

Communicating the importance of embodied carbon



CNCA



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CNCA - Dramatically Reducing Embodied Carbon in Europe

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Media snapshot

Mainstream and EU press analysis

- Coverage from October 2019-now
- Key words: “Embodied carbon” and “bio-based materials” plus
 - Construction
 - Cities
 - Climate change
 - Net zero



Mainstream press: broad discussion, more focused on operational carbon

- While supporting cities' decarbonisation, construction themes viewed more generally in mainstream press
 - Overall carbon emissions
 - Population rise in cities by 2050
 - Changing urban planning to accommodate new ways of life and post-pandemic realities
 - Business opportunities of green cities and benefits of directing stimulus investment towards green recovery
 - Profiling actors in building sector who are supportive
- Reference to bio-based materials almost invisible – “low-carbon materials” or alternatively “nature-based” solutions like green roofs more talked about
- Coverage often framed around problems rather than offering solutions

But before they're even inhabited, buildings have a huge carbon footprint – **11% of energy-related carbon emissions** are embodied within the construction and materials used.

Continuing to **construct buildings from concrete and steel could mean emissions** reach 600 million tons (544 million tonnes) a year by 2050. At the moment, steel and concrete already **account for around 16% of global CO2 emissions**.

But using wood instead **could store up to 680 million tons (617 million tonnes) of carbon a year**, according to research in Finland, since trees absorb CO2 from the atmosphere and using the wood for construction could then lock it away for decades.

Continuing to construct buildings from concrete and steel could mean emissions reach 600 million tons a year by 2050

2045: MEMORIES OF THE FUTURE | CITIES

How cities are going carbon neutral

The dirty secret of so-called 'fossil-fuel free' buildings



The 'embodied carbon' in the building of glass and steel blocks makes them anything but green

In the race to reach net zero carbon by 2050, a commitment to which the **UK is legally bound**, Acan sees the biggest unchallenged obstacle as the energy consumed by construction. Much is made of the proposed energy efficiency of buildings once they are occupied, but so far very little attention has been paid to the carbon emitted in getting them built, and eventually dismantled - from extracting raw materials and manufacturing components, to the toxic byproducts of demolition leaking out in landfill.

Acan estimates that this “embodied carbon” accounts for up to three-quarters of a building’s total emissions over its lifespan, a proportion that is only going to grow as the energy grid becomes increasingly decarbonised with the rise of renewables. With the built environment contributing about **45% of the total carbon emitted in the UK**, the embodied energy of construction has become the vital element to focus on.

The Guardian, April 2021

Climate Capital **Construction sector**

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Quest for 'green' cement draws big name investors to \$300bn industry

Start-ups and venture capitalists are joining concrete makers in trying to solve the hardest problem of carbon emissions

Architecture

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The tyranny of concrete and its costly carbon footprint

Billions of people live and work in buildings made of the material — but it exacts a heavy toll on the environment

Financial Times, May and July 2021

EU press: coverage overwhelmingly linked to policy events or sponsored content

- Consequences

- Opportunities for op-eds and shaping the narrative
- Authors informed about the issue and related policy
- Likely to be seen as biased
- If not vetted by a communications staff member, may have too much jargon

- Embodied carbon and bio-based materials mentioned more frequently, often in relation to European policy

- However, “low-carbon materials” still preferred – and embodied carbon usually only mentioned alongside operational carbon

- Helping Europe to build better buildings -

Buildings in Europe today account for 40% of energy consumed, as well as 36% of greenhouse gases emitted.

Emissions from the manufacturing of materials, transportation, construction, maintenance and deconstruction of a building are known as “embodied carbon.” Carbon emissions linked to the use phase of the building are “operational” carbon emissions.

Making good choices about efficient building practices and materials can have a huge effect on both operational and embodied carbon emissions.

Materials such as mineral wool insulation can for instance help make houses more energy efficient, having a direct positive impact on climate change.

Energy savings through the use of insulation like mineral wool can be up to 200 times greater than energy used to manufacture and install the insulation.



European leaders need to recognise that direct investment in cities is the best way to address the immediate needs of our citizens, whilst also responding to the causes of the climate crisis, writes Rafał Trzaskowski.

Rafał Trzaskowski is the Mayor of Warsaw.

EU to start measuring 'embodied' carbon emissions from buildings

By Nikolaus J. Kurmayer | EURACTIV.com

📅 30 Nov 2021 (updated: 📅 1 Dec 2021)



While the EU has so far focused on reducing energy consumption in buildings, France has adopted a broader approach which also takes into account "embodied" carbon emissions from construction materials. [Shutterstock/ESB Professional]

Languages: [Deutsch](#)

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