



Raising standards for consumers

COMMENTARY

Sustainability in the construction sector

A consumer perspective on relevant standards and initiatives



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INTRODUCTION

Since the previous evaluation of the Energy Performance of Buildings Directive (EPBD), ANEC has taken the opportunity to call for the development of a European strategy for sustainable construction. The resulting ANEC position paper “Laying the foundations for sustainable buildings” was published in October 2015. Since then, the EU Commission has launched several related initiatives¹, and a series of related European standards has been elaborated in CEN TC 350 “Sustainability of construction works” with the aim of ensuring the sustainable development of the construction sector.

Our earlier studies and positions² guided our further contribution to those initiatives and most recently to those resulting from the European Green Deal’s focus on sustainable construction. In our recent position on the Revision of the Energy Performance of Buildings Directive – IIA Roadmap, we explain how ANEC sees the planned revision of the Energy Performance of Buildings Directive (EPBD) as a potential opportunity to promote truly sustainable construction and put forward the way in which improvements can be introduced.

In this paper, we now present a review of two standards, recently developed in CEN TC 350 “Sustainability of construction works”, which are of consumer relevance.

¹ E.g. Renovation wave strategy (<https://tinyurl.com/7fx2rmxy>), Circular Economy Action Plan (CEAP), Proposal for 8th environmental action plan (<https://tinyurl.com/b4rjkvcb>).

² See also ANEC position paper “Sustainable construction – a building site without end Alternatives to flawed standards” (<https://tinyurl.com/ty2avtxs>, September 2011).

1 | ANEC's general view on CEN TC 350 draft standards relevant to consumers

The following consumer-relevant drafts of CEN TC 350 are currently under Enquiry:

- **prEN 17672 'Sustainability of construction works - Environmental product declarations - Horizontal rules for business-to-consumer communication'**. Closure of Enquiry 2021-09-02
- **prEN 17680 'Sustainability of construction works - Evaluation of the potential for sustainable refurbishment of buildings'**. Closure of Enquiry 2021-09-09.

Through this paper, ANEC presents its views on these two standards.

Our criticisms of the European Standards developed by CEN on the sustainability of construction, through its Technical Committee 350, were already set out in our [position paper 'Sustainable construction – a building site without end - Alternatives to flawed standards'](#), (September 2011) and remain valid for the most part:

"The LCA-Methodology shows many weaknesses which limit its use for setting environmental indicators or environmental product criteria for regulatory or labelling purposes. For instance, many important environmental impacts do not allow quantification (e.g. biodiversity) or potential impacts are (yet) unknown but should be avoided following the precautionary principle (e.g. persistent organic chemicals - POPs). Another issue is that some of the impacts cannot be aggregated. Hence, LCA methodology based on a functional unit approach does not and cannot provide for comprehensive environmental assessments.

The precision of LCA results is limited by available resources, data gaps and data quality constraints. Further complications are related to different methodological choices (e.g. scenarios for transport or user behaviour, assumptions regarding service life, etc.) and data selections by different LCA practitioners, with industry potentially being tempted to 'embellish' data. The LCA results depend to a large extent on the choices made and the error margin differs widely. The consequence is that LCA studies are often challenged by competing industries."

Standardisation can reduce (but not eliminate) these problems and has – in the meantime - addressed some issues (e.g. data quality: see EN 15941 "Sustainability of construction works - Data quality for environmental assessment of products and construction works - Selection and use of data", currently under Enquiry). However, we sustain our basic criticism of the methodology used and have therefore refrained from detailed comments on the standards in question. Nevertheless, we have contributed to

the work from the outset, on the basis of several studies³, although the reflection of consumer concerns in the TC has been limited. The system of *Environmental Product Declarations* has broadened to a plethora of product TCs but has not evolved into a meaningful instrument for consumer information. Similarly, ANEC is sceptical about the *Product Environmental Footprint* methodology favoured by the Commission.

1.1 | prEN 17672 'Sustainability of construction works - Environmental product declarations - Horizontal rules for business-to-consumer communication'

Publication of prEN 17672 'Sustainability of construction works - Environmental product declarations - Horizontal rules for business-to-consumer communication', as drafted, would be a particular cause for concern.

The communication of LCA indicators to consumers makes sense if a) the indicator is environmentally relevant; b) the difference between two products with regard to the indicator is significant, and c) this difference is visible and classified using benchmarks.

Consumers are already familiar with such benchmarks in the form of the *Energy Label* which shows the performance of the product on a scale indicating the best and worst performing products of the product group. Beforehand, the main environmental impacts and their parameters are identified through a sensible combination of different means: for example, screening LCA and risk assessment. This approach also considers those effects that cannot be recorded by LCA alone for systemic reasons (noise, local effects due to pollutant emissions and similar). These environmental effects can then be quantified or described qualitatively through a communication (e.g. a label) understandable to consumers.

By contrast, the approach chosen by CEN TC 350 does not provide relevant, credible, reliable and unambiguous information that can be used as a basis for decision-making. Basic questions relevant to consumers are insufficiently addressed. Impacts of products on human health and the environment may be addressed only at a voluntary level as an additional environmental impact indicator that (even then) is to be "*used with care as the uncertainties of these results are high or as there is limited experience with these indicators*" (EN 15804 Table 7).

³ "Environmental product indicators and benchmarks in the context of environmental labels and declarations", Öko-Institut, December 2008 (<https://tinyurl.com/28ub2cur>); "Requirements on Consumer Information about Product Carbon Footprint", Öko-Institut, February 2010 (<https://tinyurl.com/7yzy2kes>); "Environmental and health related criteria for buildings" IBO, March 2011 (<https://tinyurl.com/9t49ea3u>).

Despite the questionable choice of indicators based on the underlying EN 15804 'Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products', the draft prEN 17672 allows for communication with and without comparative assertion of the results of the related calculations. However, from a consumer's perspective, a communication of mere numbers is meaningless without the context of the best and worst performing products of the product group.

The document addresses the limitation of comparisons with the major obstacle to conform to the same functional unit and the same functional equivalent, including the problems of defining representative scenarios for use, maintenance, repair and end-of life. It clearly describes the basic conditions for comparison, but then only recommends refraining from comparisons in case these conditions are not met, rather than excluding comparisons.

In case manufacturers choose to use comparative assertions, the approach to compare at the level of a representative product is questionable with respect to the significance of the information conveyed (not to speak of the difficulties in defining an "average product", especially where that product has different end-uses). Additionally, we do not see the usefulness of informing consumers about a performance difference of 5%-10%, as the underlying LCA methodology has a far greater margin of uncertainty.

At the same time, the system is complex and difficult to understand for consumers. The three benchmarking approaches appear to allow everything (including normalised or weighted indicators), as long as the system is in line with the document.

Even the performance classes, with a statement on the difference of higher performing to lower performing average products, can be chosen arbitrarily based on most relevant parameters, and by determining market realistic minimum and maximum values. On the basis of these multiple possibilities (starting with the definition of the product group) a comparison of products through these different programmes hardly seems possible.

In essence, ANEC questions the normative provisions and their underlying concepts. We find they do not focus on the essentials, contradict long-established product information (such as an *EPD Type I* label: the *EU-Ecolabel*, *Blue angel* or *Nordic Swan*) and are cost-intensive. Furthermore, the information given is not suitable for decision making. Hence, we reject the approach taken to communicate the environmental performance of products based solely on LCA and EPDs - likewise the PEF-approach chosen by the European Commission.

Nevertheless, the economic and social aspects must also be considered when assessing the sustainability performance of buildings (and products) as shown in the draft prEN 17680 'Sustainability of construction works - Evaluation of the potential for sustainable refurbishment of buildings'.

1.2 | prEN 17680 'Sustainability of construction works - Evaluation of the potential for sustainable refurbishment of buildings'

The decision to renovate a building, or demolish it and build another, is often determined - especially in the case of commercially-used real estate - by purely financial aspects. These play a dominant role which is why sustainable renovation rates can be increased only if financial aspects or direct financial contributions (e.g. for private clients) are considered and determined in a fiscal framework by the EU.

We welcome that **prEN 17680 'Sustainability of construction works - Evaluation of the potential for sustainable refurbishment of buildings'** sets a methodology for determining sustainable alternatives to the demolition of a building. The difficulty is the lack of information on the building under scrutiny, and the standards referred to (e.g. EN 15978-1) are not necessarily suitable for this. If a building is to be refurbished or modernised or converted to a further use, a closer examination of the building with regard to its state of preservation, undocumented alterations and presence of pollutants cannot be avoided. The analysis of obvious damages, and the consequences of the necessary measures for their removal, have been common practice to now. What is new here is the listing of a broad spectrum of economic, social and environmental aspects that can lead to a differentiated assessment in various steps (although the decision may be different, despite the recommendation from the assessment).

On several occasions, ANEC has pointed out that the improvement potential for energy performance can be assumed to be highest in the use stage – both for new and existing buildings. A meaningful approach in the field of environmental indicators must take into account the options for improvement. If significant efficiency gains are not feasible, indicators are pointless.

Consumption of resources and related environmental impacts must be put into context of the lifetime (i.e. use phase) of the building. The longer the service life predicted, the smaller that environmental impacts can be expected to influence the environmental performance of a building during its life cycle, provided that maintenance scenarios do not have an unreasonable negative influence.

However, when it comes to the (partial) demolition of the building, reuse and recycling of building components/products will be the preferred option with respect to the circular economy.

Of course, recycling is not an end in itself and may not be conducted if environmental burdens outweigh the benefits. For reuse of components/products, practical on-site test methods need to be established to check whether the item still is possible to fulfil its function or whether hazardous substances are involved. Additionally, business models for reuse of refurbished components/products are missing as well as a collection and

take back system. *“The transition to a circular economy is a complex process involving fundamental changes to production-consumption systems that affect the environment”* as the European Environmental Agency already stated in their report 2/2016 on circular economy in Europe.

2 | Tackling the Challenges of Circular Economy in the construction sector

We acknowledge that the Circular Economy Action Plan of the European Commission has placed expectations on the construction industry and standardisation. However, rather than analysing how the issues could be addressed collectively by standardisation, numerous actions are being started by single product TCs. The concept of a circular economy is a strategy to support a sustainable development. Hence, the related existing standards should have been scrutinised on how they address circularity.

A new subcommittee (SC 1) was created under the auspices of TC 350. However, before this new subcommittee was in the position to define basic principles and related terms valid for the entire construction sector, product TCs (e.g. CEN/TC 134 ‘Resilient, textile, laminate and modular mechanical locked floor coverings’) began to create new work item proposals for defining common terms (such as by-product, or bio-based) relative to their specific product(s). By contrast, the underlying concepts are generic and so need to be defined at a generic level first.

Even though the terms used are based on ISO standards, ANEC senses the danger that the standardisation activities in CEN will fragment, making it difficult (or impossible) to achieve a coherent and consistent approach (as already experienced with the issue of sustainability at ISO level).

3 | Conclusion

Determining the measurable contribution of the building to the sustainable development of the built environment is a complex task. It is not simply a matter of summing individual values and communicating them in a fully aggregated way. From the consumer's point of view, it is essential to communicate this overall assessment in an understandable way.

The public presentation of the sustainability assessment of products and buildings can be expected to raise awareness among consumers and so promote demand. Hence labelling must be used in a clear, consistent and meaningful way on the basis of sound and trustworthy information, and not merely used as a marketing instrument.



ANEC is the European consumer voice in standardisation, defending consumer interests in the processes of technical standardisation and the use of standards, as well as related legislation and public policies.

ANEC was established in 1995 as an international non-profit association under Belgian law and is open to the representation of national consumer organisations in 34 countries.

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