BELLONA EUROPA

POSITION PAPER

EPBD WLC Methodology:

The contribution of the construction sector to climate neutrality

The transition towards a climate-neutral society is a complex process that requires careful planning and clear direction. New and revised policies should **promote best practices and support progress towards defined goals**, while providing clarity and certainty for all actors involved. This challenge is especially pronounced in the built environment, which is characterised by wide variability in personal habits, stakeholder involvement, climate conditions, and local practices. It is therefore essential to clearly define the roles, responsibilities, and boundaries of the different levels of governance.

The role of the European Union for the built environment is to provide the general objectives, timelines, and guidelines which must be translated into national and local legislation by the competent authorities. This process for the building sector started in May 2024 when the Revised Energy Performance of Buildings Directive EU/2024/1275 (EPBD) entered into force. One of the most relevant changes from the previous version is the expansion in scope of the Directive from energy performance alone to life-cycle emissions.

While the revised version was adopted in 2024, we find ourselves at a crucial moment as all Member States are required to "publish and notify to the Commission a roadmap detailing **the introduction of limit values on the total cumulative life-cycle GWP of all new buildings** and set targets for new buildings from 2030, considering a progressive downward trend, as well as maximum limit values [...]" (Article 7 (5)). Starting from the publication of the **calculation methodology** in December 2025 onwards, Member States will define their ambitions and timelines for new buildings.

How ambitious is the methodology itself?

The delegated act describing the EU framework for calculating the global warming potential (GWP) of new buildings received feedback during an open consultation, but few changes were integrated into the final version. Before analysing such changes, though, it is important to understand the methodology and its scope.

The goal of the methodology is **defining a common way of calculating the GWP of new buildings** which will have to be disclosed in the energy performance certificate of all new buildings from 2030 onward. In addition, the framework published by the European Commission constitutes the base upon which Member States will define the limit values. Still, the methodology provides a certain degree of freedom to Member States, who can adapt it to the local situation and needs. At the same time, **the framework ensures all emissions from all life-cycle stages are accounted for**, regardless of national choices: **the methodology encompasses all life-cycle stages, building elements, and**

pushes for the creation and use of specific data, favouring Environmental Performance Declarations (EPDs) over generic or default values at all stages.

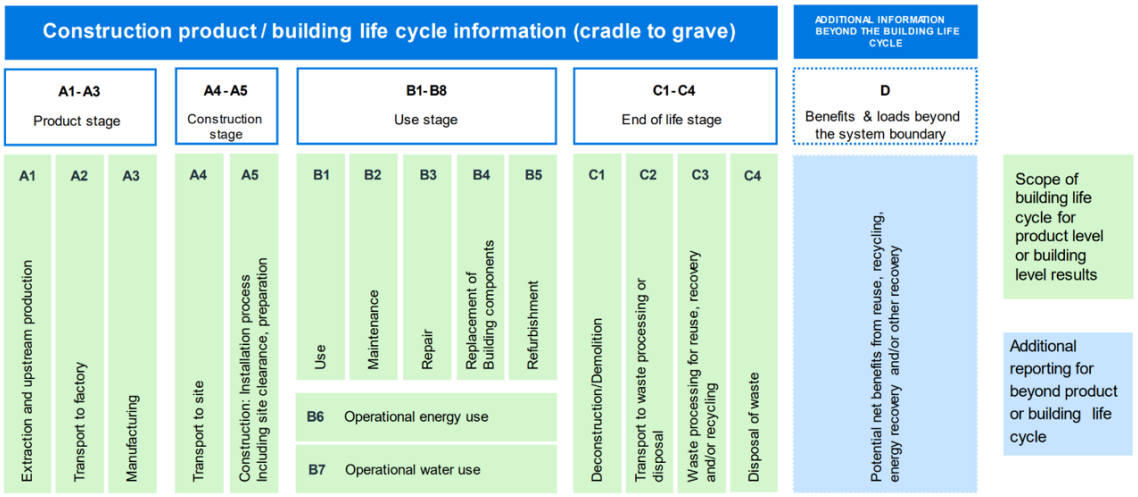

Figure 1. Life-cycle stages and modules of a building[1].

The changes in the final version

The final version of the methodology presents only two major changes; none of Bellona's suggestions has been included. The first change from the draft proposal leaves more freedom to Member States as they can choose which building elements are required in the calculation at higher levels of granularity. Such change does not affect the methodology as all building macro-elements still have to be included (e.g. structure, substructure), but Member States can define the building elements to reflect the local building practices (e.g. foundation piling, beams).

The second change improves the quality of the methodology as it clearly establishes that independent parking structures must be considered as separate buildings. In this regard, the emissions from independent parking structure can be included or not in the calculation. Still, regardless of the choice, their surface area cannot be added to the useful floor area of the building to avoid a "dilution" of the emissions of the building over a larger useful floor area.

Nonetheless, it is important to highlight **one important shortcoming of the methodology**: the absence of incentives for long-lived products over short-lived ones. As a matter of fact, there are several materials and products used in construction that easily last for more than 50 years and their use and maintenance should be encouraged. In addition, not providing the right incentives might lead to the premature demolition and disposal of construction products and building elements, increasing the overall emissions.

1 Technical assessment paper (TAP) for long-term temporary biogenic carbon storage in buildings (with certification rules report) https://op.europa.eu/en/publication-detail/-/publication/d8185ac9-cc06-11f0-8da2-01aa75ed71a1

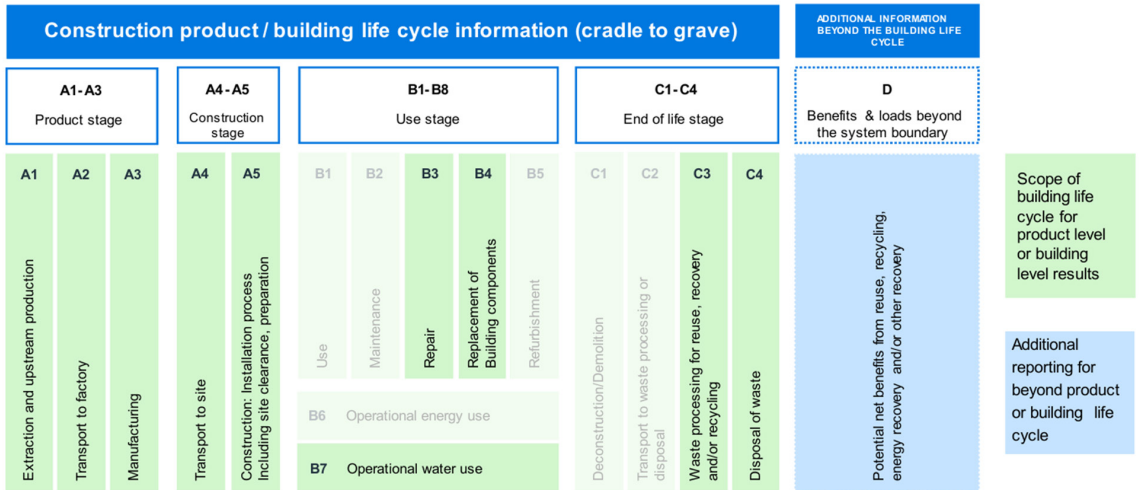

Figure 2. . Life-cyle stages covered by limits in the Danish legislation[2].

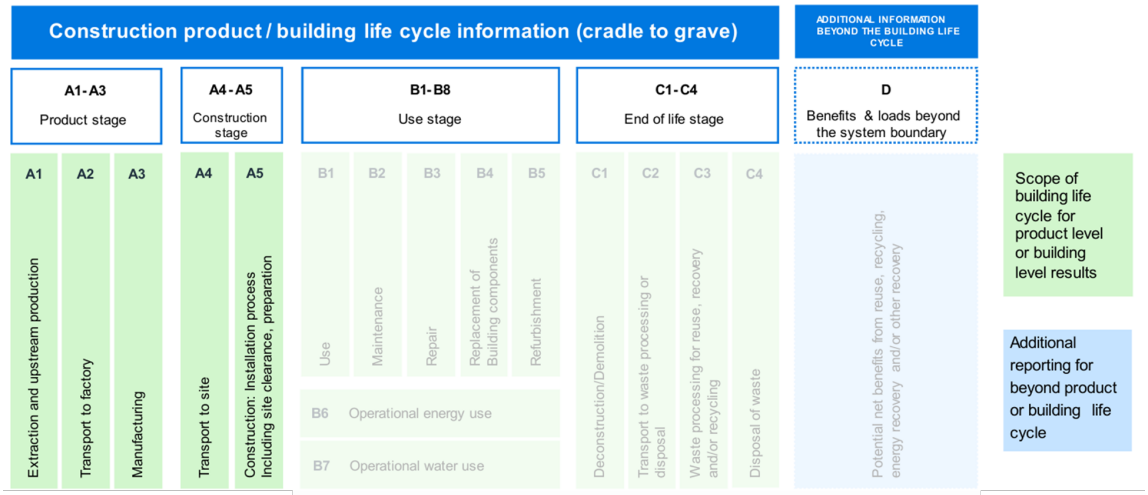

Figure 3. Life-cycle stages covered by limits in the Swedish proposal[3].

In the EU, there are already few countries who have introduced limits on emissions for new buildings or that are in the process of proposing them. Two relevant examples with different approaches in scope are Denmark and Sweden. In Denmark the limits are already part of the legislation, while Sweden is still in the proposal stage. The main difference is noticeable in Figure 1 and Figure 2: Denmark's limits cover most life-cycle stages relevant for embodied carbon (the energy part is treated separately), while the Swedish proposal considers only manufacture of construction materials and products and the construction phase.

In this case, the Swedish approach **does not promote the uptake and development**

2 https://www.bygningsreglementet.dk/
3 https://www.boverket.se/en/start/laws-and-regulations/climate-declaration/the-assignment-on-limit/

of specific solutions aimed at reducing emissions for use and end-of-life stages . The Danish approach, instead, **forces architects to keep in mind the potential recyclability or reusability of the construction materials or products when making a choice**. Similarly, the equipment and machinery used for the demolition and deconstruction will be different whether the emissions are included in the limits or not, also contributing to the success of innovative, low-carbon solutions and the creation of lead markets for them. This last point is especially important as **the business case of specific practices and materials strongly depends on demand signals**. Bellona sees this as a missed opportunity that risks slowing down the ongoing green transition, damaging the competitiveness of European industries, and underdeliver in terms of climate goals: **all life-cycle stages have to be decarbonised to reach climate neutrality in the built environment by 2050**.

Finally, having different limits for whole-life GHG emissions across the bloc reduces data comparability, making it complicated to evaluate the effectiveness of the Directive towards the decarbonisation of the built environment.

In Bellona's view, one of the main objectives of introducing WLC limits for all new buildings is creating strong demand and enable the green transition for three specific sectors of construction: manufacturing of construction materials and products, construction and demolition machinery and equipment, and end-of-life practices. Not including all life-cycle stages is a missed opportunity to create strong lead markets for the construction sector as a whole, failing to realise the strategic potential of the EPBD to improve competitiveness and accelerate industrial decarbonisation.

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