails and ore enriching processes. TMC could provide a more comprehensive picture of the impacts of our consumption relying heavily on imported raw and technical materials. Several reports exist on the topic, but it is not yet possible to estimate TMC with enough robustness. However, as imports to the EU are often based on technical materials requiring ore extraction, enriching and transformation processes, it is likely that from a TMC perspective, Europe's material footprint may be significantly larger than that measured by RMC.

⁵ Data available online: http://fb4.ifeu.de/nachhaltigkeit/pdf/RME_EU27-Report-20120618.pdf - see page 94.

consumption. The use of natural resources in the construction sector is also significant as it includes not only new buildings and streets, but all services connected to real estate. 'Other services' include retail, trade, repair, health, social work, hotels, restaurants, public administration and defence.

In general, all three EU institutions, the European Commission, Parliament and Council, emphasise the critical role and added value of making better use of product policy instruments as an essential part of the EU agenda to promote more sustainable consumption and production as well as a resource efficient circular economy. Through the EU action plan for the Circular Economy, dated 2 December 2015 – COM(2015) 614/2, the Commission committed itself to examine options for a more coherent policy framework for the different strands of work on EU product policy. It proposed a broad range of measures notably in the field of ecodesign, extended producer responsibility, green public procurement, consumer rights and eco-labelling, to be implemented by 2019.⁶

Through its resolution of 9 July 2015 on resource efficiency: moving towards a circular economy – 2014/2208 (INI) – the European Parliament stressed "the importance of a well-thought-out product policy that increases products' expected lifetime, durability, reusability and recyclability; points out that the amount of resources used by a product over its lifetime and its reparability, reusability and recyclability are largely determined during the design phase; calls on the Commission to promote a lifecycle-oriented approach in product policies, in particular by establishing harmonised methods for evaluating products' environmental footprints."⁷

Finally, the EU Member States underlined the importance of a coherent product policy framework at European level through their Council Conclusions on the EU action plan for the Circular Economy from 20 June 2016 (10518/16): The Council "strongly encourages the Commission to ensure coherence, enhancement and effectiveness of existing EU instruments relevant for product policy; (...); stresses the need to ensure that products are designed and produced more sustainably, taking into account their full lifecycle and minimising negative impacts on the environment and on human health; (...); urges the Commission to include appropriate measures to improve the durability, reparability, reusability, possibilities to use recycled materials, upgradability and recyclability of products in the EU Ecodesign regulations, and other legislation as appropriate, before 2020; invites the Commission to evaluate before the end of 2018 for which product groups, other than energy related, it would be possible to take better into account resource efficiency and impact on the environment and human health, building on experiences from the Ecodesign directive."⁸

1.2 Purpose of this report

The objective of this report is to introduce ideas on product policy, and present some recommendations how to use them to increase circularity of relevant products and services in our mainly linear economy. It is clear that only pushing the supply side is not sufficient. Complementary instruments, notably targeting the demand side and resource-saving consumption patterns, as well as new business models are necessary to transit towards circular economy. However, the EEB is convinced that product policy has a major contribution to make, and this is the focus of this report.

The first part of this report outlines a more coherent approach for the future EU Product Policy Framework. Instead of focusing on incremental changes in each policy instrument, the EEB describes some ideas and measures how to systematically improve the overall design and effectiveness of product policy. The basic concept is to distinguish between different classes of environmental performances but based on the same core metrics that would allow products and services to become eligible for different policy tools such as Ecodesign, Green Public Procurement, Ecolabelling and eventually taxation. We also would like to open the discussion how to best take different environmental impacts into account and make important links with

⁶ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614>

⁷ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P8-TA-2015-0266+0+DOC+XML+V0//EN>

⁸ <http://data.consilium.europa.eu/doc/document/ST-10518-2016-INIT/en/pdf>

other legislative frameworks such the ones as on hazardous chemicals and on consumer rights. Finally, we would like to introduce the concept of an EU harmonised product information system that could provide increased synergies and benefits across a broad range of policy objectives in a circular economy.

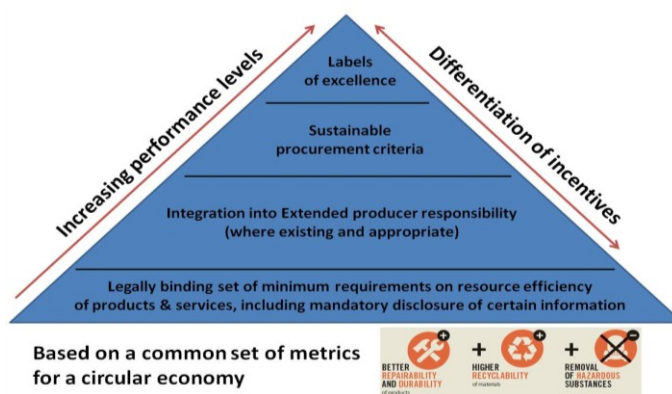
Beyond this proposal for an overall framework, the second part of the report emphasizes the opportunities for making better use of each of the existing product policy instruments, both at EU and at national level: Ecodesign type regulations on minimum information and product design requirements, Extended Producer Responsibility (EPR) Schemes, Green Public Procurement and Labelling of environmental frontrunners, Taxation. The last chapter summarizes the policy recommendations from both parts of the report in form of a roadmap that provides guidelines for policy makers, starting with the immediate, short term opportunities and outlining the gradual improvements to be achieved and implemented over time. In each chapter, we highlight where shortcomings of the existing legal framework exist, if new instruments should be developed and/ or implementation and enforcement must be improved.

2. Outlook on a more coherent EU Product Policy Framework

2.1 An integrated approach through classes of environmental performances

An impact assessment study⁹ from the European Commission in 2012 looked at the different policy options for facilitating better and more credible information on the environmental performance of products and organisations, starting from 'no policy change' as the baseline scenario to a completely new mandatory policy framework. Instead of putting together the jigsaw puzzle of different instruments and addressing the missing parts, it concluded by simply adding the voluntary application of environmental footprint (EF) methodologies as a new tool to the EU policy framework. Since then, the Commission has started a pilot phase to test the use of the EF methodology for different type of organisations and products. It has also regularly evaluated existing policy instruments such as Ecodesign, energy and eco-labelling and green criteria for public procurement one by one. Unfortunately, it has not yet systematically looked at how to increase the synergies and reduce the inconsistencies between the different instruments.

We believe that a more integrated approach should start by aligning the standards used for measurement and verification of environmental performances for products and services as they are currently used to comply with different policy tools. The pyramid graph distinguishes between 4 different levels of environmental performance linked to different EU instruments. The higher in the pyramid, the more performing the product:



1. Legally binding rules for all products being placed on the European market to remove the worst performing products (a market access approach such as taken in the EU Ecodesign Directive).
2. Market instruments such as EPR, which incentivise circular models, notably related to end of life management and waste treatment hierarchy.
3. Green public procurement rules that reward the 20-30% best in class products placed on the market.
4. Label of excellence: the top 10-20% performing products and services available on the market should qualify for a credible, multi-criteria and third-party certified eco-label.

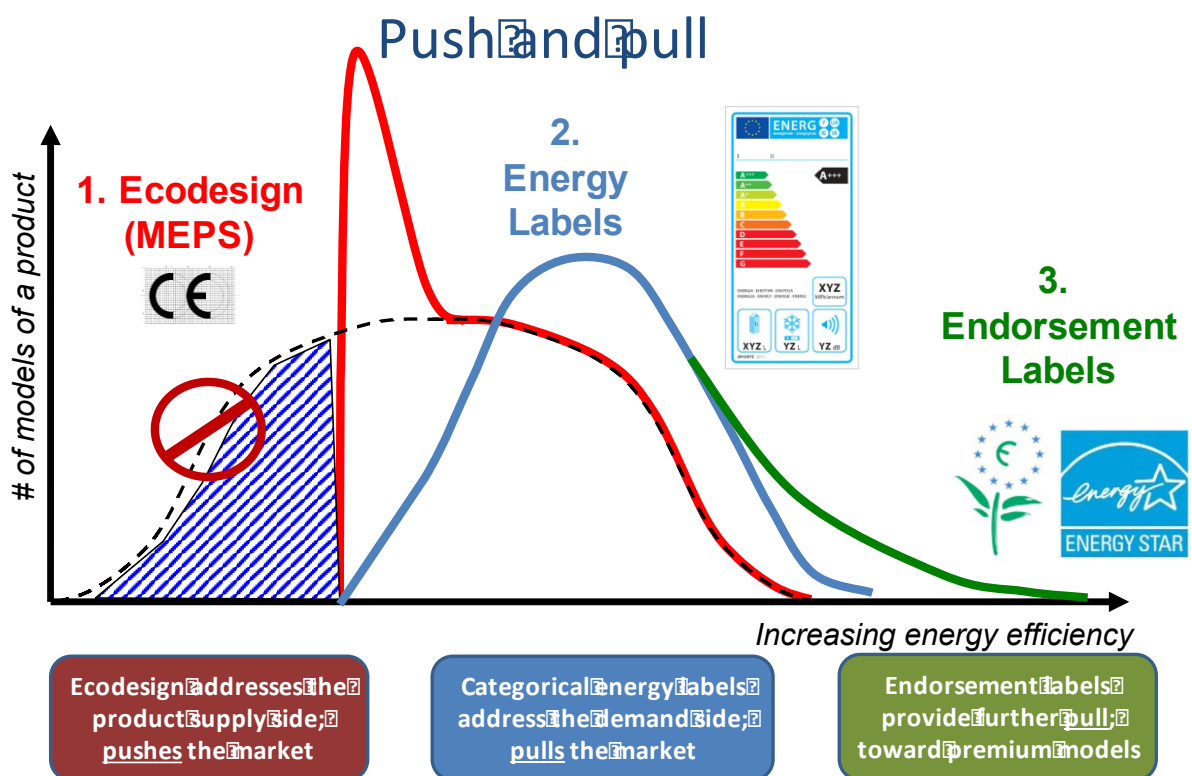
A mechanism of modulated taxation (e.g. Reward/Penalty schemes) could be applied along this performance scale to accelerate further market transformation.

⁹ http://ec.europa.eu/environment/eussd/smgp/pdf/ia_report.pdf

The main difference, and challenge, compared to the regulatory situation today would be that all the policy instruments referred to in the pyramid would be based on a common set of performance criteria and calculation or measurement methodology. This would streamline performance declaration and verification, from the very basic minimum requirements to allow the placing of a product or service on the market to the really best-in-class products and services. As a consequence, administrative burden for both producers and market surveillance authorities could be reduced.

To develop such an integrated approach, the EU does not have to start from scratch. Environmental impacts of many product categories have already been investigated through lifecycle assessment (LCA) studies and different sets of criteria and requirements have been derived from the results. The ongoing definition of standard methodologies to assess durability, reparability and recyclability of energy-related products under the EU Ecodesign Directive could further inform the system about priority parameters to be taken into account to promote a circular economy. This new set of basic compliance criteria could then also apply with a slightly higher performance level to modulate fees of EPR schemes or with even more stringent requirements allow for a variation in taxation, e.g. lower Value Added Tax rate, including where no EPR schemes exist. Towards the top of the performance pyramid, intended for use in GPP or Ecolabels, we might have to complement the basic set of criteria with additional and more advanced sustainability criteria in order to differentiate those products and services more clearly from the rest of the market.

The graph below illustrates how this system of different classes of environmental performances already partially works today to promote more energy efficient products on the European market:



- The EU Ecodesign Directive sets mandatory energy performance standards (MEPS) to be fulfilled by all products being placed on the European single market.
- The energy label differentiates further classes of energy efficiency. Some EU member states provide economic incentives to buy energy efficient appliances, e.g. through eco-cheques.
- The EU Energy Efficiency Directive requires central governments to procure only products of the highest efficiency class.
- Top performing products are awarded by the multi-criteria EU Ecolabel (or other labels of excellence) and can be easily recognised by consumers (multi-criteria labels of excellence integrate energy efficiency when appropriate but go much beyond energy dimension)

Although this example relates only to energy efficiency without a fully consistent escalation of performance classes, more coherence has already been implemented in recent years throughout the EU product policy instruments. Therefore, it may be time to extend this experience beyond energy performance and apply it to the promotion of a resource-efficient circular economy in Europe.

2.2 Main impact categories to be taken into account

For quite some time, energy use and climate change have been the main environmental categories that are high on the agenda for both policymakers and business.¹⁰ In reality, we are confronted with a huge variety and complexity of overlapping environmental impacts which interact with a broad range of societal needs as outlined, for example, in the concept of social and planetary boundaries (see Figure 2). This is why the UN Sustainable Development Goals for 2030¹¹ as well as UNEP's 10 year Framework Programme on Sustainable Consumption and Production¹² reflect on a wide spectrum of environmental challenges instead of focusing only on the challenges to mitigate and adapt to climate change.



Figure 2: The doughnut of social and planetary boundaries.
Source: <http://www.kateraworth.com/doughnut/>

In order to capture the complexity but keep it manageable, the EEB recommends focusing on five clusters of impact categories to be covered by a more coherent approach towards greener products and services:

- Climate change and energy use
- Material footprint and circular economy
- Land and water use
- Biodiversity and ecosystem impacts
- Ecotoxicity and pollution (including health & safety)

Even if we want to strengthen policies on preventing dangerous climate change as a first priority, we will have to take other environmental dimensions into account to be successful. Making our energy systems less carbon-intensive alone will not suffice to meet the 2 / 1.5 degree Celsius policy objective, because the greenhouse gas emissions linked to material extraction and use need to be addressed also. McKinsey and the Ellen MacArthur Foundation argue that by adopting circular economy principles in Europe, carbon dioxide emissions for food, mobility and the built environment could be reduced by 48% in 2030 and by 83% in 2050 relative to today's levels¹³. Both climate change mitigation and adaption depend on resilient and healthy ecosystems and a rich biodiversity¹⁴ which might be devastated because of land use changes¹⁵ or due to increasing pollution from agriculture, industry or transport.

Not all these impact categories are relevant for all types of products. Through an environmental hotspot analysis, the most relevant impacts over a products lifecycle can be identified. This would limit the complexity when analysing policy scenarios on how to address those impacts through the different instruments at hand. To take an example, when it comes to appliances, we would suggest focusing on durability, reparability, recyclability and chemical contents in addition to energy use. In fact due to their

¹⁰ See e.g. the 10 political priorities of the Juncker Commission from 2015: https://ec.europa.eu/priorities/index_en

¹¹ <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

¹² <http://www.unep.org/resourceefficiency/Policy/SCPPoliciesandthe10YFP/The10YearFrameworkProgrammesonSCP.aspx>
¹³ <https://www.ellenmacarthurfoundation.org/news/circular-economy-would-increase-european-competitiveness-and-deliver-better-societal-outcomes-new-study-reveals>

¹⁴ http://ec.europa.eu/environment/nature/climatechange/pdf/EbA_EBM_CC_FinalReport.pdf

¹⁵ http://unfccc.int/land_use_and_climate_change/items/8792.php

high use of technical materials, hotspots for appliances, beyond their obvious significance for energy-related carbon emissions, are related to materials and the circular economy. Those dimensions are also in line with ongoing standardisation methodologies being developed under the EU Ecodesign Directive framework, and match the agenda on critical material recovery.

However, such a focus on abiotic resources alone may not be the most relevant for other sectors such as food products. In case of relevant impacts on biodiversity and ecosystems, traditional measurement methods based on Life Cycle Assessment (LCA) do not capture site-specific environmental dimensions such as soil fertility, structural or genetic diversity or ecologically sound land use practices, for example. These are usually covered by sustainable management certification schemes. Complementary methods to existing LCA should therefore be developed.

Exploring a point system to acknowledge multi-dimensional environmental performances

To allow Ecodesign regulations to deliver across multiple areas, innovative methods could be considered. For example, in the context of addressing complex products under Ecodesign policy, a methodology based on a points system is currently being investigated¹⁶. While the initial intention is to measure the energy performance of complex products with different components and functionalities, the methodology may also capture multiple dimensions of environmental performance. This could enable more flexibility for improving the overall environmental impact of products. A combined approach between mandatory requirements and optional ones, as seen in the building sector, might be of utmost relevance. However, it is not the purpose of this report to scrutinise further the pros and cons of such a methodology. We mentioned it here as a possible route worth paying attention to.

2.3 Promoting longer product lifetimes through consumer legislation

Stronger 'consumer rights' could be a powerful and popular tool in pushing the market towards longer lasting products and better services. At present, the Consumer Sales Directive 1999/44/EC sets a minimum legal guarantee period of two years for most products. However, the burden of proof to show the failure is due to a manufacturing fault lays most of the time with the owner after 6 or 12 months, depending on the implementation in the respective EU Member State. That means the owner of the product is to provide evidences that the failure of the product is linked to a defective design, and not his own faulty user behaviour or even due to a bad manipulation to get compensation. Producing such evidence is not easy for consumers. If we could obtain a longer guarantee period in line with life expectancy of the product and reverse the burden of proof on the supplier in case of failure, we could create more competition around reparability and durability aspects, leading to more product differentiation on the market. This may increase consumer engagement towards a circular economy.

The EU Ecodesign Directive already provides a thorough and systematic investigation of a product group from a lifetime perspective. This could include provisions towards a minimum legal guarantee period according to the average lifetime of each concerned product category. This could eventually relax the one-size-fits-all minimum requirement of 2 years' legal guarantee in current consumer legislation to better reflect the diversity of products and their longevity. A product specific legal guarantee period covering a minimum lifespan (e.g. equivalent to the average life time of the product or a portion thereof) could be coupled with the provisions in directive 1999/44/EC on consumer sales and guarantees.

For example, a washing machine has an average lifetime of over 10 years. The minimum legal guarantee period could be incrementally increased from today's two years towards 5 and finally 10 years. Laptops last on average 5 to 6 years. Guarantees could be progressively increased from 2 to 3 then 5 years. Although less obvious, similar extensions of legal guarantee periods could be explored for other goods than appliances. With this solution, there would be no significant need for verifying the durability of the product as it could be the case if a minimum technical durability period was set by law. Such a check has been

¹⁶ <https://points-system.eu/summary>

reported as lengthy and costly procedure by national enforcement authorities who in consequence are reluctant to consider minimum durability requirements. Enforcement would be dealt with in contentious cases when the consumer demands for repair or replacement of a faulty product to be paid by the manufacturer. This may not prevent non-compliance within the full lifespan, but the extended guarantee period would provide a strong incentive for manufacturers to achieve compliance in most cases.

Even if there is no huge differentiation in terms of durability of the products available on the market, a legal guarantee tailored to an average product lifetime still makes sense. If it cannot be set for a specific product category, for technical or regulatory reasons, the existing minimum period of a legal guarantee should apply for those products, with the burden of proof for at least the first two years on the manufacturer. If the average lifetime is expected to be lower than the two years, exemptions may apply.

In addition, mandatory availability of repair manuals, tools and spare parts to professional repair services by the original manufacturer must be required. The use of third party spare parts, whose technical specifications are compatible with the appliance in question, shall not be prohibited as a replacement spare part. If the manufacturer fails to comply with the declared availability of spare parts during a certain period, the regulation should stipulate the need to provide a comparable replacement product during the same period.¹⁷

As an alternative or complementary approach to progressively extending the legal guarantee as outlined above, we suggest to require the display of the free of charge warranty period offered by the manufacturer. This could simply be the legal minimum guarantee or an extended commercial, but still free, warranty period. This would better differentiate manufacturers that go beyond the legal minimum and foster favourable competition transforming the market towards more repairable, durable and upgradable products. For the appliances covered by the mandatory EU energy label scheme, the display of the total number of years offered by the manufacturer could be included in the label next to the information on energy performance aspects.

Exploring alternative business models based on usage rather than ownership

Alternative business models that operate on leasing and sharing of products could be encouraged through economic incentives. Such models will change the supplier/user relationship and also affect the setting of legal guarantee or commercial warranty periods and duties. This is a promising dimension, but beyond the remit of this report.

2.4 Avoiding hazardous substances in a circular economy

A new EEB report¹⁸ shows how chemical, product and waste legislation interact in a circular economy. It highlights how the current legal framework is failing to ensure that information on hazardous chemicals is properly passed along the material cycle, stopping it from finding its way into new products. This failure places huge strain on the circular economy by forcing up the costs of complying with legal requirements to protect human health and the environment when using recovered materials and making virgin ones comparatively cheaper and more reliable.

In light of these findings, the EEB recommends that the current legal framework should be adapted to the challenges of a circular economy. Policymakers must be more active in limiting hazardous chemicals from entering the economy in the first place. This would better protect human health and the environment, but also facilitate the future use of recovered materials from waste and promote a safe and clean circular economy encouraging longer product lifetimes and reuse. Full implementation of REACH chemical and other

¹⁷ Similar provisions have been implemented under the Californian Song-Beverly Consumer Warranty Act: <http://www.dca.ca.gov/acp/songbev.shtml> and <http://www.lemonlawcourt.com/song-beverly-consumer-warranty-act/#.WHdr51xhB6A>

¹⁸ EEB report February 2017 <http://www.eeb.org/index.cfm/library/keeping-it-clean-how-to-protect-the-circular-economy-from-hazardous-substances/>

legislation should be pursued. Economic incentives to support toxic-free materials should also be explored, such as those described in the below section on Extended Producer Responsibility.

Dealing with legacy substances

An important area for consideration is how to handle the waste coming from products manufactured before the EU introduced strict REACH chemical legislation in 2007. Possible actions to tackle these products should address the transitional period of the next 15-20 years when 'old' products hinder a safe recycling. They should also addressing the problem of extra costs that will be charged on the enterprises that wish to recover materials from such products and reflect on how to prevent the import of products to the EU made with harmful substances restricted in EU but not in the exporting country.

Economic operators need sufficient information on the presence, location, and concentration of hazardous chemicals in discarded products and materials. This will reduce burden on recyclers and manufacturers who want to make clean recovered materials available for new products while improving the protection of human health and the environment in a circular economy. Such information could be part of the minimum information required to place a product on the market, building on the existing right to know principle in Art. 33 REACH that needs to be complemented by additional instructions on localisation, extraction and removal of hazardous substances by product or waste legislation.

Finally, policymakers must ensure that the legal framework is not less protective of human health and the environment when materials are recovered from waste and when products are made of recovered materials. This means notably requiring appropriate decontamination of waste before it can be recovered and rejecting the possibility of more lenient threshold levels of hazardous contents when applied to recovered secondary raw materials compared to virgin primary raw materials.

2.5 Introducing an EU harmonised product information system

When it comes to making available information on products and materials, there are already different pieces of EU legislation that demand for mandatory disclosure of specific information from manufacturers who want to sell their products and services on the European single market. These include the implementing measures under the Ecodesign and Energy Labelling Directives, Article 15 WEEE (Waste Electrical and Electronic Equipment) Directive and Article 33 of the REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) Regulation. An EU harmonised product information system would go one step further in combining these single bits of different environmental information into a standard digital format and making them more easily accessible for distinctly defined target groups.

Different stakeholders agreed on the basic idea at the European Resource Efficiency Platform (EREP). This sent policy recommendations to the European Commission in March 2014 that stated: "Inadequate business-to-business information on what resources a product contains and how it can be repaired or recycled is hindering resource efficiency. To tackle this barrier, the possible use of a 'product passport', such as an Environmental Product Declaration, should be explored that would make such information easily accessible and applicable to the supply chain, thus facilitating efficient material flows and encouraging the creation of value in the circular economy."

An EU harmonised product information system should be understood first as an approach to centralise and optimise the reporting and use of legally required information. Which data should be chosen? The initial focus should be on information firms are required to produce anyway. Product tags, such as a label or QR code linking to more detailed online information, could also be considered to make the information easily accessible and usable in the supply chain. This could be linked to an EU database as proposed under the revised EU Energy Labelling Directive.

Obligations for manufacturers to provide reliable information must be put in perspective of the expected benefits. For example, leveraging and easing business activities along different value chains, supporting

information schemes for procurers and end-consumers as well as easing verification and market surveillance. Such information must be based on clear standards to be meaningful, measurable and enforceable.

National pilots and collaboration between member states could pave the way to a practical European solution. Standardising the technical and environmental information on product properties relevant to facilitate a circular economy could build on the experiences with existing voluntary schemes, such as cradle-to-cradle® certification, environmental product declarations, chemicals or recycling passports.

Establishing an EU harmonised product information system would reduce administrative costs for business according to the principle of 'report once and use several times'.

When deciding if certain information should be made public, industry usually pleads for confidentiality. We believe policymakers must balance open access with the need for commercial sensitivity if we want to stimulate competition between manufacturers with regards the performances of their products and develop repair and recycling services and new servitising models, such as leasing and sharing platforms.

The solution could be found in defining distinct stages of access levels for:

- Market surveillance authorities enforcing the law;;
- Professional and qualified service providers for repair, maintenance, refurbishment, remanufacturing and/or recycling;
- Public procurement departments checking compliance with their GPP criteria, and;
- Consumer organisations or private consumers to guide their purchasing decisions.

Making relevant information on products and services available and transparent is one of the foundations of a free market economy claimed by most business actors. Confidentiality should thus not be the starting point and not be overstated at the expenses of transparency and circular economy development. Finally, it is worth noting that a harmonised product information system could evolve as criteria to document environmental performances classes are defined (*as suggested in section 2.1 related to classes of environmental performances*), as consumer rights are extended (*as proposed in section 2.3 about warranty periods*) and as information on chemical content is monitored along various product lifecycles and the associated value chains (*as brought forward in section 2.4 about hazardous materials in the economy*). In brief, such a system would gather these crucial types of information and combine them in a centralised, digital system.

3. Better use of existing policy instruments

After having defined some directions for an overall approach on product policy, it is also worth considering improvements that could be made on the use of some individual existing policy instruments.

3.1 Implementation of the EU Ecodesign Directive

The highly successful Directive 2009/125/EC broke new ground by establishing a framework of energy-related standards for two-dozen or so household and commercial products in Europe. Manufacturers had to meet these if they wanted to sell their products in Europe. The rules have played a major role in lowering the energy intensity of economies across Europe, save hundreds of Euros for every home, and have become the cornerstone of the bloc's energy efficiency drive. Their impact has been felt beyond Europe, setting the tone for regulations in many other world regions. All this helps prevent creation of barriers to trade, improve product performances and environmental protection.

Ecodesign has been energy focused so far. But the directive clearly aims at the overall improvement of environmental performance from a lifecycle perspective and could be a highly valuable tool for policymakers looking to enhance the circular economy. As energy efficiency gains become harder to achieve due to past improvements, so resource-related aspects will grow in importance. This allows for environmental protection and market differentiation, both for new and already regulated product groups.

In addition, the WEEE Directive on waste electrical and electronic equipment (2012/19/EU) clearly states in its recital (11) and its Article 4 on product design that it needs to be enforced through Ecodesign implementing measures. "Ecodesign requirements facilitating the re-use, dismantling and recovery of WEEE should be laid down in the framework of measures implementing Directive 2009/125/EC. In order to optimise re-use and recovery through product design, the whole life cycle of the product should be taken into account."

Key areas for improvement¹⁹

National governments should urge the European Commission to make good on these opportunities. All future Ecodesign regulations should:

- Identify design options to support better reparability and durability;
- Address critical and strategic materials by specific design-for-recycling options (e.g. plastics, rare earths);
- Remove or substitute problematic or hazardous substances hindering cost effective recovery; and
- Provide information and instructions to downstream users, service providers, end-consumers or recyclers with regards disassembly of components and properties of embedded materials.

Mandatory information requirements as a first step

Requiring information on resource-related aspects could promote product and materials longevity through better maintenance, repair and reuse, re-manufacturing or recycling. At the same time, it gives manufacturers some flexibility to improve their product design without setting specific minimum requirements right from the beginning. Such information requirements can be applied broadly at an early stage of the Ecodesign implementing measures setting the scene for more specific requirements at later stages. Useful information could include:

- How to use and maintain the product most efficiently including the use of related consumables (such as detergents for washing, paper for printing...)
- Expected lifetime under normalised conditions and how to eventually extend it
- Disassembly and repair instructions in a standard format
- Access to troubleshooting and diagnostic tools to aid repair
- Availability of spare parts
- Identification of any problematic / hazardous components or precious/ recyclable materials with extraction schemes to aid reuse and recycling
- Instructions on adequate end-of-life treatment

¹⁹ For more details see: <http://www.eeb.org/index.cfm/news-events/news/cutting-resource-use-it-s-in-the-design/>

This information can be provided directly with the product, either on the product itself or as part of the technical description. Or it can be provided online, ideally through a freely accessible database. The information may be directed to the final consumer and / or to interested professionals, service providers like repair shops, reuse facilities or recyclers.

We suggest that the above mentioned options should be considered and adequately specified during exploratory steps of measures, being preparatory studies carried out for a new product group or for any review of existing regulation under the Ecodesign directive. This should include self industry initiative and voluntary agreement, when no regulation is set. Recently published draft regulations on electronic displays and enterprise servers already adopt such an approach. This is a good precedent to build on for other product groups, especially computers and ICT. This could also prepare the set up of a horizontal approach to provide and standardise such information for several product groups with similar potentials, an aim of the EU Circular Economy Action Plan (CEAP) for 2018 to facilitate product repair.

Potential for a horizontal regulation across different product groups

To best capture material saving opportunities and create more potentials for the industry (for example suppliers of materials or repairers/recyclers), it was suggested the idea of rules applying to a wide range of product groups. Following the conclusions in the Task 2 Supplementary Report "Identification of resource-relevant product groups and horizontal issues" within the Preparatory Study to establish the Ecodesign Working Plan 2015-2017²⁰, a separate preparatory study across many different product groups could significantly help to clarify the question whether horizontal Ecodesign measures on resource-related aspects can yield in significant environmental benefits. This study should focus on the following potential requirements:

- Prioritise certain materials made accessible for recycling processes. These materials should be chosen because of their strategic value from a supply/demand perspective as well as from an environmental perspective that assesses the impact of sourcing and processing these materials when they are extracted from the ground;
- Provide information about which, how much and where those materials are located in products. Adequate marking and separation of components, which contain a high content of these materials, must complement this. Rare earths in permanent magnets are an example. In addition, we recommend exploring potential Ecodesign requirements for plastics, including the use of polymers and composite materials compatible for reuse and recycling;
- Exclude, or ensure easy separation of substances, components or materials that can have negative effects on a product's recyclability. Examples are the contamination of steel with copper or halogenated additives (such as flame retardants) in plastics.

While such a transversal study sounds appealing and could significantly help unleash material savings across different product groups, it should not stop the setting of requirements in individual product groups. In fact, a transversal investigation could take advantage of experiences and learning linked to individual product groups. Furthermore, whatever transversal suggestions are made, they will always have to be adapted on a case by case basis for each product group.

Market uptake for recycled plastics

In addition, the EEB urges the European Commission to kick-start and facilitate the discussion with industry on a potential Ecodesign horizontal requirement to increase market uptake of recycled plastics. It should be applied to all manufacturers of energy-related products that fall under existing Ecodesign implementing

²⁰ <http://www.ecodesign-wp3.eu/documents>

measures including the standby regulation, and should particularly focus on helping uptake for recycled plastics.

The EEB supports a broad approach on recycled content across the whole appliance sector covered within the legal framework of the Ecodesign directive. It could be more effective than a product by product approach as creating economy of scales opportunities for manufacturing as well as for recycling industry. The following should be emphasised:

- It should embrace all products containing plastics, notably those that comprise a high degree of plastic, such as coffee machines and small domestic appliances;
- It should define minimum quality requirements for recycled plastic to facilitate use in a wide range of materials and applications.

Follow up on the proper implementation of the Ecodesign Working Plan 2016-2019

In the coming years, member states should closely monitor the implementation of the new Ecodesign Working Plan 2016-2019 published by the European Commission on 30 November 2016²¹ to make sure it delivers on resources conservation. Particular attention should be paid to upcoming revisions of existing regulations, but not only.

- Although new products have been above all selected for their energy saving potential, there are significant opportunities for reparability, durability, upgradability, and recyclability. Those are lifts, solar panels and inverters, refrigerated containers, hand dryers, kettles, high pressure cleaners and building control systems.
- Some existing product regulations have clear resources conservation potential, namely TVs and monitors, computers, enterprise servers, fridge-freezers, washing machines, dishwashers and tumble dryers. They have been identified as such in the Commission Ecodesign work plan document.
- A separate track with the launch of an in-depth study on three additional IT products with high circular economy potential to assess their future inclusion in the Ecodesign working plan has been announced. This study should tackle particularly the options to improve resource use of mobile phones. The other two product groups proposed for further investigation are home network equipment and base stations for mobile communications.

Scope extension

Environmental Council conclusions from 20 June 2016²² requested the Commission to conduct an analysis of potential design requirements for non-energy related products which are currently outside the scope of the Ecodesign Directive, but which could benefit from the same type of regulatory approach. EU member states should ensure that this analysis will be delivered before the end of 2018 and that it evaluates different policy options such as:

- Establishing a separate working plan for non-energy related products under the EU Ecodesign Directive to identify key material streams and to investigate possible product group-specific design requirements in sectors such as construction, furniture and textiles;
- Outlining a new policy framework that allows developing and introducing sector-specific standards as part of the Commission's action plan on circular economy, building on existing activities in EU member states and involving key stakeholders along the value chain.

²¹ [http://ec.europa.eu/energy/sites/ener/files/documents/com_2016_773.en .pdf](http://ec.europa.eu/energy/sites/ener/files/documents/com_2016_773.en.pdf)

²² <http://www.consilium.europa.eu/en/press/press-releases/2016/06/20-envi-conclusions-circular-economy/>

3.2 Extended Producer Responsibility (EPR)

EU minimum requirements for EPR

Faced with increasing amounts of waste, many governments have reviewed available policy options and concluded that placing the responsibility for the post-consumer phase of certain goods on producers should be considered. EPR is a policy approach under which producers are given a significant responsibility, financial and/or operational, for the collection and treatment of discarded products. The EEB is convinced that European minimum requirements for EPR schemes make sense and help rather than hinder member states to best deploy those schemes with a certain flexibility being preserved for adaptation to local situations. The EEB also favours the extension of minimum requirements for EPR schemes towards the revised EU Packaging and Packaging Waste Directive to ensure separate collection and appropriate treatment of consumer product packaging.

The EEB supports full net cost coverage of separate collection, sorting, treatment and recycling of material by obliged industries, placing products on the market covered by EPR duties. The full net cost coverage means that the financial means to achieve the collection and treatment objectives are supplied by the concerned industry, which can benefit from the revenues of valuable material recycling to balance these costs. This is the best way to ensure sufficient financing of proper collection and treatment infrastructure, meeting the desired environmental standards, without leaving too much of the burden to municipalities and tax payers. Furthermore, the EEB also supports the idea that part of the additional costs linked to waste treatment should be paid by producers when not properly sorted or refused for recycling. This is particularly the case for packaging and waste that is not ready to be recycled, but is sent to landfill, incineration or other disposal. Citizens, taxpayers and local authorities should not be subsidising problematic packaging.

However, the EEB questions whether it is possible to delegate completely waste management to producers, even if certain industries have to cover the full cost. In many European countries, waste management remains a public service. National and local authorities should have their say and their responsibilities, notably with regard to treatment standards, enforcement and contribution to waste reduction, disclosure of information and collection achievements. Assigning responsibility to producers should not eliminate it for public authorities.

EU-wide criteria are needed to differentiate the end-of-life fees paid by producers according to the properties of the products which they place on the market. It is simply unfair and counter-productive to have all producers paying the same fee whatever the environmental burden or treatment cost. Nor does it make sense to have a patchwork of criteria at national level as this would not create the mass market incentives needed to foster better design. Fee modulation criteria, for example, could be defined at EU level to take into account the promotion of waste prevention, sustainable sourcing and the presence of hazardous chemical additives.

Implementation and evolution of EPR schemes at national level

EU member states could consider implementing measures beyond the EU minimum requirements on EPR schemes²³, such as by encouraging the participation of civil society organisations in the governance structure. The government could also require conditions for geographical coverage and increase transparency on revenues from recycling streams. If EPR schemes only concentrate their activities on easy to collect areas, and valuable materials, neglecting less profitable areas and waste streams, this could result in 'cherry picking' practices by EPR schemes, instead of fulfilling their obligations.

²³ The European Commission has also published a report on guiding principles and recommendations for EPR schemes that can provide further inspirations to improve both the legal framework and the operational practice. http://ec.europa.eu/environment/waste/pdf/target_review/Guidance%20on%20EPR%20-%20Final%20Report.pdf

Deposit schemes, voucher systems and reuse programmes could become more systematic parts of EPR schemes where appropriate (e.g: deposit/refund for beverage packaging could be established in coastal areas to prevent marine littering, reuse and preparation for reuse targets could be integrated in EPR objectives for WEEE streams).

Important questions for the future operation of EPR schemes in a circular economy should be addressed for specific product and waste streams:

- How to extend the EPR concept to further embrace the whole lifecycle of products, for example by creating more systematic incentives²⁴ for waste prevention, integrating deposit and eco-voucher systems, or by demanding sustainable sourcing and full recyclability of bio-based materials;
- How to deal with an increasing share of products offered as part of a leasing service or where material ownership remains with the company supplying the product (e.g. washing machines not being sold, but only rented to consumers, or photovoltaic panels installed on household roofs, but still belonging to the installer). Such disruptive business models may create new challenges for EPR schemes.

Interesting further reading for the operational deployment of EPR schemes in a circular economy context can be found in the study 'Implementing individual producer responsibility for waste electrical and electronic equipment through improved financing'²⁵.

3.3 Green Public Procurement

Green purchasing aims to influence the market through enlightened spending power. By demanding green products and services, public authorities and private customers can provide industry with real incentives for developing better technologies and products, as well as services, with a lower environmental footprint. In some sectors, public purchasers command a significant share of the market, such as in public transport and construction, health services and education. Their decisions have considerable impact.

Make implementation mandatory

Green Public Procurement (GPP) remains today mostly a voluntary instrument, which means public authorities can determine the extent to which they consider green procurement opportunities in their daily routine. Consequently, procurement departments are not yet all used to balance cheapest purchasing price with medium term saving opportunities and/or environmental consequences. The EU has so far only set an indicative 50% target, and pushed green procurement mainly for energy related goods and services for central administration. There are clear missed opportunities resulting from this situation today, though national governments can build on the [extensive EU level work](#) to implement environmental criteria for a broad range of products and services relevant for public procurement.

Setting mandatory targets for GPP at national level and providing support for local implementation is crucial to making circular economy potentials turn to reality. For example, GPP has become an important instrument within Italy's National Action Plan on Sustainable Consumption and Production. The Italian government recently decided to make its GPP criteria mandatory. In future, the criteria will apply to the full monetary value of all tenders in the provision of energy and half of the value in all other tenders. Italy also

²⁴ For further inspiration, the OECD Working Party on Resource Productivity and Waste has compiled an extensive report on design for environment incentives from Extended Producer Responsibility (EPR), including an overview how modulated fees have been implemented so far in different EPR schemes across EU Member States: <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/EPOC/WPRPW%282014%296/FINAL&docLanguage=En>

²⁵ https://www.researchgate.net/publication/256058008_Implementing_Individual_Producer_Responsibility_for_Waste_Electrical_and_Electronic_Equipment_Through_Improved_Financing

plans to update criteria for different product categories and to introduce a national labelling scheme to recognise and reward environmental frontrunners.

Use GPP to promote circular solutions

Governments should investigate how to make best use of green procurement to leverage circular economy solutions. EU GPP criteria for computers and monitors²⁶, published in October 2016, specifically address issues going beyond energy consumption in the use phase, including hazardous substances, product lifetime extensions and end-of-life management. EU member states should align their own rules for GPP as much as possible with the new approach towards promoting circular procurement by using the EU GPP Criteria set as the core inspiration for their own requirements, such as:

- Purchase products with a restricted amount of hazardous constituents and with a reduced potential for toxic emissions after disposal;
- Products designed for durability, upgradeability and reparability, including options for renting, sharing or leasing instead of purchasing.
- Products with reuse or remanufacture potentials at the end of first service life;
- Products designed for dismantling and end-of-life management to maximise the recovery of resources; and
- Purchase of (services providing) already used, refurbished or remanufactured goods.

Remove barriers to GPP and encourage the use of ecolabels

The legal basis for public procurement at national level should be the 'best value for money' principle instead of the lowest price. The best value for money refers to integrating usage costs and environmental impacts during the whole life time of the good/service, beyond the mere upfront cost of the offer and the basic legal compliance. This approach is in line with [EU procurement directives](#) that acknowledge this 'best value for money' principle, and make it easier to reward environmental performance beyond the market average or standard solutions.

Governments can also refer to EU Ecolabel criteria to make public tenders more compatible with the circular economy. For instance, the new EU Ecolabel for furniture requires manufacturers to focus on durability and reparability of their products, offering extended product guarantees of at least five years, during which time they must make available spare parts. Furniture comprised of multiple components must also be designed for disassembly by unskilled labour with basic tools, making it possible for furniture owners to dispose of, reuse and recycle used products. Manufacturers must also undertake lifecycle assessments of the material components, and highlight where they may contribute to indoor air pollution. GPP tendering processes can use those criteria as a starting point and would benefit from the EU Ecolabel as a straightforward means for verification. Ecolabelled products would qualify automatically for GPP compliance while equivalent non-labelled products have to provide equivalent evidence for meeting the criteria.

Defining circular procurement to promote new business models

The EU-funded project REBus (Resource Efficient Business Models)²⁷ is useful in illustrating how public procurement can enhance circular business models. REBus aims to have procurement departments, users and suppliers of goods and services 'think circular' and about how to retain value of materials within the

²⁶ http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

²⁷ http://ec.europa.eu/environment/ecoap/about-eco-innovation/good-practices/eu/rebus-project-facilitates-development-of-circular-economy-business-models_en
<https://www.pianoo.nl/public-procurement-in-the-netherlands/sustainable-public-procurement-spp/spp-themes/circular-procurement/getting-started-with-0>

supply chain from the very first request for a product or service through to an intensive market dialogue on the solutions needed. This notably includes the possibilities for reuse and recycling of the materials on offer.

One prominent and advanced example is the work undertaken on office furniture for the Dutch government with a clear focus on redeployment of existing furniture and prolonging the lifetime of furniture. The same project also covers pilots for circular procurement of IT equipment, construction, textiles and catering. It started with a commitment of the participating public organisations to implement at least one or two pilot call for tenders each. As a support structure, the national government established a Circular Procurement Academy which holds a series of meetings each year in which public contracting authorities discuss their experiences with circular procurement. Participation of at least 2 people is requested, ideally a procurer and a project manager or sustainability manager. Participation is free of charge, but quitting the academy before the last meeting results in a penalty fee. Beyond exchanging best practices, the academy facilitates peer consulting groups and an online procurement forum amongst the participating public organisations. To upscale these pilot initiatives, there is a clear need for a harmonised definition on what circular procurement means, so that procurement can be made in confidence and with no risk for legal complaints and consequences when selecting an offer. Because there is no standard approach yet, an objective assessment of circular criteria is still a challenge. A clearer political framework could achieve both larger economy of scale and environmental benefits.

3.4 Taxation

Green Budget Europe, the European expert platform on environmental taxation and green fiscal reform, recently published a short policy guidance with practical steps on how to enhance the EU circular economy package through economic instruments, including examples from different countries and regions.²⁸ Green Budget Europe calls on the EU and Member States to ensure:

- A higher share of environmental taxes in order to achieve at least the 10% of total revenues envisaged in the Europe 2020 Strategy;
- A tax shift away from labour and on to resources and pollution at the national level;
- Reduced rates or exemptions on VAT for reuse and repair activities, for example;
- The mapping and phase-out of direct subsidies and tax breaks to products and services which hinder reuse, recycling and innovation.

More ambitious indicators within the framework of the regular discussion on national economies and budgets (namely the so called [European Semester](#) process) are also needed to align the general economic policies in EU member states with clear objectives in the field of resource efficiency and the circular economy. An inventory of instruments applied in EU member states on taxation of natural resources and pollution was compiled by the Institute for European Environmental Policy and is available together with more studies and data on environmental taxation online²⁹.

The impact of a tax shift from labour to consumption and natural resource use is also the subject of a recent report³⁰ by The Ex'tax Project in cooperation with Deloitte, EY, KPMG Meijburg and PwC. '[New era. New plan. A fiscal strategy for an inclusive circular economy in Europe](#)' modelled the impacts of a tax shift scenario in the period 2016-2020 in 27 member states of the European Union. The GDP and employment results are positive in all countries. By 2020, GDP levels are on average 2.0% higher and employment levels 2.9% higher than business as usual, equating to 6.6 million more people in employment.

Based on the modelling results, the integrated impact of the scenario on financial capital, natural capital and social capital was assessed. The Ex'tax Integrated Value Added Statement includes the financial capital

²⁸ See here: <http://green-budget.eu/the-circular-economy-practical-steps-to-enhance-the-eu-package/>

²⁹ http://ec.europa.eu/environment/integration/green_semester/studies_en.htm

³⁰ <http://www.ex-tax.com/new-era-new-plan/>

value (economic growth), as well as the external benefits to society in terms of social capital (the health impacts of employment versus unemployment) and natural capital (health impacts of lower carbon emissions, reduced pollution levels because of lower energy resource use and water savings).

These findings suggest that a tax shift from labour to natural resource use and consumption is a viable strategy to align tax systems with the Europe 2020 Strategy and the UN Sustainable Development Goals for 2030.

4. Policy recommendations

The policymaking process at EU level does not foresee for the time being a comprehensive review and reshape of the existing European product policy regulatory framework. Instead, the EU Action Plan for the Circular Economy announces 54 different policy measures to be implemented during the current mandate of the European Commission to mid 2019 – mainly building on existing instruments, their optimisation and synergies. However, the European Commission plans to “examine options and actions for a more coherent policy framework of the different strands of work of EU product policy in their contribution to the circular economy”. A communication on the results of this analysis is expected in the course of 2018 and could be linked to a lot of other ongoing processes and measures, such the evaluation of the pilot phase of the (product) Environmental Footprint methodology, so-called fitness checks of EU chemicals legislation and the EU Ecolabel.

Although the EEB considers the EU level as the most effective and relevant to reform product policy and adopt single market policy measures towards a circular economy, there is also room for manoeuvre at national level. This holds true in terms of influencing European policy decisions, of course. But EU member states could also pave the way through own initiatives or together with like-minded countries, especially through concerted action if no action is taken by the EU institutions. Multiplying and improving national approaches such as the Italian mandatory targets for green public procurement or the reduced VAT for repair services in Sweden can be an effective tool to set the scene for future EU policies.

Before suggesting policy recommendations based on the considerations and proposals from the above chapters, we wish to highlight some interim conclusions for the transition to a circular economy in Europe:

- The existing EU product policy framework is neither perfect nor complete, but provides most of necessary instruments and allows for further improvements. The measures foreseen in the EU circular economy action plan already provide important opportunities to implement significant steps towards a more coherent and effective approach.
- Even industry stakeholders and policymakers who call for better or less regulation at EU level advocate for a better alignment of the different product policy instruments. This provides a good starting point for the discussion.
- Integrated push and pull approaches, exemplified by the Ecodesign and energy labelling schemes, have delivered significant achievements with regards energy saving and green house gas emissions that could be built upon and expanded with respect to resources conservation and the circular economy beyond energy related products and beyond energy and climate policy. Sectors such as food, textiles or construction might need a tailored approach that can be better integrated into their existing legal framework while still building on the same dynamic combination of push and pull instruments.

4.1 Immediate, short term opportunities

- Ensure that mobile phones are added to the Ecodesign Working Plan as an iconic example to

- demonstrate how the policy can deliver on resource use aspects;
- Set a collaboration between EU member states and progressive business to kick-start the definition of horizontal Ecodesign requirements for the market uptake of recycled plastics under the EU Ecodesign Directive;
- Establish mandatory information requirements for producers to facilitate and promote longer lifetimes and maintenance, repair and reuse, remanufacturing and recycling for all implementing measures under the Ecodesign Directive, but also at national level if the EU level fails to deliver;
- Fulfil the request from the Environmental Council (conclusions 20 June 2016³¹) to conduct an analysis of potential design requirements for non-energy related products which are currently outside the scope of the Ecodesign Directive but could benefit from the same type of regulatory approach;
- Support ambitious minimum requirements for Extended Producer Responsibility (EPR) schemes to be established in both the EU Waste Framework Directive and the Packaging and Packaging Waste Directive, including EU-wide criteria for the modulation of EPR fees;
- Implement large scale pilots on circular procurement and set up incentive and support structures for public procurers, e.g. based on the experience from the Circular Procurement Academy in the Netherlands;
- Pressure the European Council to discuss the Commission's proposal for legal guarantees and other aspects of contracts for online and other distance sales in the context of the EU Circular Economy Package;
- Push for the introduction of a lifespan approach to differentiate the legal guarantee period for different products with the burden of proof to be put on the manufacturer. Reject the current proposal from the European Commission to fix two years as a general maximum period for legal guarantees on all tangible goods;
- Support the extension of an EU database for all products covered by Ecodesign and energy label, as it exists in other economies, building on the database now agreed under energy label reform in 2016/2017, and allowing for the integration of supplementary relevant information on durability, reparability, recyclability and other environmental performances.

4.2 Longer-term improvements

- Follow up on the implementation of the Ecodesign Working Plan 2016-2019 and scrutinise each upcoming preparatory study for new or revised product regulations to see if aspects of reparability, durability and recyclability have been duly investigated;
- Evaluate the performance of the existing EPR schemes at national level and how their governance and financial structure could be improved, including the possible integration of deposit schemes, voucher systems or reuse programmes;
- Establish a mandatory 'best value for money' principle instead of the lowest price only in all public procurement at national level and make use of the new circular economy related EU criteria for GPP and Ecolabel, such as for computers or furniture, when updating the national criteria;
- Define clear criteria and metrics to evaluate circularity and sustainability of business models, building on public and corporate procurement experiences striving to promote circular economy;
- Align and finally integrate the approaches of the different EU studies investigating the same product groups to develop consistent classes of environmental performances which could then be used for setting, for example, Ecodesign requirements, Green Public Procurement and Ecolabel criteria;
- Reduce taxation for contractually repairable and upgradable products and for reuse and repair activities;
- Review all forms of financial or taxation schemes to discourage products and services that hinder reuse, repair remanufacturing and recycling;
- Integrate a lifespan approach towards the system of legal and commercial guarantees in national consumer legislation, encouraging better repair options and availability of spare parts instead of replacement of the product or financial compensation in case of product failures;
- Develop adequate standards and tools so that economic operators have access to sufficient information on the presence, location, concentration of hazardous chemicals in products and materials recovered from waste;
- Set up a European, national or multi-national pilot programme to design and test the use of an EU harmonised product information system in specific sectors and value chains such as appliances, furniture or automotive, which could start as collaboration between interested member states

³¹ <http://www.consilium.europa.eu/en/press/press-releases/2016/06/20-envi-conclusions-circular-economy/>

- leading to a European integrated solution;
- Ensure a higher share of environmental taxes to achieve at least the 10% of total revenues envisaged in the Europe 2020 strategy and outline a further shift away from labour taxes to resources and pollution at national level;
 - Advocate for more ambitious indicators within the framework of the European Semester to align the general economic policies in EU member states with clear objectives in the field of resource efficiency and the circular economy.



European Environmental Bureau

Boulevard de Waterloo 34
B-1000 Brussels, BELGIUM

Tel +32 2 289 1090

eeb@eeb.org | www.eeb.org