Discussion paper

Building blocks for sustainable construction through a revised Construction Products Regulation

Brussels, 29 March 2022

Summary

ECOS calls on policymakers to propose an ambitious revision of the Construction Products Regulation (CPR), fully in line with the horizontal principles of the forthcoming Sustainable Products Initiative (SPI), as a one in a decade opportunity to make sustainable construction products the norm.

To do so, policymakers must ensure that the CPR:

- Is shaped by a **new governance system with environmental protection at the core** of its functioning, where worst performers are pushed out of the market.
- Introduces **requirements on environmental performance and circularity** within the legislative text.
- Relies on **standards and the standardisation system** to develop solid assessment and measurement tools to support legal requirements.
- Ensures **effective disclosure and communication** of information across the whole value chain, using a single instrument – digital product passports.
1. Introduction

In the EU alone, buildings, and construction products - their components, are responsible for 36% of carbon emissions, a share that almost equals the annual carbon footprint of the entire African continent. Across EU Member States, the environmental impact of construction goes beyond carbon emissions: construction products are responsible for 50% of all extracted materials, 33% of water consumption and 35% of waste generated. The picture is not complete without stressing the significant lack of circularity, coupled with health risks caused by harmful chemicals, such as PFAs and PCBs, still embodied in our buildings.

Despite a growing number of companies bringing more sustainable materials to the market, the circular approach is still far from mainstream. Timely action is long overdue and is needed now. To avoid undershooting our EU climate targets (ie. -55% by 2030), policymakers must not delay addressing the existing imbalance between the share of embodied environmental impacts caused by the construction industry all along its value chain and the increasing urgency of climate commitments concerning all sectors of our economy.

For sustainable construction products to become the norm in the EU, the primary focus of decision-makers must be on removing unnecessary, inefficient, toxic and wasteful products from the EU market. Several horizontal initiatives are currently ongoing at EU level: the Circular Economy Action Plan (CEAP) pledges to halve waste generation across a variety of waste streams, while the Sustainable Products Initiative (SPI) will horizontally make sustainable products the norm.

Considering the urgency of tackling the environmental impact of the construction sector, policymakers must operationalise these upstream and downstream initiatives into ambitious legislative measures addressing construction products directly. The revision of the sector-specific legislation on construction products – the Construction Products Regulation (CPR) – represents a once-in-a-decade opportunity to reverse the embodied environmental impacts of construction products.

Defining a sustainable path for construction products

Sustainable construction products are products that use as little resources as possible and create as little waste and other pollutants as possible. They are:

- **Durable, easy to repair, refurbish and upgrade**, therefore easy to dismantle and deconstruct from building structures.
- **Low in embodied carbon**\(^1\), meaning the total impact of all GHG emitted from material extraction to end-of-life is substantially reduced.
- **Resource-efficient**, meaning that products are reusable and reused in practice, made with maximum recycled content and their end-of-life is optimised.
- **Toxic-free**: harmful chemicals are phased out, to minimise environmental and health impacts on the indoor and outdoor environment, as well as during reuse and end-of-life management.

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\(^1\) Embodied carbon refers to the GHG emissions across the entirety of the product’s lifecycle. This encompasses accounting of emissions associated with extractions, manufacturing, transporting, installing, maintaining and end-of-life management of construction products.
1.1 Breaking the stereotype: regulating the product-level

Buildings are a sum of their parts, i.e. construction products and other components, in functional, environmental and health terms. As straight forward as this might seem, the priority of building-level legislation has long prevailed in setting targets and measurements on functionality and environmental performance. This has left construction products and their impacts largely unregulated from an environmental perspective.

With EU building-level legislation slowly moving towards regulating Whole-life Carbon and circularity during this decade, it will be necessary to shift our perspective and begin to scrutinise where emissions and other embodied impacts come from. Unsurprisingly, this will mean that product-level legislation, namely the CPR, will have to support decarbonisation and circularity of the whole sector just as much as building-level legislation. The same principle applies to waste and chemical legislation. Without the introduction of design requirements upstream (at product level) within the CPR, both the EU waste prevention and non-toxic environment objectives will be put in danger.

2. Making the governance system of the CPR fit for the climate challenge

2.1 Shortcomings of the current system

At the core of the CPR is the need to ensure the proper functioning of the Single Market, by declaring the performance of construction products against essential characteristics developed in the 7 core basic work requirements (BWRs)\(^2\). With regards to environmental objectives BWR7 covers the sustainable use of natural resources in construction works, including principles on circularity and durability. While defining the relevant elements towards the BWRs remains outsourced to the standardisation system, the competence to operationalise and implement these principles belongs to Member States within their national/regional building legislation and codes. In practice, this means that the CPR “as is” does not set any requirements in terms of environmental performance, leaving the actual policymaking in the hands of Member States across Europe. This governance framework has shown significant shortcomings due to:

- Difficulties in interpreting the exact scope of BWR7 Resources and translating the latter into concrete and measurable outcomes with regards to the highest levels of circularity for which a market increase is foreseen\(^3\). For instance, with BWR7 not explicitly mentioning reuse, critical uncertainty has been created on whether the CPR de facto applies to used construction products or not.

- A failure in implementing BWR7 across Member States. As reflected upon by MS themselves, these aspects have so far hardly been legally referred to and developed in the Member States\(^4\) or in mandatory harmonised standards defining essential

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\(^2\) See Annex I - CPR
\(^3\) Nordisk Ministerråd - Nord2021-014 (norden.org)

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characteristics and related measurements. As a matter of fact, only a small number of Member States have regulatory requirements for sustainability and circularity in place.

- **Unsuitable standards developed on construction products’ embodied environmental impacts.** This is characterised by:
  - The absence of harmonised standards defining essential characteristics relating to BWR7 such as use of secondary raw materials or durability, leading to a lack of disclosure of environmental performance.
  - Existing standards being largely outdated, posing substantial barriers to circularity, for instance relating to the uptake of recycled content. They also suffer from a critically low acceptance rate by the Commission, with no harmonised standards being cited in the OJEU in support of the CPR for more than 2 years.

**Environmental Product Declarations: an inadequate system to measure and communicate environmental performance**

Lacking an obligation to measure the environmental footprint of construction products, voluntary standards based on the Life Cycle Assessment (LCA) methodology - Environmental product Declarations (EPDs) – have been created by and for standardisers through core standard EN 15804 on the environmental assessment of construction products.

This flawed system for voluntarily providing environmental information on products has to date been used to plug a gap in the current CPR, where currently only one piece of information relevant for intended use is to be disclosed in the Declaration of Performance. Despite more than 10 000 verified EPDs developed to date, different schemes across regions and Member States apply different rules, creating an overall fragmentation in the comparability of products, even within the same product group.

Current developments propelled by Commission initiatives point into the direction of making EPDs the go-to instrument for declaring product information, notably developed per product category group. **We call on policymakers to consider the negative effects that will materialise if the use of EPDs will be made mandatory and used as a tool for communicating environmental performance and for decision-making.** In particular:

- No reliability of information can be ensured.
- No comparability of environmental performance will be possible, including within the same product category.
- A burdensome, opaque, and fragmented framework, especially to non-experts including policymakers and citizens, will be perpetuated.
Established as an interim solution to tackle the existing “standard blockage”, the ongoing CPR Acquis process represents a positive first attempt of the European Commission in taking more leadership in shaping the development of technical specifications for different priority construction product categories based on Member States’ regulatory needs. Unless mandatory performance requirements, including on environmental parameters, are introduced in the CPR text itself, the current shortcomings will be perpetrated within the new revision, leaving no room for sustainable products to become the go-to option on the market. Shifting conformity to compliance with requirements in the CPR, supported with strong standards for measuring and reporting will be the only way to achieve sustainable construction products.

2.2 How would an appropriate governance framework look like?

To ensure that the governance system of the CPR tackles embodied environmental impacts of construction, the revision of the CPR must bring change to the way the Regulation addresses sustainability and to the way standards are used. For this reason, it is essential that:

- Clarity is enhanced with regards to environmental and circularity objectives:
  - Environmental protection is brought to the core of the CPR: concerning its legal basis, together with art. 114 TFEU – and to fully satisfy market harmonization objectives, a reference to art. 191(1-2)\(^5\) should be introduced.
  - Definitions should be introduced within the CPR itself and beyond BWR7 (Annex I) on key elements such as embodied carbon, design for recycling and reuse, reuse of construction products, to mitigate existing interpretation uncertainties concerning the scope of the CPR’s environmental principles and their translation into standards and, most of all, requirements.

- A top-performer approach is adopted through EU-level horizontal minimum product requirements within the CPR itself: horizontal requirements (see section 3) will have to be matched with tailor made product-group requirements, developed to ensure inherent product safety and compliance with environmental requirements.

- Worst performers are gradually phased out of the European market, through a more transparent and participatory process developed on the basis of an eco-design like framework: this will entail developing within the legislative mechanisms of the CPR a workplan for gradually setting performance benchmarks for key priority streams, defined through an initially agreed workplan and following proper impact assessments. While the possibility to set benchmarks/class of performances through delegated acts already exists within the CPR (see section 3), this should be done in a structured way as to ensure coherence with environmental objectives.

- Standards properly support measurement and assessment of horizontal requirements, adapted per product category, without substituting themselves to effective product requirements within the CPR.

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\(^5\) Defines the objectives and principles of EU environmental policies
Reuse – the forgotten link to avoid material consumption at source

Reuse of construction products is a growing reality for the construction sector across Europe. To focus on achieving circularity, the primary objective pursued by the CPR under its BWR7 should be to build products that last longer, enable reuse and prevent waste generation. Yet, in practice, this does not happen. Reuse is not clearly defined under the CPR, the lack of quality assurance acts as a barrier to the larger uptake of reused materials.

For these reasons, we call on the Commission to tackle reuse from a holistic perspective, by:

• Providing a horizontal definition of reuse, specific for construction products.
• Clarifying the necessary steps for CE marking, including development of the appropriate standards to measure and test their effective performance (notably for structural products).
• In view of setting future requirements, introducing monitoring requirements in the CPR to monitor flow of materials which are reused in practice.

3. How can the CPR mirror SPI requirements

Expected to cover a wide scope of products on the EU market, the SPI will extend eco-design requirements beyond energy-related products, by ensuring sustainable products become the norm on the European Market. To make sure the same level of ambition is maintained for construction products, it is essential that the CPR mirrors key legal requirements on environmental performance, as well as methodologies and tools. In our view, this can only be achieved if the elements listed below are introduced in the upcoming revision of the CPR.

3.1 Streamline the formula information requirements and performance benchmarks to drive sustainability

Mandatory disclosure of information all along a product lifecycle - supported by a robust methodology, will be essential to ensure that priority areas, which have the most potential to decrease environmental footprint, are identified. Increased availability, clarity and accessibility of information to all relevant actors across the value chain will improve information flows and therefore sustainability relevant decision-making throughout a product lifecycle, including at the building-level.

However, information can’t do it all, meaning that the simple disclosure and identification of environmental hotspots will only allow for actual environmental performance improvements if
appropriate requirements and limits are set on inherent characteristics, such as carbon footprint and resource use.

Despite remaining unexploited, a built-in mechanism already exists in the CPR: art. 27(1) gives the possibility to the Commission to adopt delegated acts to establish classes of performance in relation to essential characteristics. Indirectly this equals to allowing the CPR to allow restriction of market access for products not reaching the said threshold levels of performance. This also entails that the Commission should consider making it mandatory for manufacturers to inform targeted players in the value chain about the performance levels reached by their products. Further clarifying these elements within the CPR itself will be critical in achieving these objectives.

To overcome the lack of disclosed information and overall deregulation on environmental performance, a common set of measurements and communication requirements is needed within the revised CPR EU-wide legislation. The CPR must:

1. **Strengthen information requirements to ensure disclosure of environmental performance covering the whole life cycle of the product.** This must include:
   - Information on environmental performance, covering indicators such as carbon footprint, resource and water use, full list of chemical substances, all along the value chain.
   - Information on circularity performance, i.e. covering assembly/disassembly (including methods and tools), reparability/maintenance (including instruction on type and frequency of activities), reuse (conditions) and end-of-life handling.
   - Due diligence certificates and proof of sustainable sourcing of risk-prone materials, e.g. timber, critical raw materials, certain metals.

To achieve effective reporting of construction product characteristics, a single harmonised instrument to adequately measure and report environmental performance should be required. If EPDs were to become the go-to instrument for the assessment and disclosure of construction products’ environmental performance, it will be essential to fundamentally amend and improve the following aspects:

- Introduce a harmonised set of measurement and communication rules to ensure the reliability and comparability of results.
- Develop EPD rules for each product category (notably Product Category Rules) for all products, agreed at EU level.
- Ensure benefits beyond the system boundaries (Module D) are not expressed as a deduction from lifecycle benefits in the form of CO2 eq. values, but as product and material volumes or circularity indicators.

2. **Establish complementary minimum performance requirements.** A first horizontal layer of performance-based requirements should be included within the CPR itself, and then developed following specificities of product groups. This must include:
   - Requirements based on benchmark/class systems for environmental performance indicators, allowing for identification and gradual phase-out of worst performers. Any product-specific benchmark should be pre-agreed, regularly updated, future-proof and ambitious enough over time. This benchmarking system would work through a
maximum value on reported environmental impact (i.e. max embodied carbon), per product category, allowing worst performers to be phased out of the market. Considering the urgency of the problem, we suggest tackling the first big-ticket items per functional categories, notably foundations, frames and other forms of superstructures often representing the biggest contribution to embodied carbon.

- **Clearly defined design requirements related to circularity, notably establishing a hierarchy of processes.** This should address:
  - design for reuse and reusability of the product or part of it;
  - minimum recycled content obligations;
  - design for recycling and recyclability obligations\(^6\);
  - design for disassembly and deconstruction\(^7\).

- **In-use requirements ensuring expansion of products’ lifespan.** Such as durability\(^8\), maintenance, repairability and upgradability during the expected lifetime.

### 3.2 Mandate disclosure and establish restrictions on the presence of substances detrimental to environmental sustainability

A significant driver for sustainable products to become the norm on the EU market lays in designing and manufacturing products that are non-toxic, thus free from harmful substances. **Harmful chemical substances in construction products represent a growing problem for our health and for the environment, including at end-of-life.** A recent report by the Swedish Chemical Agency\(^9\) has identified 46 substances regularly used in the manufacturing of Construction Products that are carcinogenic, toxic for reproduction, mutagenic, suspected of being endocrine-disrupting or allergenic. A large portion of these substances are volatile organic compounds (VOC) and semi-volatile organic compounds (SVOCs). While some EU Member States, including Germany, France and Belgium have implemented national rules regulating these issues, at EU level, the CPR does not foresee chemical restrictions for construction products.

In particular:

- The CPR’s reference to REACH (art. 6.5) on information provision only covers a restricted number of hazardous substances that pose harm to health and the environment, meaning that **no construction product-specific restriction exists beyond horizontal REACH restrictions.**
- REACH information is not intended to be used further in the CPR data chain and is not classified as a performance aspect of the product itself, and thus not reported under the existing Declaration of Performance.

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\(^6\) i.e. identification of which products or part thereof and what quantity can be recycled after de-construction.

\(^7\) i.e. the obligation to facilitate separation of different materials/substances during deconstruction/recycling procedures and the obligation to avoid mixed materials where not justified by performance, environmental or safety aspects.

\(^8\) i.e., the obligation to reach state-of-the art durability, in their function for construction works, protected by a warranty (see below obligation to substantiate claims.

\(^9\) Hazardous chemicals in construction products – proposal for a Swedish regulation (kemi.se)
To allow only safe and toxic-free construction products to access the EU market, the CPR should:

- **Require the disclosure of comprehensive information related to chemical use and presence throughout the whole value chain using a Digital Product Passport** (see next section).

- **Restrict substances of concern within the CPR**, in alignment with the objectives of the SPI and the EU Chemicals Strategy, including:
  a. substances having a chronic effect for human health or the environment under a harmonised classification under the EC 1272/2008 CLP Annex VI (candidate list in REACH and Annex VI to the CLP Regulation)
  b. substances that hamper recycling for safe and high quality secondary raw materials.

### 3.3 Ensure effective disclosure and communication of information, through Digital Product Passports

With new information and product requirements being gradually introduced in the CPR, it will be essential to minimise fragmentation of information and enable consistency of reporting, and, ultimately, compliance with requirements (and hENs).

While information to the whole value chain is important to complement and drive minimum requirements and pull the market into the uptake of more sustainable products, sustainability labelling can play an important role, provided that information is environmentally relevant, reliable, understandable, comprehensive, comparable and verifiable. This will become increasingly important if benchmarks and/or classes of performance are developed and will have to convey clear information to all. Currently, definitions of business-to-consumer (B2C) communication and tools are outsourced to the standardisation system, where standard prEN17672 is under development. The latter, in its current form, is more suited for communication towards EPD technicians, failing in providing clarity in displaying information, and lacking comparability of benchmarks displayed.

**For this reason, the CPR should:**

1. Introduce a more comprehensive **CPR product passport template for the Declaration of Performance and other product information** in which all product information can be declared, to reconcile communication tools of environmental performance, chemicals, and circularity under a single instrument.

2. Follow the **principle “no data, no market”**, meaning that, if producers are not able to fully disclose the necessary information, no CE marking and no access to the market is granted.

3. Given the quantity and importance of information to be shared across the value chain, ensure that **product passports are also provided in a digital form**.
3.4 Strengthen enforcement & market surveillance

Articles 56-59 CPR set out procedures relating to the surveillance of the construction products market\(^\text{10}\). Yet, a lack of visible enforcement actions needs to be overcome by increased compliance with the CPR\(^\text{11}\).

To ensure that there are less non-compliant products when it comes to health, safety and environmental parameters, the CPR should:

- **Strengthen market surveillance through comprehensive, effective, and independent performance assessment of products delivered by Member States authorities**, supported by EU level guidance and requirements for disclosure of underlying LCA data to Member States.

- **Mandate the deployment of digital tools** (Digital Product Passport), to increase transparency over the entire lifecycle of a product, while making compliance easy to track at all relevant stages by market surveillance authorities.

- **Ensure market surveillance activities are complemented by a fine and penalties system where relevant.**

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\(^{10}\) it is essential to note that the General Product Safety Directive horizontally covers construction products designed for consumer use not covered by harmonised standards.

\(^{11}\) Microsoft Word - CPR Final Report 15 Sept 2015 (sbs-sme.eu)