

# CEMENTING EUROPE'S FUTURE

## Our Role in a Green Economy

### Contributing to a Green Deal for Europe

The cement sector is determined to support the objectives of the European Green Deal and contribute to the EU's vision for a carbon neutral society by 2050.

#### INNOVATING TO REDUCE CO<sub>2</sub> EMISSIONS

The European cement industry is mindful of its environmental footprint. With 15% of CO<sub>2</sub> emissions reduced in cement manufacturing since 1990, we have already made significant changes and will continue to do so across the cement and concrete value chain.

To achieve this objective, our industry deploys a wide-range of technologies and innovation projects at every step of the cement production process. These include:

1

The development of alternative fuels to replace fossil fuels in heating processes and improved energy efficiency of kilns.



2

Low-clinker cements, innovative binders and innovative concrete solutions.



3

Leading the way in the development of carbon capture and storage/use technologies through several pilot programmes across Europe.





## CREATING A CARBON-NEUTRAL BUILT ENVIRONMENT

Without cement, concrete cannot exist. Thanks to its versatility, resilience [key for climate change adaptation] and durability [concrete structures can last 100 years or more] it is a safe and reliable building product.

Furthermore, through its high thermal mass, 100% recyclability and its recarbonation potential, concrete significantly supports the reduction of emissions in the building sector, which account for 40% of energy consumption and 36% of CO<sub>2</sub> emissions in the EU.

**Recarbonation:** Hydrated cement used in concrete or mortars naturally absorbs CO<sub>2</sub> during its lifetime, thus removing carbon from the atmosphere. This permanently locks CO<sub>2</sub>, providing a stable long-term CO<sub>2</sub> storage solution.

**During the life of a built structure, up to 25% of the process emissions related to the production of the cement can be absorbed.**

**Thermal mass:** A property unique to heavyweight materials such as concrete, which can soak up and store heat or cold. This reduces heating and cooling costs in buildings, lowers energy consumption, especially at times of peak power demand, and decreases CO<sub>2</sub> emissions.



33% as natural forest



23% as grassland



8% as lake

## PROMOTING BIODIVERSITY

Biodiversity conservation and ecosystems management play an important role in the European cement industry's long-term resource and reserve strategy.

Through proper planning and rehabilitation, our members are committed to protecting wildlife by creating new habitats during quarry restoration. To date, our quarries are rehabilitated:

**33% as natural forest**  
**23% as grassland**  
**8% as lake**



## CONTRIBUTING TO SUSTAINABLE ENERGY AND MOBILITY

Our industry is an indispensable force in enabling the transition to a low-carbon economy. The cement industry provides for the material needs of European citizens across all Member States. Cement, aggregates and water are combined to make concrete which is used to construct sustainable buildings and infrastructure needed by society today.

Cement and concrete play a pivotal role to support the development of renewable energy through dams and wind farms and sustainable transport with bridges and tunnels for train and road networks across Europe, therefore acting as a key "enabler" for the Green Deal. The Eurotunnel linking Britain and France could not have been built without concrete.

### Achieving climate neutrality

**Innovation to reduce CO<sub>2</sub> emissions**  
 Rethinking the ways we make cement to protect the environment

**CCU/S**  
 Capturing and storing carbon to reduce our environmental impact

**Re-carbonation**  
 Hydrated cement used in concrete or mortars can naturally absorb CO<sub>2</sub> during its lifetime



**Transition to a circular economy**  
**Co-processing**  
 Using waste as energy to make cement

**A zero pollution Europe**  
**Towards better air quality**  
 Through innovation, energy efficiency and investment the cement industry is reducing its impact to air pollution

**Recycle**  
 Concrete is 100% recyclable



**Concrete for tunnels**  
 Connecting towns, cities and countries

**Concrete for metro and rail stations**  
 Helping people travel quickly and safely

**Sustainable transport**

**Preserving Europe's natural capital**

**Nature conservation in quarries**  
 Ensuring wildlife can thrive and flourish

**Respecting habitats**  
 Building and preserving homes for animals in and around our quarries

**Thermal mass of buildings**  
 Only concrete can store and release heat for winter months, and help keep buildings cool in the summer

**Clean, reliable & affordable energy**

**Concrete for windfarms and water dams**  
 Building Europe's sustainable future

## LEADING IN A CIRCULAR ECONOMY

The European cement industry is continuously using waste as a resource through 'co-processing'. Co-processing is the combination of simultaneous material recycling and energy recovery from waste in a thermal process, which results in replacing natural mineral resources and fossil fuels such as coal and petroleum products.

Already, the cement sector in Europe is substituting an average 46% of its fuel with alternative sources, and it wants to grow this even further. Studies have shown that there are no technical barriers to raising this to 60% across Europe by 2030. Co-processing is already having a very real impact on the sustainability of the cement industry in Europe:



- 18 million tonnes of avoided CO<sub>2</sub> emissions each year.
- The use of alternative fuels, including waste biomass, is saving about 6.7 million tonnes of coal.
- About 5% of the raw materials needed in the production of the cement clinker in Europe consisted of recycled material and ashes from alternative fuels.



## ADDING VALUE TO EUROPE'S ECONOMY

The cement industry had a turnover of €14.9 billion in 2016, with an added value of just over €5 billion, and directly employs 35,000 people in the EU.

The combined cement and concrete industry has a total value added of €56bn in the EU and generates over 1.1 million jobs.

For every € generated in the cement and concrete industry, €2.8 are generated elsewhere in the economy.



## CEMBUREAU, the European Cement Association, is the cement industry's voice in Europe

As of 1st January 2020, its Full Members are the national cement industry associations and cement companies of the European Union (except for Malta and Slovakia) plus Norway, Switzerland and Turkey. Croatia and Serbia are Associate Members of CEMBUREAU.

A cooperation agreement has been concluded with Vassiliko Cement in Cyprus and with the Cement Association of Ukraine.



  
www.cembureau.eu

