



CEO Statement

Concrete plays a vital part in our daily lives, through many diverse applications and usages. It is, in fact, the most used man-made material in the world, with three tons used annually for each man, woman and child.

Thanks to its properties (strength, durability, thermal mass, affordability and abundance of raw materials), concrete can enhance the sustainability of the built environment (from schools, hospitals and housing, to roads, bridges, tunnels, runways, dams and sewage systems), as it offers wide flexibility to construction professionals to achieve their sustainability goals.

Cement is the essential “glue” in concrete. It reacts with water to bind aggregates (crushed stone and gravel) and sand.

Cement production accounts for approximately 5% of worldwide man-made CO₂ emissions:

- About 60% of these emissions come from the raw materials used in the manufacturing process of cement, the basic chemical de-carbonation of limestone into lime releasing CO₂;
- About 40% of these emissions come from the energy required for the above chemical reaction and to heat the materials to a temperature of about 1450°C.

A long-term committed effort to mitigate the CO₂ emissions from the cement sector

Aware of the vital role that concrete plays and will continue to play in the future of our modern society (with increasing urbanised population and mobility needs development), and aware of the significant challenge that mitigating the CO₂ emissions from the cement sector represents, some forward-thinking, leading cement companies gathered together in 1999 to create the Cement Sustainability Initiative (CSI), a CEO-led project operating under the auspices of the World Business Council for Sustainable Development (WBCSD).

Since 1999, climate change mitigation has been at the heart of CSI strategy and work program and the project has realised the following achievements:

- Develop a common Energy and CO₂ reporting Protocol for the cement sector, based on the well-known GHG protocol designed in cooperation by the WBCSD and the World Resources Institute (WRI);
- Set-up the most comprehensive sectoral database of CO₂ emissions, enabling a rigorous monitoring of the CO₂ emissions of the sector (2015 was the 8th consecutive reporting year);
- Develop technology roadmaps in partnership with the International Energy Agency (IEA) and with the financial support of the International Finance Corporation (IFC) in order to:
 - Identify the available and developing technologies, including breakthrough advancements;
 - Evaluate their potential and their needed implementation level to remain within the 2°C temperature increase in 2050.

As early as 2009, the WBCSD and the IEA issued the very first sectoral Carbon Technology Roadmap, paving the way for other sectors to follow.

- Scale-up the implementation of these technologies through:
 - cooperating with national and regional cement trade associations,
 - expanding the CSI membership (it grew up from 10 companies in 1999 to 25 companies in 2015 and others will soon join), and
 - developing regional technology roadmaps (India, Brazil, Egypt...) to better fit to the local contexts and focus on implementation.

A collaborative effort both within and beyond the sector is necessary

Beyond the tremendous efforts already being undertaken by our cement companies worldwide, in particular through the collaborative approach of CSI, we believe that **further action is needed**.



We established a shared statement of ambition, by which **CO₂ emissions should be reduced in the range of 20 to 25% by 2030 compared to business as usual**, an average emission rate equivalent to the emissions of the best-in-class CSI company 2020 targets.

To move forward towards this aspirational goal, we, CEOs of the cement companies represented below, invite the whole sector to join and set-up the following action plan:

1. **Enhance the coverage of the sector's CO₂ emissions and energy consumption database**, with a specific focus on China (about 60% of cement worldwide production).
2. **Enhance overall energy efficiency** of the cement manufacturing process.
3. Scale-up the **collection, availability and usage of good quality alternative fuels and raw materials**, including relevant waste from other sectors in a circular economy approach.
4. **Further reduce the clinker content** in cement to minimize the share of the energy-intensive part of the process.
5. **Develop new cements** with reduced net CO₂ emissions over the full life cycle.
6. **Engage the full building and infrastructure value chain** in local markets to identify and maximize the avoided emissions by usage of cement and concrete products.
7. **Evaluate cross-sectoral initiatives**, particularly on the opportunity to capture, use and store carbon (CCS-U).

The success of these actions is dependent on policy-makers' ability to:

- Agree on a long-term, universal climate agreement in Paris in 2015 to enable the private sector to undertake appropriate long-term investments. **We expect it.**

- Strengthen international cooperation to gather reliable, industry-level energy and emissions data, as well as the development of life cycle assessment (LCA)-related tools and databases for all construction and infrastructure projects. **Our experience in the CSI proves that what gets measured gets managed.**
- Unlock data disclosure barriers in countries where they still exist, such as China. **We need it to ensure a better representation of the whole sector.**
- Develop a concerted strategy on adaptation to climate change in order to match the societal challenges ahead of us. **We believe that adaptation and mitigation should be looked at in conjunction.**
- Review and update regional, national and local level legislation, to ensure the use of alternative fuels and biomass is incentivized by policy. **We favour local, customized initiatives, as there is no one-size-fits-all solution.**
- Develop, revise and strengthen adequate standards, codes and public procurement policies promoting low-carbon products. **Composition-based standards are often the biggest hurdle for the introduction of products with a smaller CO₂ footprint.**
- Promote the development of regulatory and financial incentives for innovative low-carbon cements. **Industry is active, but further support is crucial.**
- Establish financial incentive mechanisms for funding research, pilot and demonstration of CCS-U projects, leading to commercial-scale demonstration plants. **Sectoral cooperation, such as CSI, has proven to be successful. We believe it is time to expand it to cross-sectoral collaboration and confirm our interest to be involved in the process.**

