

SPOTLIGHT ON CEMENT & CONCRETE

A VERY CONCRETE PROBLEM

Concrete is, after water, the material we consume the most. It is made of a mixture of gravel, sand, water and the key ingredient, cement, acting as the glue holding it all together.

The main ingredient for common cement is the so-called “Portland clinker”. Its 3.2 billion tonnes produced each year contribute to the 8% of global CO₂ emissions for which the sector is responsible. But clinker is far from irreplaceable. It can be substituted with alternatives such as recycled concrete fines or other supplementary cementitious materials (SCM). There are also many solutions to reduce cement use overall, including reuse of concrete products, for example as part of structural building components.

Unfortunately, material efficiency and decarbonisation are underestimated as a solution to reduce the impact of cement. Consequently, there is a troubling disconnect between current practices and policy, and the most effective pathways to decarbonisation.



In the EU, we use more than 2 tonnes of concrete per person per year, of which 325 kg is cement. It makes up over 95% of the CO₂ footprint of concrete products, and its production is often based on burning fossil fuels. These numbers must change, and soon!

ECOS WORKS TO...

- Improve international and European standards to enable the use of new low-to-zero carbon cement products;
- Stimulate the development of new cement specifications and test methods to measure or predict performance, durability and sustainability of cements, including low-carbon alternatives to Portland cements.

IN AN IDEAL WORLD...

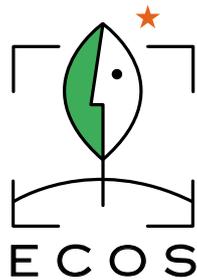
Low-carbon and more sustainable cement and concrete are produced using recycled resources from other industries and locally available materials to replace clinker and greatly reduce emissions.

Cement and concrete producers use high levels of recycled material and alternative constituents, while supporting the introduction of low-carbon and more sustainable cements. At the same time, they minimise downcycling of waste material, and regulatory requirements for environmental performance exclude the least sustainable products from the market. Producers also assume responsibility for the lifecycle impacts of cement production (e.g. EPR for post-consumer waste), while take-back schemes oblige suppliers to accept unused or waste products.

Contractors optimise material efficiency at the design phase, also enabling effective deconstruction and reuse, while green procurement policies are the norm, incentivising more sustainable practices.

End-users of cement and concrete are guided to choose the most sustainable solutions based on comprehensive assessment methodologies, robust communication standards, trustworthy certificates and labelling indicating environmental performance.





ECOS is the only environmental organisation worldwide specialised in standardisation.

We are an international network of members sharing a vision of a clean and healthy environment where people live in respect of the planet and its natural resources, preserving them for future generations. ECOS aims to influence the development of ambitious standardisation, legislation and political strategies to promote the transition to a clean and circular economy that respects planetary boundaries.

ECOS promotes and defends environmental interests in the development of standards at European and international level, as well as in the development of technical environmental product policies. Thanks to nearly 20 years of experience and a strong network of members and experts, our role in these processes is highly valued and widely recognised.

The green line to standards



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