Sustainable Products Initiative
Response to Inception Impact Assessment

November 2020

Sandbag welcomes the Sustainable Products Initiative (SPI), with its proposals to extend the scope of the Ecodesign Directive and establish principles to regulate the sustainability aspects of products. These measures are particularly relevant for emissions-intensive products, which will be the focus of this feedback.

Certain sectors rely heavily on commodity materials (such as steel, cement, concrete, aluminium, fertilisers and plastics), the production of which relies on large amounts of energy, mostly from fossil fuels. The **decarbonisation of these emissions-intensive sectors is feasible, but only through the full exploitation of material efficiency and demand side measures**. For this reason, there needs to be a better integration of climate and materials policy. The current disjoint between the two was illustrated by the Impact Assessment of the 2030 climate target, which did not include in its calculations the emissions savings from circularity measures estimated in the CEAP. The SPI should seek to bridge this gap by capturing the synergies between decarbonisation and circularity. Transforming energy use in heavy industry will often rely on technologies that are currently at a pre-commercial stage. The SPI should ensure that all material efficiency levers are deployed early on, so as not to let the burden of decarbonisation lie solely on as-yet uncertain technologies.

For sectors using emissions-intensive commodity products, possibilities exist for more circular value chains that will reduce resource consumption and greenhouse gas emissions. However, **barriers to the uptake of these circularity levers exist**, as identified in Sandbag's recent report *Relaunching a Sustainable Industrial Sector*.[1] **Inadequate collection and sorting infrastructure** means that opportunities to recycle are not being exploited to their full potential. For some products, **the value of recycled materials is too low to justify the cost** of recycling. Production practices may result in **contaminated recyclate** which cannot be used, as is for example the case when steel scrap is contaminated with copper. Often, **end users of products do not have enough information** to know whether and how the product should be reused or recycled. There is also the issue of the continued production of non-recyclable materials even when alternatives exist. While improving consumer access to information is one important part of encouraging the take-up of more sustainable products, **information requirements and other soft tools are not sufficient** to bring about the wide-reaching changes in product design, use and disposal which the EU's circular economy ambition requires. In addition, as many of these barriers to circularity are non-price barriers, **the EU ETS or other pricing instruments are not sufficient** to bring about change at the required speed on their own. Regulatory measures are therefore needed to support the development of low-carbon products and to dissuade and prevent practices that limit the circularity potential of emissions-intensive materials.[2]

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[1] Sandbag (2020). Relaunching a Sustainable Industrial Sector. https://sandbag.be/index.php/2020/05/28/2020-industry-report/

[2] Sandbag (2020). Relaunching a Sustainable Industrial Sector. https://sandbag.be/index.php/2020/05/28/2020-industry-report/

The SPI will need to set a policy framework that can cover a wide variety of products and sectors, addressing many facets of product design, inputs, reuse and disposal. **The framework should establish legal requirements supported by appropriate technical standards**. The Ecodesign Directive is therefore an appropriate vehicle for the SPI as it will allow for a focus on regulatory instruments. The scope of the SPPI should be as large as possible and include provisions targeting both the materials producing sectors and downstream industries.

The extension of the Ecodesign Directive should allow for the consistent measurement of the sustainability of products, enable comparison between different products, and ensure the enforcement of product sustainability requirements. While the current Directive focuses on energy efficiency (an aspect which should be maintained for the expanded product scope), the extended version will need to **measure, compare and enforce circularity and carbon-intensity aspects of products**. This requires an **extended life-cycle approach** which holistically assesses the social and environmental impact of products, during their production and use but also through disposal and end of product life. To allow for a coherent measurement of product sustainability and for the comparison of products, a **digital product passport** could be introduced to record and convey data relating to a products sustainability.

The structure of the Ecodesign Directive, with its **horizontal framework** prescribing work plans of priority products, and **product-specific regulatory implementation measures** developed under each work plan, lends itself particularly well to the needs of the SPI. The horizontal framework could cover sustainability principles such as **extended producer responsibility**, **definitions around recycling** (e.g. differentiating between pre- and post-consumer recyclate), and a **circular economy hierarchy** where value retention and the avoidance of consumption is prioritised, with recycling being the final option in the hierarchy. The horizontal framework could also designate what **information categories should be included in a digital product passport**, e.g. product origin, material composition, chemical substances, product assembly, possibilities for design, repair, reuse, refurbishment and dismantling, and end-of-life dismantling options.

Underneath this horizontal framework, vertical work plan pillars should deal with sector-specific sustainability requirements, by implementing **product-specific technical regulations**. The sector-specific pillars of the SPI should cover all of the key sectors listed in the Circular Economy Action Plan, including packaging, batteries and construction products. **Coherence between the SPI and the CEAP** is important to ensure that all priority products are covered to the same extent and that there are not gaps within the EU's circular economy policy framework. For sectors where sustainability is already (partially) covered by other legislation (for example the Construction Products Regulation), the **existing legislation should be brought under the SPI** and adapted so that they can act as the equivalent of regulatory implementation measures, designating mandatory sustainability requirements for products.

Mandatory sustainability requirements should relate to a range of climate and circularity indicators of products, such as **embodied carbon content, percentage of recycled content, reusability, toxicity, recyclability, demolition and dismantling**. Sustainability requirements are most relevant for products that can be decarbonised and will have a role in the climate-neutral circular economy of 2050. However, other products are inherently unsustainable and should be substituted for other products. A clear example is virgin plastics, particularly those that cannot be recycled. **Limiting the consumption and encouraging substitution of such products will require additional policy instruments** to discourage their use, such as a tax on non-recycled plastics. Such

instruments could be included within the SPI or developed complementarily under the broader scope of the CEAP.

Case Studies: material efficiency measures in the construction and automotive sectors

Steel and cement are very emissions-intensive products that nevertheless have the possibility to become more circular, reducing GHG emissions in the process. The construction and the automotive sectors are the two biggest consumers of finished steel in the EU, while the construction sector is also the main consumer of cement. Both are covered by existing regulations that only partially and inadequately address sustainability issues. As such these sectors would be prime candidates for the priority work areas of the SPI.

The construction sector

There is significant potential to reduce the demand for steel and cement at all stages of a building's life cycle. The **Construction Products Regulation**, currently under review, should be brought under the scope of the SPI and tasked with setting product-specific sustainability requirements for construction products.

An IEA report[3] estimates that in the year 2050, improved practices at the design and construction stages of buildings could amount to a reduction of global steel demand of 2.5%, relative to a 'Stated Policies' baseline. **Reducing over-specification in construction design** (structural steel) and construction products (cement quantity in concrete) will be essential. Denmark, for instance, allows concrete with half the amount of cement of other Member States. Moving towards performance-based technical standards could facilitate this shift towards a more efficient use of materials in construction, while still ensuring health, safety and sustainability objectives are met.

Portland cement clinker can be substituted in varying degrees with other less carbon-intensive materials such as pozzolans and calcined clays. For some applications, a more radical extension of clinker substitution principle might involve entirely replacing Portland cement with wood or low-carbon precast materials.[4]

The IEA estimates that **extending the lifetime of buildings offers the largest reduction potential** for steel demand (a potential 6% reduction in global steel demand in 2050).[5] Commercial buildings in particular are often demolished before the end of their technical lifetime. Considerable reductions in materials demand could be achieved by refurbishing and repurposing these buildings instead. The SPI should consider how it can incentivise lifetime extension when this does not lock in much higher operational emissions. Adopting demolition fees or offering tax rebates for refurbishment are potential options.

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[3] IEA (2020) Iron and Steel Technology Roadmap, https://webstore.iea.org/download/direct/4208

[4] Sandbag (2020). Relaunching a Sustainable Industrial Sector. https://sandbag.be/index.php/2020/05/28/2020-industry-report/

[5] IEA (2020) Iron and Steel Technology Roadmap, https://webstore.iea.org/download/direct/4208

At the end of life, priority should be given to materials reuse. **Direct steel reuse** (without remelting) across all sectors can bring a 3% reduction in global demand for steel in 2050,[6] so incentives should be aligned to make reuse a cost-effective option for construction companies. To enable reuse while ensuring safety and quality control, the SPI should enforce an **adequate labelling of materials** through the digital product passport. Within the construction sector, it can require **more careful demolition and dismantling techniques**. When reuse is not possible, steel should be recycled and used as input for secondary steel production.

The automotive industry

The SPI can also ensure that the automotive industry, the second consumer of finished steel in the EU, contributes to material efficiency efforts. After years of emissions reductions, average emissions from new cars in the EU have stagnated between 2015 and 2019, as electrification and energy efficiency measures were offset by a growing appetite for increasingly heavy vehicles.[7] In the first half of 2020, SUVs represented 39% of car sales. Electrifying the European vehicle fleet while allowing it to become increasingly heavy is nonsensical. The SPI can contribute to curbing this tendency. The existing Regulation on CO_2 emission performance standards for passenger vehicles should be brought under the SPI framework and **include additional sustainability requirements such as lightweighting** (vehicle mass reduction). The IEA estimates that lightweighting in cars and trucks can achieve a 2% reduction in global steel demand in 2050.[8] Under the current regulation, a manufacturer that sells heavier vehicles has a more lenient emissions target. Lightweighting can be achieved through an **increased take up of high-strength steel and alternative light materials**, but most of all by **encouraging the design and sale of smaller cars**. The emissions savings from the avoided steel production will add themselves to those simultaneously achieved by consuming less fuel or electricity.

The automotive industry could also provide a good **testing ground for steel recycling**. With its already existing dedicated network of professionals for product end-of-life management, it could allow the collection of uncontaminated high-grade steel paving the way to high-grade steel recycling. This could be supported by end-of-life requirements for cars under the SPI.

Sandbag is a non-profit think tank which uses data analysis to build evidence-based climate policy. We focus on EU policies such as the EU ETS, the Effort Sharing Regulation and emissions reductions in industrial sectors.

Rue du Trône 60, 1050 Ixelles, Belgium www.sandbag.be

[6] IEA (2020) Iron and Steel Technology Roadmap, https://webstore.iea.org/download/direct/4208
[7] The average mass of cars in the EU went from 1, 375 kg in 2014 to 1,420 kg in 2019.
[8] IEA (2020) Iron and Steel Technology Roadmap, https://webstore.iea.org/download/direct/4208