



Environmental performance of buildings – Draft Set of Core Indicators

Overview of the

'Life cycle environ

Macro-objective 1: Gr

1.1 Operational energy consumption

Total primary energy consumption
Indicator:
kWh/m²

Macro-objective 2: Re

2.1 Full Life Cycle Assessment

Cradle to grave LCA
Indicator:
Impact category results

Macro-objective 3: Eff

3.1 Operational water consumption

Total mains drinking water consumption
Indicator:
m³/person/year

'Quality, performa

Macro-objective 4: He

4.1 Indoor air quality

Pollutant emissions
Quantitative reporting:

As previously informed (see [EMO Newsflash 03/2015](#)), the European Commission (DG ENV and DG GROW, with the technical support of DG JRC-IPTS) started in 2015 a [study](#) targeted at **delivering a set of core indicators for the assessment of the lifecycle environmental performance of buildings**. The final goal of the European Commission is to promote the voluntary use of these core indicators as a simpler, common way for assessing and evaluating the environmental impact of buildings. As such this new voluntary system would compete with other already established voluntary evaluation systems, like LEED, BREEAM, DGNB, etc.

The [study is divided into 4 work packages](#) (A to D) and will run until July 2017. The deliverable for **work package A** is the [Working Paper 1](#), which was already published in December 2015 and **identifies the 6 macro-objectives**:

“Life cycle environmental performance’ macro-objectives for buildings”

1. Greenhouse gas emissions from building life cycle energy use
2. Resource efficient material life cycles
3. Efficient use of water resources

“Quality, performance and value’ macro-objectives for buildings”

4. Healthy and comfortable spaces
5. Resilience to climate change
6. Optimised life cycle cost and value

Work package B focused on how to best respond to these macro objectives at building project level **through indicators** and **work package C** on defining a set of core indicators corresponding to the previously defined 6 macro-objectives. As a deliverable for these two work packages recently the [draft Working Paper 2](#) was published, which **identifies an initial draft set of 14 indicators** and describes a number of **“horizontal themes”** that may need to be addressed as part of how the **indicators work as a whole**.

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4.1 Indoor air quality

Pollutant emissions
Quantitative reporting:
✓ CO₂
✓ Total VOCs
✓ Carcinogenic VOCs
✓ R-Value
✓ Formaldehyde
✓ Benzene
✓ Particulates (PM 2.5/10)

Qualitative reporting:
✓ Presence of mould

Macro-objective 5: Re

5.1 Thermal comfort

Overheating risk assessment
Indicator:
(Adaptive) degree hours

Macro-objective 6: Op

6.1 Life Cycle Costing

a. Utility costs
Indicator:
€/yr/m² (30/50 yrs)

At the same time as the afore mentioned draft second Working Paper and as part of the study's working plan, the **European Commission (EC) has launched a [consultation on these initial draft set of indicators](#)**, which will remain open until 7 October 2016. The consultation shall provide stakeholders involved in the building sector with the opportunity to comment on and support the development of a **common EU framework of core indicators**. The feedback from this consultation shall be taken into account in **work package D**, which **will develop guidance and best practices to support the implementation of the proposed "framework of core indicators for the assessment of environmental performance of buildings"**.

The afore mentioned, ongoing [consultation on these initial draft set of indicators](#) is very technical and addressed at experts with practical knowledge in (aspects of) the life-cycle assessment of buildings. To inform and support experts participating in this consultation in addition to the afore mentioned basic [Working Document 1 \("Identifying macro-objectives for the life cycle environmental performance and resource efficiency of EU buildings"\)](#) and the closer to the consultation related Draft [Working Document 2 \("Summary findings and indicator proposals for the life cycle environmental performance, quality and value of EU office and residential buildings"\)](#), a specific [Guide to the Consultation \("Draft common EU framework of core indicators for the environmental performance of EU buildings"\)](#) was provided.

The **EMO secretariat has mixed feelings as to participating in this consultation:**

One has to appreciate that the core indicators apply to and address the building performance (at project stage) – and not construction products – and that with regards to assessing the indicator it is often referred to CEN TC 350 or other European standards. However, the secretariat has always questioned the motivation, need and chances of success of another voluntary "system" that would need to compete with already existing, well-established assessment and valuation systems like LEED, BREEAM, DGNB, etc. Therefore, **given the questions and possibilities to respond, on the one hand participating would likely be interpreted as a sign of support that one does not wish to give.**

At present there are no legal national obligations for full life-cycle assessments of the environmental impact of buildings – at least none that were duly notified – and the European Commission cannot impose such obligations. However, once a voluntary common framework of core indicators has been presented, it is likely the European Commission takes the lack of national obligations as a motivation to try to convince Member States to support the framework and introduce it through legal initiatives. Whether or not such an attempt would be successful remains to be seen. Yet in view of a potential success **one might on the other hand want to participate in the consultation so influence as best possible the content/use of the framework of core indicators.**

Given the limited in-depth own knowledge and expertise on the impact and evaluation of indicators at building level, the EMO secretariat **welcomes feedback from EMO's national experts to collect it, see if a common position could be agreeable and if a participation in the consultation sensible/recommendable**. If an individual EMO participation in the consultation is not considered necessary, the feedback will be useful to feed it into the discussion within Construction Products Europe (CPE), who will most likely contribute to the consultation for the construction product sector as a whole.

As a starting point for this discussion the secretariat has prepared a ["best guess" draft response](#) to the consultation, which is by far neither a recommendation nor an official view. Please send any feedback before 1 September 2016.

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