



# Activity Report 2015



# CEMBUREAU

The European Cement Association based in Brussels is the representative organisation of the cement industry in Europe. Currently, its Full Members are the national cement industry associations and cement companies of the European Union (EU, with the exception of Cyprus, Malta and Slovakia) plus Norway, Switzerland and Turkey. Croatia and Serbia are Associate Members of CEMBUREAU.

The Association acts as spokesman for the cement industry before the EU institutions and other public authorities, and communicates the industry's views on all issues and policy developments with regard to technical, environmental, energy and sustainability issues. Permanent dialogue is maintained with EU institutions, international authorities and other international associations.

Serviced by a multi-national staff in Brussels and with the input from its Members via four Working Groups as well as a number of Task Forces set up on an ad hoc basis and directly reporting to the appropriate Working Group, CEMBUREAU takes action in relation to all developments at European level affecting the cement industry.

CEMBUREAU plays a significant role in the world-wide sustainable development of cement and the ready-mixed and precast concrete industries in co-operation with Member Associations and other relevant organisations. The Association regularly organises events on specific issues aimed at improving the market perception of the concrete industry and promoting the use of generic cement and concrete products. In addition, the Association regularly commissions studies to evaluate specific issues of importance to the industry.



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## MESSAGE FROM THE CHIEF EXECUTIVE

By Decision of 26 October 2015, the European Commission appointed the CEMBUREAU President, Daniel Gauthier, in the High-Level Group on Energy Intensive Industries. The High-Level Group consists of high-level representatives of industry, EU Member States, the European Commission, trade unions and NGO's. Its objective is to "provide the Commission with expertise and insight, thus helping to develop solid policies in the field of energy intensive industries". During a first meeting, CEMBUREAU already had the opportunity to address innovation in the cement sector. Going forward, we will find a useful platform in the High-Level Group to promote our views on the circular economy and climate change.



***Koen Coppenholle***

The appointment in the High-Level Group crowns a year of intense interaction and engagement with policymakers and stakeholders at large. While, in 2014, we strongly focused on clarifying our positions on a wide range of policy issues and launched The Concrete Initiative, we kicked the outreach and advocacy process into a higher gear in 2015. The year was marked by the publication of the Commission's proposal reform climate change legislation for Europe (EU-ETS) and by a regulatory package on the circular economy. While a detailed overview of our activities is given later on in this report, I do wish to highlight a number of areas where our advocacy, sometimes in coalition with other industries, has led to a better understanding of our industry's position amongst policymakers.

In conveying our positions, we have taken care to ensure that the need to protect and defend our industry goes through the promotion of our industry as

- (i) a strong contributor to growth and jobs in Europe. The findings of the study carried out by consultants Le BIPE/ EUROCONSTRUCT for The Concrete Initiative suggesting a 2.8 multiplier effect of the cement and concrete industry on the overall economy was further endorsed by European Environment Commissioner Vella in his opening speech at the Concrete Dialogue event in November 2015. The Commissioner emphasised that the construction sector, with a 9% contribution to the EU's GDP, is a motor for growth and specified that recycling construction and demolition waste comes with local work for sorting and collection and adds jobs that cannot be moved elsewhere;

- (ii) crucial to the circular economy thinking. The policy debate we organised on 24 March 2015 in the European Parliament created a strong outreach platform to MEPs, European Commission and Member States with the lead Rapporteur on the Circular Economy, MEP Pietikainen expressing her support for “new business ecosystems where waste residues from one industry can be transformed into assets for another”. Big strides have been made by CEMBUREAU to advance co-processing in the cement sector as a unique combination of energy recovery and material recycling while sourcing from a variety of waste streams. This strong advocacy has secured a firm place for our “industrial symbiosis” approach in the upcoming Waste-to-Energy Communication of the Commission;
- (iii) producing a low-carbon end product, concrete. Driving the full supply chain message acted as an eye-opener, for instance in the meeting with Member State representatives in September 2015 where we discussed the EU-ETS. Putting our industry in perspective, we highlighted the fact that cement constitutes 10% -15% of concrete which further includes water and aggregates. It is this low-carbon, durable, energy-efficient product that will play an essential role in the sustainable construction agenda.

Through events, thematic lunches with policymakers, individual outreach meetings in all EU institutions and speaking opportunities, we have stressed all of these messages and reiterated our commitment to Europe. Within that same context, we welcomed the clear desire of the European Commission and Member States to maintain the carbon leakage status to ensure competitiveness for our industry. Unfortunately, the gap between the Member State’s express intention in the European Council Conclusions of 23-24 October 2014 to ensure that the best performing plant has no undue costs, on the one hand, and the concrete elaboration of this idea in the Commission’s proposal, on the other, remains substantial and will dominate the policy debate throughout 2016. Nevertheless, the core message is pretty simple: the continued contribution of our industry to Europe depends on a strong, predictable legal framework which makes us competitive in a global environment.

All CEMBUREAU Working Groups have worked hard on setting out our messages and advocacy, assisted by the government relations experts in the Senior Advisory Group who deployed their skills, in close concertation with the Members Plenary Group, in reaching out to national governments. Our membership structure and strong Board involvement allow for a unique and very efficient outreach to national and European policymakers and both our Members and the CEMBUREAU staff have taken up the challenge to promote, advocate and convey our key messages. A big thank you to all!





# MESSAGE FROM THE PRESIDENT

On its website, the Directorate General Research of the European Commission states that Europe's future is connected with its power to innovate. The cement industry is a surprisingly innovative industry which constantly rethinks and remodels its manufacturing processes and its products with a view to maintaining a competitive edge and responding to modern society's needs. The European Cement Research Academy (ECRA), established in 2003, gathers 40 leading cement producers from around Europe and acts as a platform on which the European cement industry supports, organises and undertakes research activities within the context of the production of cement and its application in concrete. ECRA has a close working relationship with CEMBUREAU, as it develops innovation responses for a wide range of policy challenges.



**Daniel Gauthier**

The COP21 results of Paris have also given the cement industry new momentum in the development of the low carbon society needed for the future. At a global level, the cement industry along with European cement companies playing a very active role, launched the Low Carbon Technology Partnership initiative for cement at the COP21 as one of the first energy intensive industrial sectors.

For Europe the cooperation with ECRA and with many national cement research institutes has allowed the cement industry to advance various bold innovation ideas for 2050, but starting today:

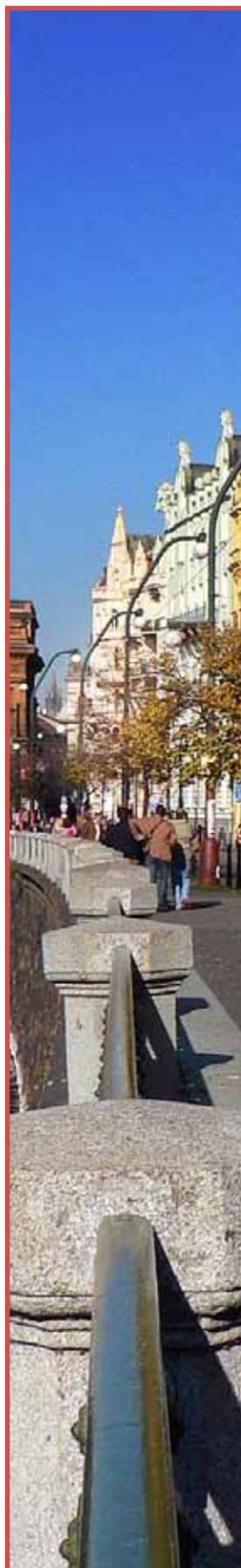
- the coordination of continued research into the potential of energy recovery and material recycling from waste so as to drive the use of alternative fuels and raw materials up to 60%;
- the further reduction of the clinker-to-cement ratio with a clear and continued focus on guaranteeing the same performance and durability;
- the increased equipping of retrofitted and new plants in Europe with Waste Heat Recovery systems, which will add renewable power production capacity;
- equipping 60% of cement plants with carbon capture technology;
- the re-carbonation potential of crushed concrete will be the topic of further in-depth research as current studies already indicate that up to 25% of the CO<sub>2</sub> emitted during the cement manufacturing process can be reabsorbed over the service life cycle of concrete.

In order to turn these ideas into a tangible reality, we need to raise awareness at political level, with a focus on the following points:

- bringing innovative ideas to market takes time: research is by definition a trial and error process and, while often ambitious, targets are long-term. In addition, successful research will only touch the market after a proper regulatory standardisation process has found the process or product fit for market use;
- payback time also plays a role when it comes to innovation: technologies that are ready for the market need a clear financial investment incentive to be carried through. The calculation of payback time takes into account the presence of a stable and predictable regulatory environment that rewards efforts made in improving environmental performance;
- a clear understanding of risk-financing is essential: private operators will not shoulder the full financial burden for investments in breakthrough technologies that include significant technological and financial risks. They are looking for a shared public-private financing approach marked by a clear and transparent set of rules and milestones;
- an integrated policy approach is key to innovation: specific research and innovation projects demonstrate that a single focus on CO<sub>2</sub> emission reductions without paying due attention to energy needs may stop promising projects in their tracks or delay them. By way of example, operational costs for a carbon capture installation are twice as high (mainly because of increased electricity costs) as those of a conventional cement plant.

Without breakthrough technologies, the cement industry will not tackle the essential challenges to come (climate change, biodiversity management and access to natural resources).

In conclusion, our industry has the power to innovate and will help lead Europe towards its future. A frank and open discussion with policymakers on how to best create the facilitating regulatory framework to make it all happen is an essential prerequisite!





# THE ECONOMY

## THE WORLD

### World Production and World Trends

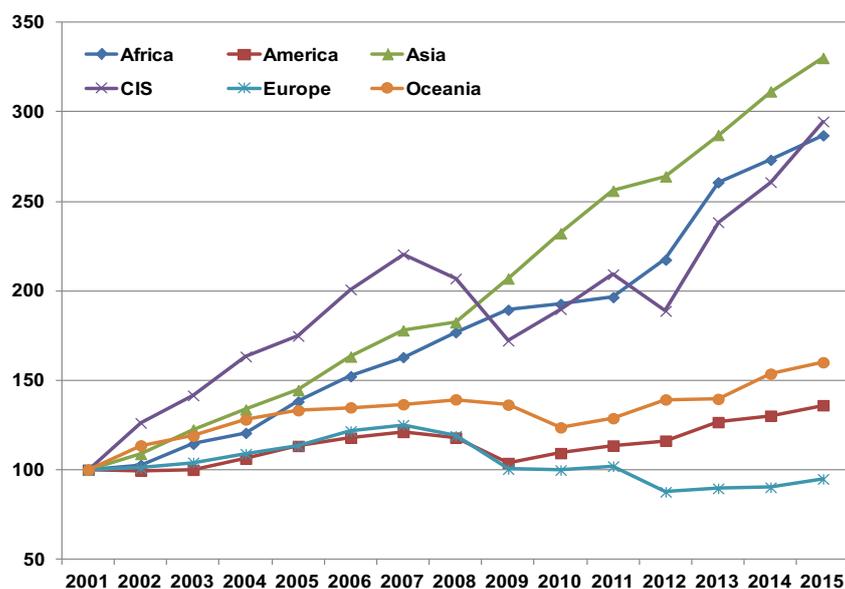
In 2015, the world economy continued to follow a positive trend, although global economic growth lost some momentum as certain key developments reshaped the global outlook during the fourth quarter of year, resulting in a clear deterioration in economic sentiment and lower growth perspectives for 2016 in most regions. The key drivers behind these developments were the fall in oil and commodity prices, a slowdown in global trade due to decreasing demand from emerging economies, the recession affecting Brazil and Russia, and a considerable economic slowdown in China. Nominal oil prices have decreased by -67% between June 2014 and March 2015<sup>1</sup> due to a combination of excess supply and moderate energy demand from advanced economies, which has put serious pressure on some major oil-producing emerging economies (BRICS, Venezuela). In the euro area, the implementation of the European Central Bank's (ECB) Asset Purchase Programme (also referred to as Quantitative Easing, QE) launched in February 2015, has been extended until March 2017. In parallel, the QE carried out by the Federal Reserve (FED) in the US came to an end in late 2015 (i.e. "tapering") resulting in higher key interest rates in the US, a subsequent appreciation of the USD and an increase in US capital inflows. The ECB's QE has primarily pushed interest rate levels down to record lows and even to negative rates, resulting in a lower sovereign debt burden and lower long-term interest rates on bonds, although this has yet to boost asset values as well as private and business investment, as originally expected. The QE has also resulted in a considerable depreciation of the EUR vs. other major currencies, notably the USD (with a nominal 20% decrease in the EUR/USD exchange rate since June 2014) and the CHF. Emerging economies have continued to clearly outperform advanced economies but their economic expansion lost ground as a result of shrinking domestic demand due to plummeting revenues from oil and other commodities, with negative repercussions on exports from advanced economies (particularly for EU economies), which provided a lower contribution to GDP growth than in previous years. In 2015, the US economy recorded its fifth consecutive year of growth, gaining further momentum as real GDP increased by +2.5% (vs. +2.4% in 2014). It continued to outperform the EU, which experienced a growth of +1.9%, +1.4% higher than in 2014 but with a slowdown during the last two quarters of 2015. Japan has experienced a moderate recovery (+0.6%) after stagnating in 2014. With the exception of Greece (-0.2%), no EU Member State recorded an economic recession. This paved the way for expectations of positive GDP growth for the EU28 in 2016 (+1.9%, revised from the former Autumn 2015 prediction of +2%), despite the above-mentioned factors of uncertainty, thanks to the combination of the QE, i.e. unprecedented monetary policy action, and somewhat eased fiscal discipline in euro area countries. In 2015, unemployment rates remained at very high levels in historical terms, although a slight decrease was recorded. The 2016 economic outlook for the EU is conditional upon several factors of uncertainty (continued slowdown in China, a recession in emerging and

<sup>1</sup> Source: Energy Internal Administration ([www.eia.gov](http://www.eia.gov)). The spot price of Brent Europe has been used as reference.

oil-producing economies, and geopolitical tensions). On the other hand, the continued support stemming from the expansionary policy carried out by the ECB, and the combination of the fall in oil prices, interest rates at record lows and an EUR depreciation, are likely to prove beneficial. In conclusion, 2015 real global GDP growth was lower (+3.1%) than in 2014 (+3.4%), whilst in advanced economies, economic expansion attained +1.9%, a tiny improvement compared to +1.8% in 2014. In line with these global developments, emerging economies slowed down considerably and recorded a real GDP growth of +4% against +4.6% in the previous year<sup>2</sup>.

Global 2015 cement production is estimated at 4.6 billion tonnes (Bt), translating into a +6.3% increase compared to the 4.3Bt recorded in 2014<sup>3</sup>, reflecting positive developments in cement demand in major emerging economies, despite a global economic slowdown around Q4 2015. In terms of major world producing countries, China's 2015 performance is worth highlighting: after slowing down considerably in 2014 (+5.1% vs. +10.4%), in 2015, Chinese cement production experienced a recession (-3.6%). However, China remained by far the largest world cement producer, representing 51.2% of global output (albeit lower than the 56.5% of 2014). As a result of this slump in China, if Chinese cement production is excluded from global output, global cement production increased year-on-year by a spectacular +19.3% with cement production volumes in G20 emerging economies clearly falling on a yearly basis, after outperforming that of mature economies for many years. In aggregate terms, emerging countries recorded a fall of -11.6% compared to 2014 (against a +12.6% increase in 2013), compared to an increase of +2.1% in G7 countries. Amongst the emerging economies, the highest cement production growth rates were recorded in Argentina and Saudi Arabia, whilst India experienced a recession (-3.6%). Amongst the G7 countries, the recovery in cement production was widespread across all countries, resulting in a particularly positive performance in the Republic of Korea (+4.5%). The only exceptions were Canada and Japan, with yearly falls in cement production of -2.3% and -3.9%, respectively. European members of the G7 recorded mixed performances, just as in 2014.

### World cement production by region - Evolution 2001-2015 (2001=100)

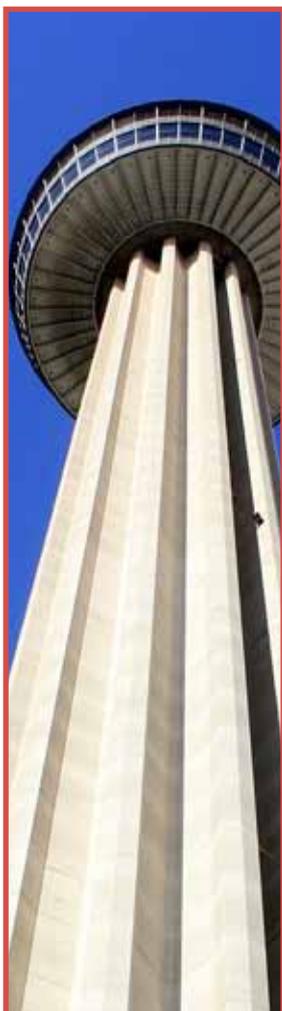


Source: CEMBUREAU

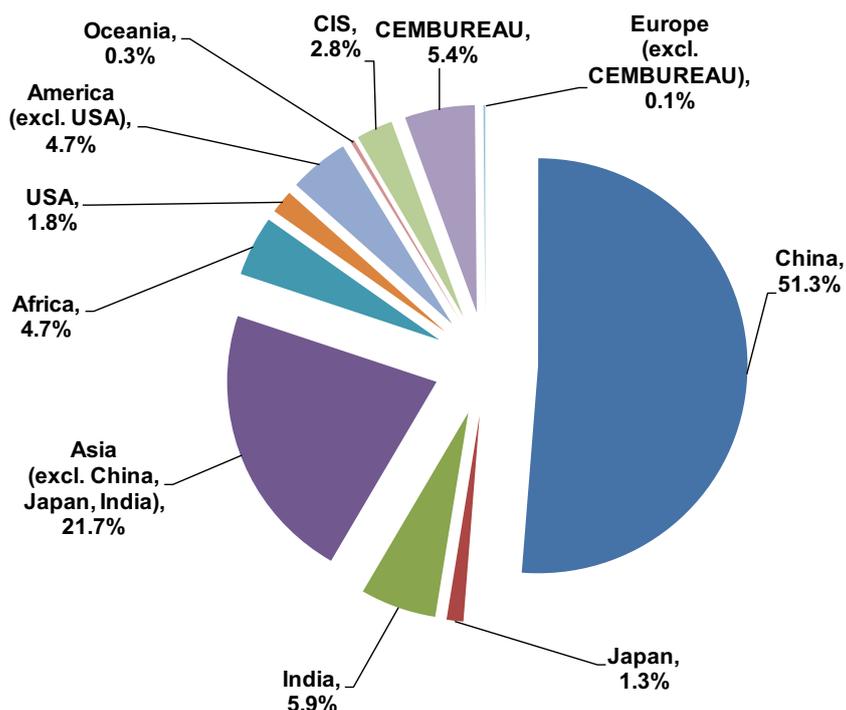
<sup>2</sup> Source: IMF World Economic Outlook Database.

<sup>3</sup> In detail: 4,586 million tonnes in 2015 vs. 4,313 in 2014.





**World cement production 2015, by region and main countries, %**  
4.6 billion tonnes



Source: CEMBUREAU

**Main world producers - The G20 Group**

Cement production (Million tonnes)										
Country	2001	2007	2008	2009	2010	2011	2012	2013	2014	2015
China	661.0	1 361.2	1 388.4	1 644.0	1 881.9	2 063.2	2 137.0	2 359.0	2 438.0	2 350.0
India	102.9	170.5	185.0	205.0	220.0	270.0	239.0	272.0	280.0	270.0
European Union	225.6	269.1	250.8	209.0	192.1	191.6	170.5	157.5	165.8	172.0 e
USA	88.9	95.5	86.3	63.9	65.2	68.6	74.0	77.2	83.2	83.4
Brazil	39.4	45.9	51.6	51.7	59.1	63.0	68.0	71.9	72.0	73.0 p
Turkey	30.0	49.3	51.4	54.0	62.7	63.4	63.8	70.8	72.6	72.8
Russian Federation	28.7	59.9	53.5	44.3	50.4	56.1	53.0	55.6	68.4	69.0 p
Japan	79.5	71.4	67.6	59.6	56.6	56.4	59.3	61.7	61.9	59.5
Korea, Rep. of	52.0	52.2	51.7	50.1	47.4	48.2	46.9	47.3	47.0	49.1 p
Saudi Arabia	20.0	30.3	37.4	37.8	42.5	48.0	43.0	48.0	51.8	54.0 p
Indonesia	31.1	35.0	38.5	36.9	39.5	45.2	53.5	52.0	54.2	54.4 p
Mexico	33.2	38.8	37.1	35.1	34.5	35.4	36.8	37.0	39.4	40.0 p
Germany	32.1	33.4	33.6	30.4	29.9	33.5	32.4	31.9	32.5	32.0 e
Italy	39.8	47.5	43.0	36.3	34.4	33.1	26.2	23.1	21.4	20.8
France	19.1	22.1	21.2	18.1	18.0	19.4	18.0	17.5	16.4	15.6
Canada	12.1	15.1	13.7	11.0	12.4	12.0	12.5	12.1	12.8	12.5
Argentina	5.5	9.6	9.7	9.4	10.4	11.6	10.7	11.9	11.8	12.2
South Africa	8.4	13.7	13.4	11.8	10.9	11.2	13.8	14.9	13.8	14.0 p
Australia	6.8	9.2	9.4	9.2	8.3	8.6	8.8	8.6	9.0	9.1 p
United Kingdom	11.9	12.6	10.5	7.8	7.9	8.5	7.9	8.5	9.2	9.6 e

Notes: p: Preliminary - e: Estimate



Production continued to increase in 2015 compared to the previous year in South America, Africa and Asia. These regions were responsible for 4.7%, 4.9% and 80.2% of world cement production, respectively. The CEMBUREAU Member countries accounted for 5.4% of global production (5.8% in 2014) whilst the proportion of global production in the EU Member States was 3.7% (3.8% in 2014).

## EUROPE<sup>4</sup>

Compared to 2014, and according to the latest data available, 2015 cement production in the CEMBUREAU Member countries recorded a moderate growth, rising by +0.9% in annual terms which was, however, the third consecutive year of recovery (due to a revision of historical data), reaching 248 million tonnes (Mt). Individual European markets recorded a mixed performance. Spain recorded another positive performance in cement production and attained a growth of +3.3%, while in Italy the recession in cement production continued (-3.4% in 2015 further to -7.4% in 2014), as it did in France (-5%, further to -3.1%). Cement production gained further ground in several Eastern European countries, with strong performances in terms of year-on-year growth in the Czech Republic, Hungary and Romania in particular. In the EU28 as a whole, cement production increased by +3.7% year-on-year - i.e. from 165.8Mt (revised figure) to 172Mt - marking the second consecutive year of recovery. However, 2015 cement production in the EU28 was some 37.3% below the peak of the previous cycle (2007).

Total 2015 clinker and cement exports from the CEMBUREAU Member countries fell by -2.3% on a yearly basis, down to approximately 45Mt, further to the more moderate drop of -2% recorded in 2014. Contrary to the previous year, the year-on-year change in imports was slightly negative, i.e. by -2.2%, reaching 18Mt.

2015 developments in cement demand were in line with the partial upturn in the general economic and construction environment, reflecting a somewhat improved economic sentiment and macroeconomic conditions, particularly over the first half of the year. Cement consumption dropped compared to 2014 in some CEMBUREAU Member countries but recorded positive year-on-year performances in most national markets. As a result, across the whole of the CEMBUREAU region, cement consumption rose by +2.5% compared to 2014. As in 2014, however, it should be pointed out that this overall figure conceals a considerable disparity between countries, with moderate decreases in some national markets compared to considerable falls in others, although fewer EU countries experienced a recession in cement consumption.

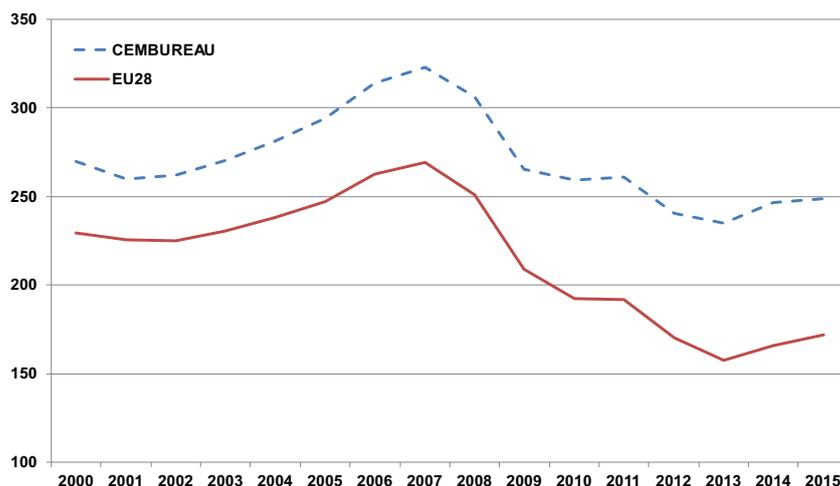


<sup>4</sup> Please note that EU28 and CEMBUREAU aggregate figures are estimates as data for some Member States (Germany, UK, Poland) are not yet available.



## Cement production in CEMBUREAU and EU28 countries

Million tonnes



Source: CEMBUREAU

### COUNTRY BY COUNTRY ANALYSIS

#### AUSTRIA

**Overview:** Housing construction volumes are rising to very high levels in Vienna as a result of massive immigration. In the other subsectors, big projects are conditional to public financing and private construction projects.

**Future trends:** No major changes in cement production and consumption are expected for Austria in 2016. Given that the high level of housing construction is expected to continue in Austria's capital city, the cement sector is likely to remain stable in 2016.

#### BELGIUM

**Overview:** After a slight increase of +1.4% in 2014 (compared to 2013), domestic cement consumption experienced a growth of +4.6% in 2015, reaching 6.4Mt, revealing a very positive yearly performance. Nevertheless, this increase must be put into perspective. National deliveries by FEBELCEM members have only increased by +1%. On the other hand, imports have increased by +18.1%, allowing them to cover 23.6% of Belgian cement market demand. Moreover, although weather conditions were favourable during the whole of 2015, the entire Belgian construction sector remains fragile and there are still concerns. With regards to the latest information received from the Institute of National Accounts, the construction sector rose by +1.9% after all in 2015, slightly more than the Belgian economy, where growth was limited to +1.4%. The residential subsector experienced a growth of +3% in 2015, which is linked to the promotion and construction of an important number of apartment blocks in big cities. The renovation sector remained stable which, at the end of the day, did not have an impact on cement consumption. The non-residential construction experienced a decrease of -3%. Civil engineering experienced a growth of +5.7%, after recording a drop over the last 2 years. An economic stimulus will depend on the enforcement of new investment plans as promised by the Regions to compensate for the application of a motorway toll on trucks and lorries. Some job losses are also expected in the construction sector.

**Future trends:** The construction sector is expected to experience zero growth in 2016. Indeed, construction order books have yet to be filled and actual growth is expected to be delayed. Euroconstruct forecasts a low growth which in turn is likely to translate into zero growth in cement consumption too, taking into account the fact that 2015 was particularly good in terms of consumption.

## BULGARIA

**Overview:** In 2015, Bulgarian cement consumption maintained its upward trend for a second consecutive year (+10% increase in 2015 following +3% in 2014), after its previous five year period of downward movement. The private construction sector continued to regain ground due to the further reduction of interest rates on debt financing compared to 2014, as well as the perception that the economic crisis is phasing out with increased consumer confidence registered by national statistics. According to the latter, the total gross floor area of office/administrative buildings under construction during the year increased by +176% compared to 2014, for the residential buildings the figure is +54% and for other buildings +15%. A rather positive development was registered in public infrastructure projects, mainly highways and road construction, due to the relatively high rates of EU structural funds used over the last year.

**Future trends:** Further growth in cement consumption can be expected 2016. Two main factors are likely to influence the market: the expected increase in the construction of private sector buildings and the high priority attributed by the government to public infrastructure investments, including highways, dams, water supplies and sewage infrastructure systems. Factors which are expected to have an impact on the residential buildings market, and therefore influence medium term cement consumption, are: positive dynamics of the residential buildings market, increased demand for newly constructed buildings after a long period of virtually no residential construction, affordable credits making investment more appealing, a considerable increase in savings (in February 2016, household savings amounted to 47% of 2015 GDP according to National Bank statistics) and unprecedentedly low bank deposit interest rates (virtually zero) with savers searching for an alternative to bank deposits, the continued implementation of a large scale national program for the renovation of multi-dwelling buildings. National statistics have recorded an increase in the number of permits for the construction of new residential buildings (measured by their total gross floor area) issued in the last quarter of 2015 (+13% higher compared to the corresponding amount in the last quarter of 2014), which has been partially upset by a slight reduction in the number of administrative buildings (-1%) but further supported by an increase in other building types (+30%). Concerning demand for new offices, 2015 recorded around a +40% increase in the first half of the year, as a result of which a large number of previously frozen office building construction projects have been restarted during the second half of the year. There is also strong interest in acquiring real estate for the construction of logistics centres located close to large cities, with a large amount of corresponding construction projects started in 2015. A further increase is expected in this sector in 2016, implying a corresponding increase in cement consumption.





## CZECH REPUBLIC

**Overview:** In 2015 construction output increased by +5.5%, year-on-year, in real terms. Building construction increased year-on-year by +0.6% (contributing +0.4% to growth), with civil engineering growing by +16.4% (contributing +5.1%), year-on-year. Compared to 2008, the peak year, 2015 construction output was -16.1% lower. In 2015, the number of building permits increased by +1.4%, year-on-year, with planning and building authorities issuing 80 478 building permits. The approximate value of these construction permits for 2015 increased by +2.0% compared to 2014. The number of dwellings started in 2015 increased by +8.3%, year-on-year, totalling 26 378 dwellings.

**Future trends:** For 2016, cement consumption is expected to grow by +3%.

## DENMARK

**Overview:** 2015 construction and building activity was slightly better than in 2014. This was due, to a certain extent, to continued public support particularly in favour of infrastructure, hospitals and universities. The residential housing sector recorded a moderately positive trend. The commercial building sector fell slightly, reaching a historic low.

**Future trends:** 2016 volumes are expected to continue in line with 2015 levels. Government-funded growth activities, other government initiatives to kick start the sector and low oil prices will have a positive effect on volumes. In 2016, the residential building segment is expected to continue to perform along the mildly positive trend, helped by low interest rates. The commercial building segment is expected to remain around the historically low levels of recent years. The postponed start up of the Fehmarn Belt Fixed Link project will have a negative effect on the infrastructure sector.

## ESTONIA

**Overview:** In 2015, cement consumption decreased by -8% in Estonia. The local construction market was mostly influenced by a decrease in civil engineering volumes. Repair and reconstruction also recorded a decrease. At the same time, new building construction continued to grow. High-quality homes continued to see steady demand, and this is supported by a higher number of building permits issued. Blocks of flats in more developed areas are seeing the highest level of demand.

**Future trends:** Growth prospects for 2016/17 construction volumes are moderately positive. Given that demand for new homes remains unchanged and that prices have reached a level which attracts developers, the moderate growth in residential construction volumes is expected to continue. The impact of the new cycle of EU funding for 2014-2020 will start to be felt in 2016 construction volumes, particularly in terms of infrastructure. Presumably, this will put the brakes on the downward trend seen during the last period in this sector, and may even lead to a certain increase. Exports are also expected to continue to benefit from positive impacts in the construction sector, provided that strong demand in neighbouring countries continues.

## FINLAND

**Overview:** 2015 has been marked by subdued construction activity. All building starts fell during Q1 and Q2 but then recovered to 2014 levels by the end of the year. The number of building permits issued increased by +6.6%. The new residential sector fell by -5%, other new buildings fell by -6%, renovation increased by +3% and infrastructure increased by +1%. In total, construction activity fell by -0.7%.

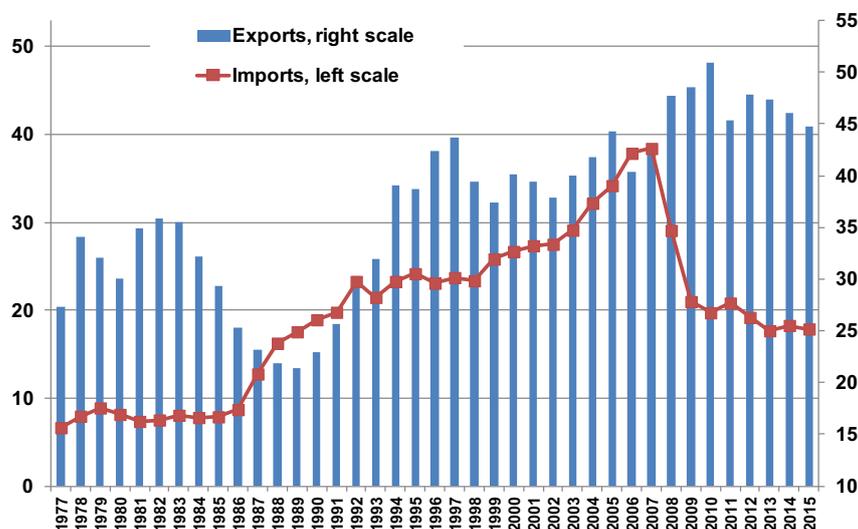
**Future trends:** Future prospects contain some positive signals. Construction as a whole is expected to grow by +4.4% in 2016 and +0.5% in 2017.

## FRANCE

**Overview:** Cement consumption fell by -5% in 2015. This is consistent with a depressed year for all construction subsectors in France. A boom in the housing market is expected in early 2016, although announcements by the government and developers had almost no effect in 2015. Public works and construction were particularly affected by budget cuts, especially at a local level. Housing construction proved stable, with a slight rebound at the end of 2015. The single-family housing market remains very depressed, with the cement sector facing severe competition from other materials (ceramics and wood). The non-residential sector continues to decline. The public non-residential sector has been particularly hit, and many private projects have been cancelled.

**Future trends:** Housing should provide some positive contribution to construction growth. The construction activity should experience a very good first semester in 2016. Public works and civil engineering are likely to continue their decline due to changes in legislation at local level. The non residential sector is a bit of an unpredictable element for 2016.

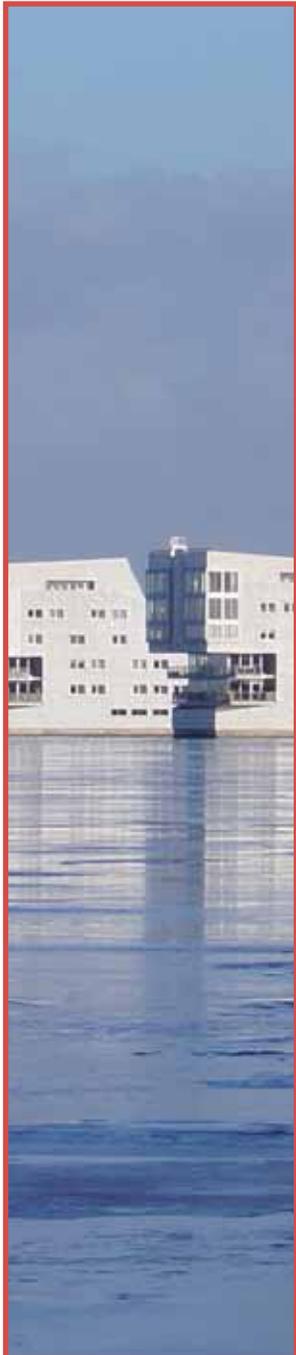
**CEMBUREAU Trade 1977-2015**  
Million tonnes (cement and clinker)



Source: CEMBUREAU

Note: Exports and imports including intra-trade flows between CEMBUREAU countries





## GERMANY

**Overview:** 2015 German cement consumption decreased by -2.2% compared to 2014. This was due primarily to the commercial building segment where building investments remained at a low level. In contrast, residential construction was able to maintain a positive growth trend. According to recent estimations, 261 000 apartments were completed during 2015 (+6.5% compared to the previous year). The contribution of civil engineering to cement consumption in 2015 remained stable.

**Future trends:** German cement consumption is expected to grow at a rate of at least +1% in 2016. Residential construction is likely to stimulate this growth. Due to high rates of immigration into Germany, housing needs have significantly increased over the last few years. According to a recent forecast, more than 140 000 additional flats need to be built every year in order to meet this demand. Further positive effects are likely to originate from the public civil engineering sector. The Federal Government has increased its annual financial contribution in order to preserve and extend the national transport infrastructure. It will now be important to expand the planning capacities of the regional authorities in order for necessary construction projects to be undertaken.

## GREECE

**Overview:** In historical terms, 2015 domestic cement consumption was close to the 2013 level. The building sector recovered by roughly +5%, while private construction was down by almost -6%, according to provisional data from the Greek Statistics Authority.

**Future trends:** 2016 is expected to be a very difficult year and is likely to be worse than 2015.

## HUNGARY

**Overview:** Hungarian construction activity increased by +3% compared to 2014. The production volume of the two main construction subsectors increased. The construction of buildings was +4.8% higher compared to the previous year. Output from the civil engineering sector grew by +1.6%. Nevertheless, whilst a significant increase was recorded during the first half of the year, it lagged behind the 2014 figure over the last few months of 2015. Road and railway construction, in particular, recorded lower growth compared to previous years. In 2015 residential construction decreased compared to 2014. Approximately -9% fewer new homes were built compared to a year earlier, while the volume of new contracts was +30% more than a year ago.

**Future trends:** According to experts, a lower level of construction activity is expected for 2016 compared to 2015.

## IRELAND

**Overview:** Ireland is continuing a recovery from a low base of construction and still lags behind the European average of Construction Output/GDP. The scale expected by this stage has yet to develop. The high rate of increase in residential development is from a relatively low base. Due to an ongoing lack of investment, civil engineering works have not yet materialised.

**Future trends:** Following a general election in 2016, where no clear winner was identified, a government has yet to be formed (end March). Uncertainty over the outcome of the Brexit referendum may have serious consequences for Ireland.

## ITALY

**Overview:** In 2015 Italian cement consumption decreased compared to 2014 (-2.5%). The fall affected all construction subsectors, in particular the residential sector.

**Future trends:** Italian cement consumption forecast for 2016 assumes an increase of between 0% and +2%, in particular due to some recovery in the public sector.

## LATVIA

**Overview:** The construction sector recorded weak performance in 2015, mostly due to a gap in EU funding distribution cycles, the growing importance of renovation, and a decrease in investment from Russia.

**Future trends:** Although the market contraction is likely to slow, it will continue in 2016.

## LITHUANIA

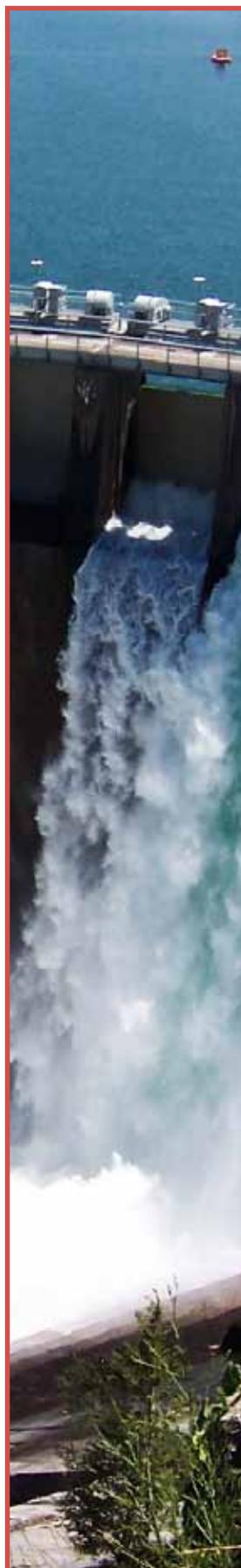
**Overview:** In 2015, Lithuanian cement demand decreased by -5% compared to 2014. This was due to a slowdown in investments in the Lithuanian construction sector, including civil engineering and non-residential construction. 2015 construction works were -3.5% lower than in 2014. Civil engineering constituted 46% of all projects, -11.7% lower than in 2014. The construction and maintenance of roads accounted for one third of these projects. The non-residential building sector accounted for 37% of construction, -5.7% lower than in 2014. The majority of these projects covered industrial and production facilities, as well as warehouses. In 2015, residential buildings recorded a total construction value of EUR 423M, accounting for 17% of construction projects. Compared to 2014, this figure is +38.3% higher.

**Future trends:** For 2016, a +3-4% growth in domestic sales of cement is expected. This growth is linked to an expected increase in demand for civil engineering and infrastructure projects.

## LUXEMBOURG

**Overview:** In Luxembourg, cement consumption increased in 2015 by +8.1%, mainly due to higher construction output, stemming from better performances in the residential and non-residential subsectors. Overall, sales decreased, mainly due to a weak French market and an underperforming German market.

**Future trends:** Cement consumption in Luxembourg is expected to grow by +8% in 2016, due again to positive developments in construction output, including a better performance in civil engineering.





## NETHERLANDS

**Overview:** The construction sector increased in 2015 by +7%, mainly due to the performance of the residential subsector. However, cement consumption decreased by -2%.

**Future trends:** Cement consumption is expected to increase by +2% in 2016. Construction output in the residential subsector will increase in 2016 by +6.5%, and in both non-residential and civil engineering by roughly +2%. Total construction output will increase by +4.5%. Due to a lower cement ratio per billion euro of construction investment, cement consumption growth will be lower than construction growth. This is partly due to the transformation process of offices into housing units, and to higher renovation investment in housing (i.e. energy savings) and civil engineering (tunnels etc).

## NORWAY

**Overview:** Due to the downturn in the Norwegian oil and gas industry, the country experienced a fall of -2% in construction activity compared to the previous year. A decrease in non-residential construction and slight increases in residential and civil engineering construction were behind this performance.

**Future trends:** The downturn in the oil and gas industry is expected to continue, resulting in lower activity in residential and non residential construction in the South-West region of Norway, while in other regions activity will remain stable. Ongoing large infrastructure projects will still provide stimulus to civil engineering.

## POLAND

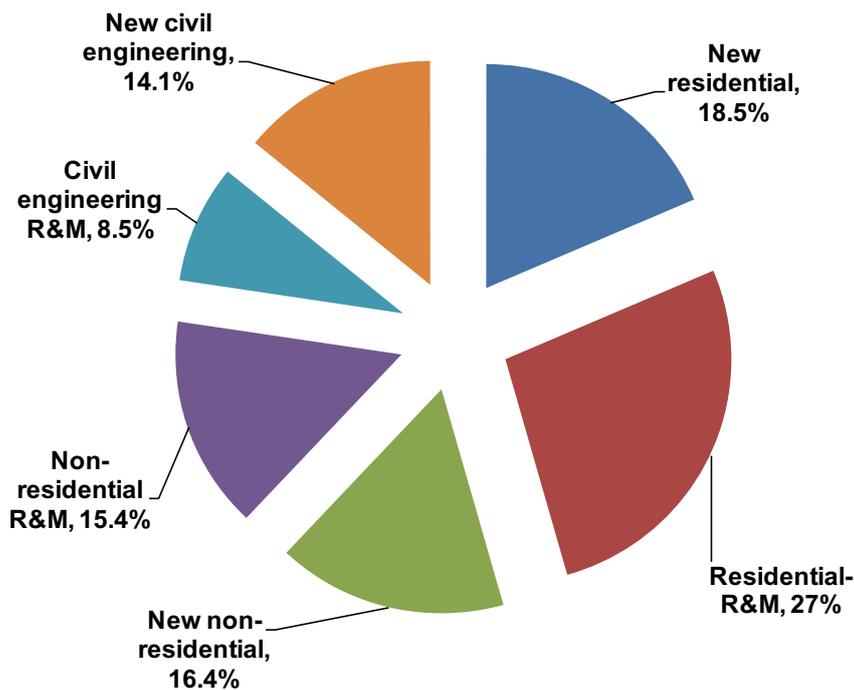
**Overview:** Accurate 2015 cement production and consumption data are not available at the time of publication. As a result, estimates have been provided. According to Polish Cement Association estimates, cement consumption recorded a slight increase in 2015 (approximately +2%), reaching 15.4 million tonnes.

**Future trends:** In 2016, GDP is expected to grow by +3.6%, similar to 2015 which recorded a growth of +3.5%. This growth will be the result of an increase in domestic demand and additional investment. According to the Polish Cement Association estimates, in 2016 cement consumption is expected to rise by +4%, amounting to 16 million tonnes. This increase is linked to the construction and modernization of road and railway infrastructure, as well as investments in the power sector and housing.

## PORTUGAL

**Overview:** 2015 cement consumption increased by +5%. Portuguese real GDP rose by +1.5% in 2015, driven by domestic demand, while external demand continued to provide a negative contribution to the growth outlook. The gradual recovery of economic activity is expected to continue, reflecting the need for further adjusting the balance sheets of public and private economic agents, in the wake of the international financial crisis and the sovereign debt crisis in the euro area. Following a long period of yearly falls, construction sector activity recovered by +3% in 2015. Construction subsectors performed as follows: civil engineering increased by +1%, residential and non-residential increased by +5% and +5.1%, respectively.

**Construction in Europe\* - Breakdown by type in 2015 (%)**  
**Construction value (2014 prices): €1 370 Billion**



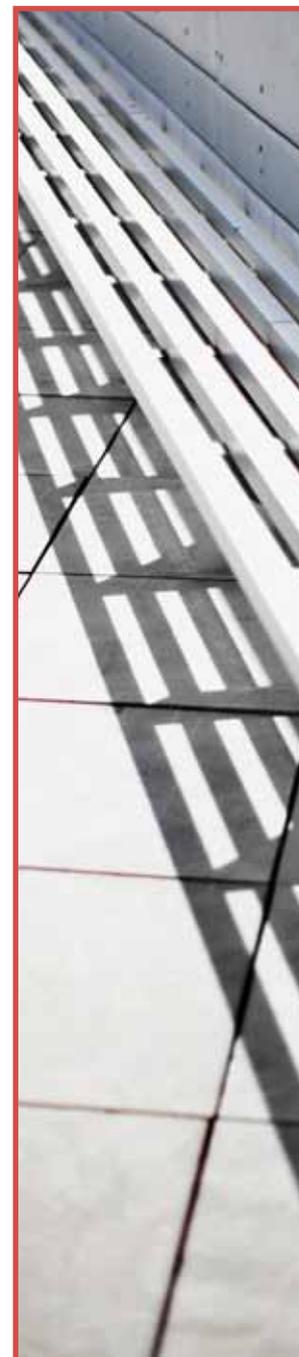
\* Euroconstruct 19 Countries

Source: Euroconstruct

**Future trends:** Projections for the Portuguese economy point to a slow recovery in economic activity over the 2016-2017 period. This is likely to translate into an average annual GDP growth of +1.6% in 2016, followed by +1.8% growth in 2017. Domestic demand should gradually recover, in line with the deleveraging of households and non-financial corporations. Exports should grow over the projection horizon, reinforcing the trend of transfers of productive resources to economic sectors which are more exposed to international competition. Construction activity is expected to increase by approximately +2.5% in 2016. Both the civil engineering sector (+1.5%) and different buildings segments (+3.5%) show positive prospects. Residential and non residential buildings are expected to increase by +4% and +3.1% in 2016, respectively. Cement consumption is expected to increase by approximately + 3.6% in 2016.

**ROMANIA**

**Overview:** 2015 cement consumption increased by +10.8% compared to 2014, firstly due to private investment (residential and non-residential projects), and secondly due to the modernisation of some airports, roads, etc. In addition, good weather conditions during the winter have contributed to this significant growth. When looked at in detail, the volume of construction works increased by +20% for civil engineering and by +1.1% for non-residential buildings. Residential buildings recorded a fall in volume of -5.8%.





**Future trends:** It is estimated that in 2016 the cement market will not see a spectacular evolution due to the lack of new major infrastructure projects. However, an increase of +4-5% is expected due to the continuation of residential construction and the modernisation of roads, as well as to the railway construction element of the Paneuropean IV Corridor.

### SLOVENIA

**Overview:** Growth was expected for 2014-2015, but actual data revealed the opposite. One cement plant stopped production in March 2015, and is now importing cement from Austria and Hungary for sale on the Slovenian market, which led to a significant increase in cement imports. The first signs of a slight recovery in construction activity were seen in 2014. Due to the completion of projects co-funded by the EU (municipal infrastructure projects, in particular) most construction works were recorded for civil engineering. Compared to 2014, construction activity by subsectors registered the following yearly falls: -7.3% in the whole construction sector, -10.7% in the residential subsector, -1.7% in the non-residential subsector and -9% in civil engineering.

**Future trends:** According to most experts, the outlook for construction activity is not positive. No major construction projects are planned. Building permits show that fewer permits have been issued compared to 2014, so 2016 is likely to be even worse than 2015.

### SPAIN

**Overview:** The evolution of cement consumption in Spain during 2015 has confirmed a change in the trend that materialised throughout the second half of 2014. Indeed, cement consumption recorded a yearly growth of +5% in 2015, reaching a figure of 11.4Mt. However, this growth has not been uniform throughout the year: whilst during the first semester the growth rate reached +8%, during the second half of the year this figure dropped significantly, reaching only +2.9%. Although 2015 cement consumption recorded positive performance, in volume terms it was still lower compared to historical levels. Between 1970 and 2014 the average annual consumption was around 25Mt. In recent years, the low levels of cement consumption in Spain have led the Spanish cement industry to export to foreign markets, as a way of alleviating the drop in their activity. As a result, Spanish exports of cement and clinker have become stronger over recent years, reaching a figure of 9.23Mt in 2015, of which 5.31Mt were clinker exports. With these volumes, Spain remained the leading exporting country in the EU, and it is the EU Member State with the highest volume of exports towards non-EU countries. In recent years, the low level of cement consumption in Spain has been caused by the drop in construction activity for all subsectors, i.e. residential, non-residential and civil engineering. However, over the first half of 2015 some recovery in civil engineering was recorded, although this trend was not observed during the second half of the year. As a result, cement consumption in civil engineering over the second half of the year was lower than in the first half. Cement consumption stemming from construction activity recorded positive growth in 2015 as a consequence of the growth in residential and non-residential construction.

**Future trends:** As a result of the evolution that is being shown by the activity in different construction subsectors, 2016 cement consumption estimates should confirm the recovery which should gain further ground. The latest forecasts suggest that 2016 cement consumption could grow by around +7%, although political uncertainty in the country could hamper this growth scenario.

### SWEDEN

**Overview:** Cement consumption increased slightly in 2015 thanks to the strong performance of the residential sector.

**Future trends:** The housing sector is expected to continue to provide a positive contribution to construction and cement demand. New infrastructure projects are due to be started by the end of 2016 - beginning of 2017.

### SWITZERLAND

**Overview:** Cement consumption decreased by -4.6% in 2015 compared to the previous year. While the construction of infrastructure projects and dwellings remained at a relatively high level, construction investment in the non-residential sector decreased due to the uncertain economic outlook. The total construction volume amounted to some CHF 18.4 bn (EUR 17.2 bn). The public construction sector (mainly infrastructure) amounted to 42% of construction output, the housing sector to 31%, while the remaining 27% was private non-residential, i.e. industrial and office building sector.

**Future trends:** Cement consumption is likely to remain around the same levels as in 2015. A major external factor is the appreciation of CHF compared to the EUR, resulting in a decrease in exports. The uncertainty in economic prospects is detrimental to investment in the industrial sector.

### TURKEY

**Overview:** In 2015 the Turkish economy grew by +4% in real terms. Over the same year, the construction sector increased by +1.7%. The cement industry provides a major contribution to the Turkish economy with its turnover of nearly EUR 2.9 bn, EUR 496 million in revenues from exports and the direct and indirect employment of 17 000 people according to 2015 figures. The industry produced roughly 72.8Mt of cement in 2015. 2014 output was 72.6Mt, which equates to a +0.3% annual increase in cement production. The Turkish cement industry recorded 65Mt in domestic sales in 2015. 63.7Mt of these were produced by TCMA member plants. Domestic sales grew by +1.2% on an annual basis, out of which a growth of +0.8% was recorded by TCMA members. At the end of 2015, 7.8Mt of cement and 2.9Mt of clinker were exported, resulting in a decrease in cement exports of -3.7% compared to the previous year, while clinker exports remained nearly the same compared to the previous year. This decline in cement exports has primarily stemmed from the current situation in foreign markets.





**Future trends:** Due to growing tensions in the neighbouring political area, Turkish exporting activities underwent difficult times. Political turmoil in the Middle East and decreasing demand in Iraqi and Russian markets showed signs of unfavourable times ahead. If this picture continues, export volumes will barely increase in the near future. With the addition of new capacity, Turkey reached a clinker production capacity of 76.5Mt at the end of 2015. There are also some ongoing capacity installation projects which means that the increase in production capacity will continue in the upcoming years. The cement sector has stressed the importance of increasing concrete road construction activity in Turkey. With solutions such as the use of new technologies for concrete pavements, concrete roads should become a major source of infrastructure works in Turkey as the manufacturing cost is virtually the same as that of other materials, they offer low maintenance costs and are resistant to climatic and environmental conditions. Cement consumption is expected to grow by around +3% in 2016, thanks to investment in housing within the scope of urban renewal and maintenance projects, and also to major infrastructure projects such as a high-speed train, metro, and highway. Investment in energy efficiency, with the aim of decreasing Turkey's energy dependence, will be equally important.

#### UNITED KINGDOM

**Overview:** Market performance through 2015 was generally positive, although more modest compared to the growth in 2014. Cement data will not be available until July 2016 but is expected to have increased by +4% in 2015. Looking forward, by 2019, aggregates sales are expected to be up +16% compared to 2015, +13% for cementitious, ready-mixed concrete (RMC) and mortar, and up +14% for asphalt sales. Downside risks to this outlook exist, and mostly relate to the timing and scale of some of the major projects, as well as general economic and geopolitical risks. Cement sales are expected to grow +2-4% in 2016.

**Future trends:** Whilst there is some evidence that the current global and domestic risks are increasingly dampening businesses' confidence, economists and forecasters remain positive (if cautious), pointing to resilient UK economic fundamentals. Subject to continued EU membership, the UK economy is expected to grow by +2% to +2.3% this year. Latest ONS estimates show the volume of construction output up +2.8% in the 12-months to January 2016. The slowdown observed in the second half of 2015 appears to be easing off, with construction output showing a pickup in activity since December. Further growth is expected as suggested by the volume of new orders, which in 2015 stood +2.8% up compared to 2014.

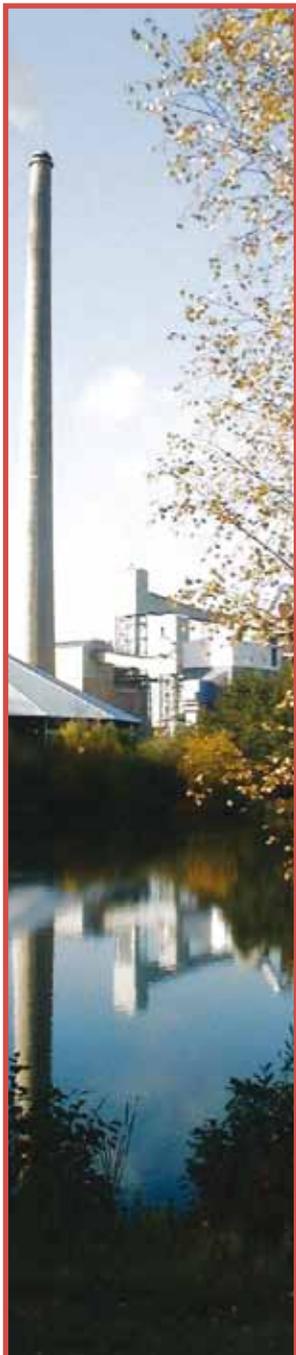
## EVOLUTION OF CEMENT CONSUMPTION IN CEMBUREAU COUNTRIES VARIATION 2015/2014



↑ : Increase    ↓ : Decrease

n/a: Not available

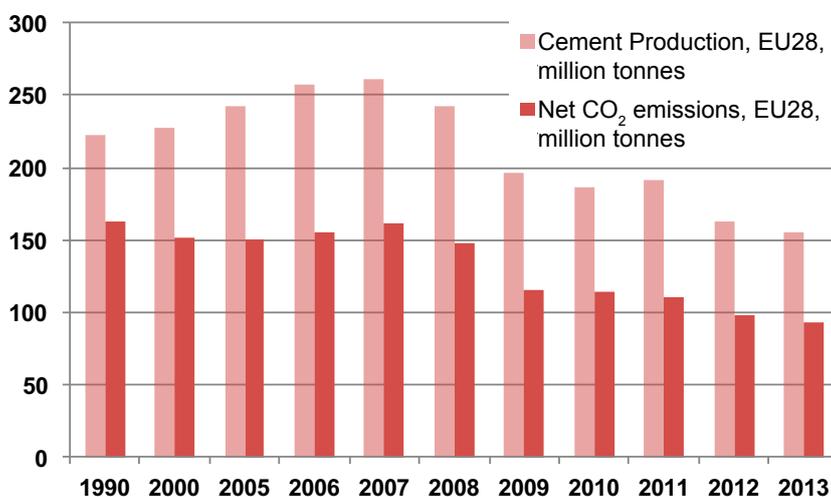
MEMBERS  
ASSOCIATE MEMBERS



# EMISSIONS REPORTING GNR & BEYOND

Since 2007, CEMBUREAU contributes to the World Business Council for Sustainable Development - Cement Sustainability Initiative's (WBCSD-CSI) "Getting the Numbers Right" (GNR) project, which aims at monitoring and addressing CO<sub>2</sub> emission trends from the cement industry at global level. The GNR project is a CO<sub>2</sub> and energy performance information system, based on emission data from individual cement installations. The system gathers information on each factor or lever that impacts CO<sub>2</sub> emissions and energy efficiency, including the average thermal efficiency per tonne of clinker, and the substitution of conventional fuels with alternative fossil fuels and biomass. The information contained within the system represents around 23% of global cement production (some 55% without China). Separate reports for the EU28 and the CEMBUREAU region are also available, including information from 301 installations, representing approximately 96% of total EU cement production.

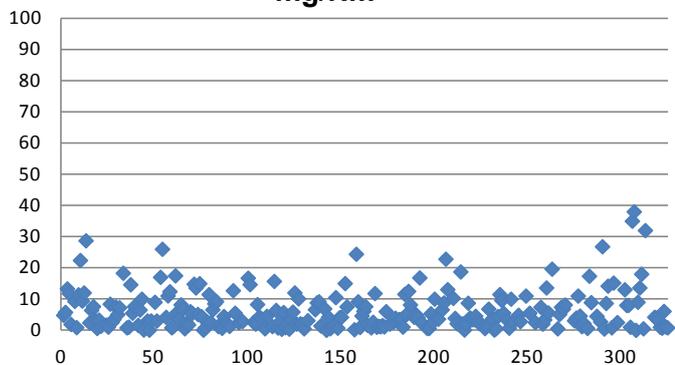
The main results of the GNR are presented here and show a significant decoupling between cement production and absolute CO<sub>2</sub> emissions over time. According to GNR data, whilst cement production in the EU28 decreased by -30.6% from 1990 until 2013, the absolute net CO<sub>2</sub> emissions decreased by -43% from 1990 until 2013. GNR reports are available online: <http://www.wbcسدcement.org/GNR-2013/index.html>. Releases from cement kilns originate from the physical and chemical reactions of the raw materials and from the combustion of fuels. In addition to CO<sub>2</sub> emissions, exhaust gases also contain dust, sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>), amongst others. In 2015, CEMBUREAU continued to collect emissions data for other key elements emitted during the clinker burning process including dust, NO<sub>x</sub> and SO<sub>2</sub>. The latest report includes emission values collected for 307 kilns from the CEMBUREAU member countries for 2013, compared to 300 the year before.



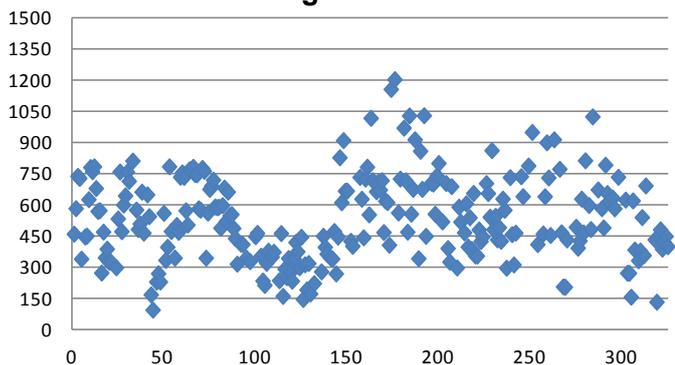
Some of key findings from the latest emissions report (2013 data) can be described as follows:

- NO<sub>x</sub> emissions continue to decrease.
- Dust emissions are increasingly within the Best Available Technique (BAT) Associated Emission Level (AEL) ranges.

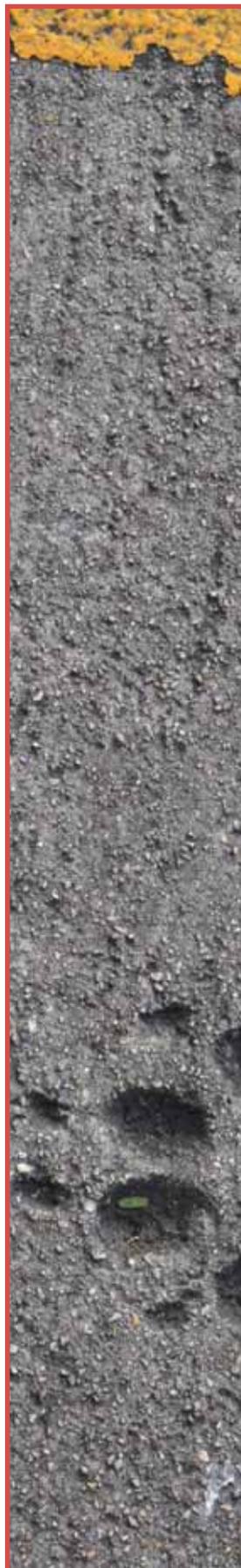
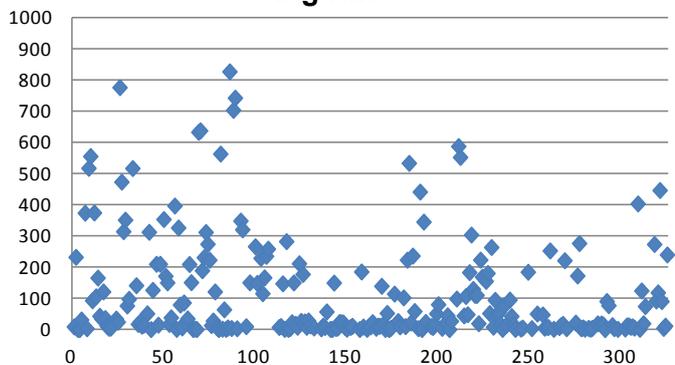
**DUST Emissions - Continuous - 2013**  
mg/Nm<sup>3</sup>



**NO<sub>x</sub> Emissions - Continuous - 2013**  
mg/Nm<sup>3</sup>



**SO<sub>2</sub> Emissions - Continuous - 2013**  
mg/Nm<sup>3</sup>



***“Actions speak louder than words. Today we take a decisive step towards enshrining the EU’s target of at least 40% emissions cut by 2030 into law. My message to our global partners ahead of the Paris climate conference: the EU stands by its international commitments. And my message to investors, businesses and industry: invest in clean energy; it’s here to stay and continue to grow. With these proposals, Europe is once again showing the way and leading the global transition to a low-carbon society.”***

(Climate Action and Energy Commissioner Miguel Cañete, Press Release 15 July 2015 on the publication of the Commission’s Energy summer package)

# CEMBUREAU MAIN ISSUES

Throughout the year, CEMBUREAU continued to engage with policymakers on its three strategic axes: (i) continue to protect and defend the industry; (ii) promote concrete as a material of choice in sustainable construction and (iii) create a compelling case on the need for a competitive, local cement and concrete industry.

## CLIMATE CHANGE & ENERGY

Ahead of the **COP21 Paris negotiations**, CEMBUREAU issued a statement outlining the European cement industry’s view on international climate policy. In it, the Association reiterated its position that a legally binding international climate change agreement must provide a long-term, stable and reliable environment to encourage investments and support plans to reduce CO<sub>2</sub> emissions further and to adapt to climate change. CEMBUREAU has mixed feelings about the outcome of the Paris negotiations. While, on the one hand, clear progress has been made in making 197 countries adapt to the Agreement and 187 countries committed to submit pledges, on the other hand, there are no commitments as to the substance of the pledges (which makes it difficult to assess how the objective of a limit to 2°C - or 1.5°C - temperature rise will be achieved). In addition, maintaining the reference to “common but differentiated responsibilities” and to the need for developed countries to take the lead, point to an at most gradual and modest growth path to a level playing field (China represents 56.5% of the global cement production, for instance). Carbon leakage protection under EU legislation remains therefore essential, also after the Paris Agreement.

Through the publication of its **Low-Carbon Roadmap**, the cement industry has laid out its contribution to further reducing its CO<sub>2</sub> emissions. With the CEMBUREAU area representing 4% of global cement production, climate change is in essence a global challenge that requires a global solution. In the absence of a global level playing field, measures need to be taken to maintain the competitiveness of cement producers in Europe.

Leading up to the publication of new proposals on the **EU Emissions Trading System (EU-ETS)**, published on 15 July 2015, CEMBUREAU responded to a public consultation and advocated in favour of a post-2020 improved EU-ETS that creates a predictable legal framework and ensures a stable long-term globally-equalised carbon price to foster investments in low-carbon technologies and eliminates the risk of carbon leakage.

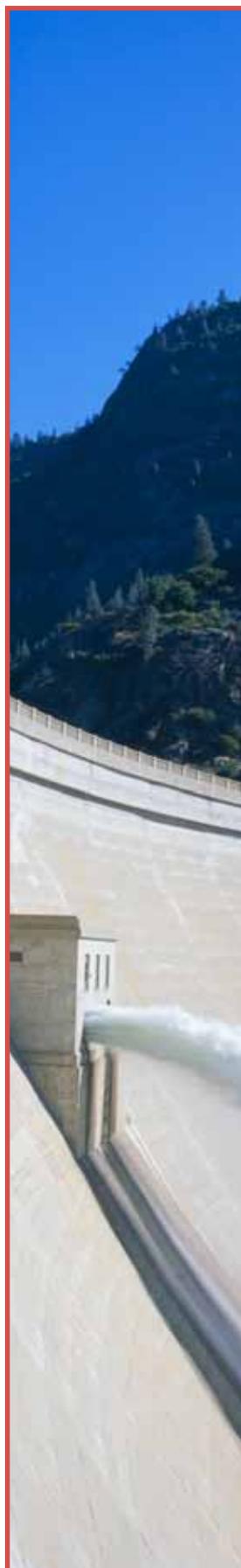


CEMBUREAU welcomes the ongoing recognition of the risk of carbon leakage in the Commission proposal but is concerned about the fact that the cross-sectoral correction factor is maintained and a flat-rate benchmark approach adopted. Separately, and in combination, these measures will not allow the best performer to receive full free protection against carbon leakage. CEMBUREAU suggests the following changes to the Commission's proposal:

- Maintain the current benchmark principles based on the average of the 10% best performers and real data.
- Inclusion of flexibility in the amount of free allocation using a reserve or auction adjustment. This can be done whilst maintaining the environmental goal set by the overall cap on emissions.
- Strengthen and harmonise the provision for the compensation of increasingly important indirect costs of EU-ETS in electricity prices.
- Ensure that the Historic Activity Level (HAL) is more closely aligned to recent production and rules provide for plant rationalisation measures.
- Improve the clarity of the text and commitment to innovation and growth funding to encompass Carbon Capture, Storage and Use.

The European Commission's public consultation on the **Effort Sharing Decision** gave the cement industry an opportunity of providing its views on the legislative proposal concerning the effort of Member States to reduce their greenhouse gas emissions to meet the European Union's greenhouse gas emission reduction commitment in a 2030 perspective. Here, CEMBUREAU raised the issue that whilst the CO<sub>2</sub> emitted by the cement industry when using alternative fuels from waste is included within the scope of the EU-ETS, CO<sub>2</sub> emissions resulting from the incineration of waste are not. As a result, there is a need to tackle this distortive inconsistency by either including waste incineration CO<sub>2</sub> under the EU-ETS, or considering co-incineration of waste in the cement industry as a zero emission factor under the Monitoring and Reporting Regulation. In promoting a full supply chain approach whereby not only the CO<sub>2</sub> emitted from the manufacturing process but also the CO<sub>2</sub> saved in the use of the product can be taken into account, the sector also called for legislation which rewards energy savings and CO<sub>2</sub> reductions achieved thanks to the use of downstream products, such as concrete, in buildings.

From a standardisation perspective, work also continued under **CEN TC 264 WG 33 (Greenhouse gas [GHG] emissions in energy-intensive industries)**. This work has now been finalised and is to be published in due course. Furthermore, it is in the process of being turned into an ISO standard.





***“With today’s package, we are delivering the comprehensive framework that will truly enable this change to happen. It sets a credible and ambitious path for better waste management in Europe with supportive actions that cover the full product cycle.”***

First Vice-President Frans Timmermans, responsible for sustainable development at the launch of the EU Commission’s Circular Economy Package, Press Release 2 December 2015

**RESOURCES & PROCESSES**

In its advocacy on the circular economy package, CEMBUREAU positioned the cement industry as being at the heart of the **circular economy**, both in the manufacturing process where energy recovery and material recycling occur, as in its downstream product, concrete, which is fully recyclable.

In terms of **energy recovery**, 39% of cement kiln primary fuels (mostly petcoke and oil) in the European Union are currently replaced by **alternative fuels**. 5.4% of these fuels originate from waste biomass (such as animal meal, waste wood, sewage sludge and sawdust) and 33.4% from other waste (e.g. waste tyres, waste oil, solvents). By 2050, 60% of kiln energy could be provided by alternative fuels, leading to a 27% reduction in fuel CO<sub>2</sub> emissions and saving 7.7 million tonnes (Mt) annually of coal and petcoke and 6Mt annually of raw materials. CEMBUREAU is also providing support on how to further develop the use of alternative fuels and biomass from waste.

Furthermore, the Association continued to promote the benefits of the **material recycling** which occurs during co-processing in the cement industry, and the recycling of concrete demolition waste either back into concrete as a recycled concrete aggregate or as road base.

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On 2 December 2015 the European Commission adopted its **Circular Economy Package**. CEMBUREAU was pleased to see recognition granted to the energy recovery of municipal waste, as well as the emphasis placed on the need for sorting systems for construction & demolition waste. At the same time, CEMBUREAU believes that more should be done to ban the landfilling of recyclable and recoverable waste.

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In September 2015, CEMBUREAU responded to a European Commission public consultation on the **functioning of Waste Markets in the European Union**. The main issues identified by the Association as either distorting or creating unnecessary obstacles to the correct functioning of waste markets across the EU include the conflicting aims of relevant policies and the different way in which waste is treated across various EU policies. For instance, some sectors are required to account and pay for CO<sub>2</sub> emissions from waste and others are not. In addition, renewable policies are driving biomass to power generation which has market consequences on industries attempting to switch away from fossil fuel combustion towards biomass. Furthermore, the declassification of waste as end-of-waste in some Member States and not in others also creates a distortion.

CEMBUREAU participated in the kick-off meeting of the **Waste Incineration Best Available Techniques (BAT) Reference Document (BREF)** held at the beginning of the year in Seville. Concerning the **Waste Treatment BREF**, the work was primarily undertaken by the European Association for co-processing (Euopro), with CEMBUREAU continuing to monitor developments.

The cement industry also initiated a reflection on the **Energy Union Strategy**. Some areas of potential relevance to the sector include energy for heating and power, energy efficiency, energy security of supply and waste markets. Work on this will continue in 2016.

On 25 February 2015, the European Commission adopted its Communication on the “Framework strategy for a resilient energy union with a forward-looking climate change policy”. The Communication includes the goals of the Energy Union and the measures which need to be taken in order to achieve these goals. The Energy Union Package mandates the Commission in its roadmap to adopt a Communication on Waste-to-Energy (WtE) in the course of 2016. The aim of such a Communication is to exploit the potential of WtE by establishing synergies between energy efficiency policies, resource efficiency policies and the circular economy. Co-processing will be integrated within the scope of the study that the European Commission has commissioned to prepare a techno-economic assessment which can help support the elaboration of the Communication on Waste-to-Energy.

On **air quality**, discussions heated up in the European Parliament around the MEP Julie Girling report on the proposal for a Directive of the European Parliament and of the Council on the reduction of national emissions of certain atmospheric pollutants and amending Directive 2003/35/EC (NEC), particularly in relation to the inclusion of mercury. In this respect, the point was clearly stressed that most mercury emissions from the industrial sector are already covered by the Industrial Emissions Directive. As a result, mercury was finally excluded from the scope of the report.

**Mercury** is present in the raw materials and in the fuel released in the cement combustion process. CEMBUREAU, with the Cement Sustainability Initiative (CSI) in the lead, has been strongly involved in the UNEP Global Mercury Partnership Advisory Group that focuses on how to protect human health and the global environment from the release of mercury and its compounds. At an international level, UNEP is currently working on the Technical Guidance Document on Best Available Techniques and Best Environmental Practices (BAT/BEP). At European level, the cement industry contributed at the beginning of the year to a study carried out for the European Commission (DG Environment) entitled “Study on EU Implementation of the Minamata Convention on Mercury”, which concluded that close to 100% of EU cement installations are covered by EU legislation on mercury.

In line with the European Commission’s evaluation of the **Birds and Habitats Directives**, which are at the heart of EU nature law, CEMBUREAU worked actively with Birdlife International to demonstrate that these two Directives are fit for purpose. Although no official conclusion was announced in 2015, it appeared clear that the majority favoured the view that the Directives should be maintained and implementation tackled. Based on the long-standing experience of our members with these laws, CEMBUREAU was able to demonstrate that the main issue requiring attention is implementation of these Directives at national level. With this in mind, CEMBUREAU and Birdlife International put their thinking caps on in order to provide positive input to the European Commission on how implementation could be improved.



***“On health and safety at work. It is necessary to simplify the existing legislative framework. At the same time, there is a need to address new risks, such as carcinogens.”***

Marianne Thyssen,  
Employment  
Commissioner  
Keynote speech at  
European Political  
Strategy Centre  
Conference on  
4 June 2015



## HEALTH & SAFETY

The **Comprehensive Health Risk Study (CHRS)** was launched by CEMBUREAU in 2005. The study is composed of several elements including an updated survey of the literature on the question, a measurement study on workers' exposure to dust in the cement production and construction industry, a toxicological study carried out in two phases, one involving in-vitro tests, the other ex-vivo tests, a European prospective lung function monitoring study and a French mortality study.

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The Comprehensive Health Risk Study is now finalized and the following general conclusions were drawn by Greenfacts:

- People are exposed to cement either by coming in contact with wet cement or by breathing in cement dust.
- Skin contact can lead to an inflammation of the skin and to an allergic reaction. Inhaling cement dust can cause breathing problems, depending on the type of dust, the level and the length of exposure.
- The use of appropriate protective equipment largely contributes to protecting workers in the cement production and construction industries in Europe from developing any of these potential health problems.
- There is no convincing evidence of an increased risk of developing any form of cancer in relation to Portland cement exposure consistent over a variety of geographic and demographic conditions.

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CEMBUREAU pursues its monitoring of all Health and Safety legislative updates and evaluates their impacts on the cement industry. The Association continues to provide assistance to members with regards to the “Registration, Evaluation, Authorization of Chemicals” (REACH) and Classification, Labelling and Packaging (CLP) legislation. Following the full implementation of the CLP regulation in June 2015, CEMBUREAU has provided Members with translations of all Safety Data Sheets for cement clinker, cement and flue dust. Furthermore, the Secretariat maintains its role as a third party representative for some cement companies in the slag consortium.

The priority issue, defined by the CEMBUREAU Board, is the dossier “Respirable Crystalline Silica” (RCS). The classification and labelling of cement is strongly dependent on the quantity of this substance in the mixture. In order to be able to measure the RCS content of cement bulk products, WGC has been working on developing a technically sound methodology to provide the cement industry with a Standard Operating Procedure (SOP) applicable in laboratories. A Round Robin Test was performed on selected samples and an SOP was developed which now is in the process of being refined.

In 2015, **The Concrete Initiative** continued to advance on the strong foundations laid out further to its launch in 2014. In term of partners, the European Aggregates Association (UEPG) joined The Concrete Initiative during the course of the year. With the presence of the aggregates, precast concrete, ready-mix concrete and cement associations, The Concrete Initiative has now established itself firmly as a credible voice for the cement and concrete industry. Furthermore, The Concrete Initiative ramped up its actions in terms of contributing to the debate on sustainable construction. In addition to enhancing and broadening contacts with key stakeholders in Brussels, a series of publications, fact sheets and events (p. 37, 38 & 39) also added a constructive contribution to this important debate.

The Concrete Initiative was actively involved in discussions concerning a common EU framework of indicators for the assessment of the environmental performance of buildings, further to the Commission's Communication on Resource Efficiency opportunities in the Building Sector, adopted in 2014. In 2015, work began on identifying 'macro-objectives' for the environmental performance of the EU building stock. This work is intended to provide an initial 'top-down' view of what the strategic priorities (the 'macro-objectives') should be for the building sector. A set of six macro-objectives at building level were proposed at the end of the year.

In terms of publications and fact sheets, the results of a study by consulting group Le BIPE/EUROCONSTRUCT, focusing on the multiplier effect of the cement and concrete industry on Europe's economy, were made public. Entitled 'Cement and Concrete Industry: Multiplier Effect on the Economy and Contribution to a Low Carbon Economy', this study, commissioned by The Concrete Initiative, clearly concludes that this important industry contributes to local growth and jobs in a low carbon economy. In fact, for every Euro generated in this sector, €2.8 are generated elsewhere in the economy. The study also highlighted why concrete is an essential material for a low carbon economy.

### **Cement and Concrete Industry: Multiplier Effect on the Economy and Contribution to a Low Carbon Economy** by Le BIPE/EUROCONSTRUCT

- In 2012, the cement and concrete industry directly generated €20bn in value-added and 384 thousand jobs across the EU28. For the CEMBUREAU region, the direct value-added is €22bn and the number of direct jobs is 413 thousand.
- Through its purchases and the spending of its direct and indirect employees, the industry generates a total value-added of €56bn in the EU28 and generates over 1.08 million jobs. In the CEMBUREAU region, the total value-added is €60bn with 1.15 million jobs created.
- This corresponds to a multiplier effect of 2.8. This means that, in the EU28, for each €1 of value-added generated in the cement and concrete industry, €2.8 are generated in the overall economy. A similar effect has also been recorded for the CEMBUREAU region and a similar ratio applies for the number of jobs.

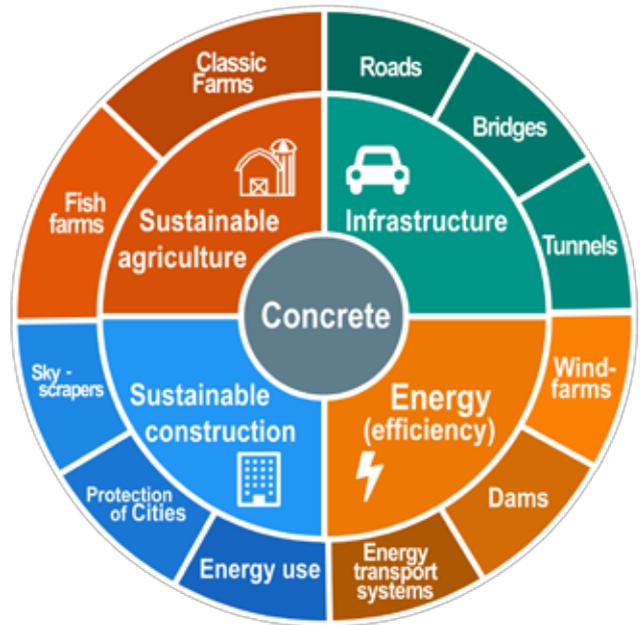
***“The circular economy is not just an idea. It has to be a practical reality. That’s what makes The Concrete Initiative so valuable. It is a very good example of how a sector can contribute directly: noting problems, identifying solutions and turning them into reality on the ground. It is great to see an industry that has already made changes in its production systems, reducing CO<sub>2</sub> emissions and substituting primary materials. Although there is always room for improvement.”***

Karmenu Vella,  
Environment,  
Maritime Affairs  
and Fisheries  
Commissioner.  
Keynote address  
at The Concrete  
Initiative annual  
event on  
19 November 2015





- The concrete and cement industry is a strong contributor to the local economy. Increased exports of cement products that are produced in the EU28/CEMBUREAU region and exported outside this area have maintained production capacity in Europe. Exports are taken into account in the calculation of the multiplier effect since they contribute to the local economy and jobs.
- Concrete is an essential material to respond into the challenges of tomorrow such as energy efficiency, climate change adaptation, durability, affordability and can be used in a wide range of applications.



In order to explain the benefits of **thermal mass**, The Concrete Initiative produced the first in a series of fact sheets: “Thermal mass - The smart approach to energy performance”.

The second fact sheet, “**Policy do’s and don’ts for construction and demolition waste (C&DW)**”, follows on from the fruitful debate during the 2014 C&DW Thematic Lunch organised by The Concrete Initiative. This paper provides some “do’s & don’ts” for successful policy on C&DW as input to the European Commission’s work in this area. In this respect, The Concrete Initiative also commissioned a study by the European Cement Research Academy (ECRA) entitled “Closing the loop: What type of concrete re-use is the most sustainable option?”, the aim of which is to look at the different options for recycling concrete in order to identify the most sustainable one.

The third in the series of fact sheets, “**CO<sub>2</sub> and the built environment - The positive role of concrete**”, demonstrates how concrete buildings can deliver the lowest overall CO<sub>2</sub> impact.

Further to the work undertaken in 2008 between CEMBUREAU and the European Cement Research Academy (ECRA) on the **Environmental Product Declaration (EPD) for Portland cement** (CEM I), in 2015, CEMBUREAU was pleased to announce the completion of updated European EPDs for CEM I, CEM II and CEM III cements. These EPDs have been approved by a third party verifier, RDC Environment, and are in line with EN 15804 and ISO 14025 standards. The EPDs are mainly intended for Business-to-Business (B2B) communication and their prime purpose is to provide measurable and verifiable input data for life-cycle assessment at the level of building or infrastructure works.

Through its liaison status under the **European Committee for Standardisation (CEN)**, CEMBUREAU gives industry input to standardisation. In 2015, CEMBUREAU gave input in particular to the work of CEN/TC 51 (Cement and building limes) and the revision of standard EN 197-1 “Composition, specifications and conformity criteria for common cements”, with a view to including implementation of the Construction Products Regulation and standardising certain new types of cements. In addition, Product Category Rules (PCR) for Environmental Product Declarations (EPDs) for cement and building limes were drafted by CEN/TC 51. With regard to concrete products, covered by CEN/TC 104, CEMBUREAU gave input to the work on drafting a common concrete PCR as well as to the discussion on a performance-based approach to durability. Finally, CEMBUREAU remained very active in CEN/TC 350 “Sustainability of Construction Works”. There the work included the draft Technical Report “Guidance to EN 15804”. Furthermore, the European Commission proposed a draft revision of the mandate for CEN/TC 350.

As a member of European Concrete Platform (ECP), CEMBUREAU remained involved in the **Responsible Sourcing Scheme for Concrete** currently under development. The project was initiated by the World Business Council for Sustainable Development’s (WBCSD) Cement Sustainability Initiative (CSI). In 2015, several companies pilot-tested the draft scheme. Furthermore, at the end of the year, discussions were initiated with NGOs in order to obtain their feedback on this RSS.

In terms of **fire safety**, technical issues relating specifically to concrete continued to be managed under the ECP. From a more advocacy-oriented perspective, the work was led by Fire Safe Europe (FSEU), of which ECP is a member. In 2015, FSEU continued to organise meetings with Members of the European Parliament with the aim of putting fire safety on the European agenda.

Work also kicked off in terms of updating the CEMBUREAU publication “**Cement Standards of the World**”. This document is expected to be finalised and available for purchase by end 2016/ beginning 2017. For more information on this publication, please e-mail: [communications@cembureau.eu](mailto:communications@cembureau.eu)





# OUR WORKING GROUP STRUCTURE

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Climate Change &amp; Energy</b>	<b>Resources &amp; Processes</b>	<b>Health &amp; Safety</b>	<b>Markets &amp; Products</b>
<b>TASK FORCES</b>	<b>TASK FORCES</b>	<b>TASK FORCES</b>	<b>TASK FORCES</b>
<ul style="list-style-type: none"> <li>• ETS Phase IV</li> <li>• 2050 Low Carbon Economy Roadmap</li> <li>• CEN TC 264 WG33 Mirror Group</li> </ul>	<ul style="list-style-type: none"> <li>• Waste</li> <li>• Biodiversity</li> <li>• BREF Revision</li> <li>• Resource Efficiency &amp; Fiscal Issues</li> </ul>	<ul style="list-style-type: none"> <li>• REACH SDS C&amp;L RCS</li> <li>• CHRS</li> </ul>	<ul style="list-style-type: none"> <li>• Product Standards and Regulations</li> <li>• Sustainable Construction</li> </ul>

The “Main Issues” section covers just the key areas of CEMBUREAU’s work in 2015. The Association continued to work on many other issues throughout the year.

It should also be noted that the Members and company representatives active with the CEMBUREAU Working Groups play an invaluable role in ensuring the success of the Association and the best possible outcome, and it is to them that we extend our thanks.

For more information on specific issues dealt with by CEMBUREAU, please e-mail: [aj.johnson@cembureau.eu](mailto:aj.johnson@cembureau.eu).

# INNOVATION

CEMBUREAU closely follows developments regarding Carbon Capture (CC) in the cement industry. Research in this field is primarily being undertaken by the European Cement Research Academy (ECRA). So far, the first three phases of the research are complete, including the literature survey, study on the technical and financial aspects of CC and laboratory scale research. The project has now entered Phase IV, namely preparing for a pilot plant. Furthermore, the first joint international conference on Carbon Capture and Storage (CCS) between ECRA and Norcem (which is also undertaking carbon capture research in the cement industry) was held in May in Norway. This two-day expert meeting focused primarily on the latest developments in the field.

CEMBUREAU continues to support its members in the area of innovation funding and maintains its involvement in Sustainable Process Industry through Resource and Energy Efficiency (SPIRE) which is a Public Private Partnership launched as part of the Horizon 2020 Programme and representing 8 different industrial sectors. Several of the research topics adopted in 2015 are of potential relevance to the sector, with the cement industry currently evaluating its involvement in the various projects.

*More information:*

**ECRA poster “The cement industry’s approach to carbon capture** (<http://www.cembureau.eu/cement-industrys-approach-carbon-capture>)





# CIMEUROPE ACTIVITIES

In 2015, global geopolitical developments also had an influence on the commodities and freight markets. In 2015, China, which is still responsible for one third of global growth, has come under increasing pressure due to rising debt, overcapacity and decelerating productivity growth. As China is the major global buyer and importer of commodities, including coal, crude oil and petcoke, Chinese demand had an impact on commodity prices. The same holds true for global freight rates with China accounting for 50-60% of global seaborne tonnages. While there were still high deliveries from shipyards in 2015, new orders have fallen sharply and the Baltic Exchange Dry Index has been in a steep decline since September 2015, from USD 1300 to around USD 500 in December 2015.

The high levels of shale gas production meant that total natural gas production remained virtually unchanged and this had a downward effect on gas prices with a resistance level at USD 2.52. In turn, low natural gas prices pushed down coal prices and this brought US coal companies in particular on the verge of bankruptcy. Crude oil (WTI) dropped below USD 50 (reaching even USD 34-36 by year-end) which was seen by many as a bottom level until summer 2015.

As to petcoke, the 2011-2014 period was marked by relatively high sulphur petcoke prices oscillating around USD 60 but falling to USD 55 by Q3 2015 and reaching a resistance level of USD 36 by year-end with the potential to slide further to USD 18 FOB. The petcoke market was further impacted by regulatory constraints on sulphur limits imposed by Turkey, Egypt, Canada and the US. China intended to prohibit the sale and use of “unqualified petcoke” as from 1 January 2016 but lots of uncertainties remained on the exact meaning and interpretation of the legal text.

In terms of events, a successful CEMPROSPECTS Conference was held in Madrid on 2-3 November 2015 where 100 participants from all over the world exchanged views on developments in the major supply markets.

At the end of 2015, Sven Rydahl took up his retirement. Cimeurope hereby expresses its deepest gratitude for the enormous work Sven has done for CEMREVIEW and CEMPROSPECTS. Sven has established himself as an authoritative voice for our industry through a unique combination of analytical and mathematical skills, an unstoppable thirst for knowledge and a natural diplomacy. He is respected in our industry not only for his deep knowledge but also, and this is even more important, as a charming and very approachable colleague. Steps have been taken to ensure the continuation of CEMREVIEW and CEMPROSPECTS after Sven's departure.



# EVENTS

As part of its advocacy activities, CEMBUREAU organised the following major events during the course of 2015:

## **24 March 2015 - How can the cement industry contribute to EU recycling targets?**

The first was a breakfast debate held in the European Parliament dedicated to ways in which the cement industry can contribute to EU recycling targets. With speakers from the Parliament, Commission and industry, the event centred around the role of co-processing in the cement industry, the Circular Economy Package (subsequently launched by the Commission in December 2016) and recycling targets. The primary aim was to raise awareness about the key role which the material recycling component of co-processing can play, and how it has the potential to contribute towards EU recycling targets. Furthermore, CEMBUREAU launched its latest publication, entitled 'The future of European recycling policy and the circular economy. How can the cement industry contribute to EU recycling targets?'.

## **2 June 2015 - Biodiversity management in the cement & aggregate industries**

Under the auspices of Green Week, CEMBUREAU joined forces with Birdlife International and UEPG (The European Aggregates Association) in organising a quarry visit, kindly hosted by HeidelbergCement. The focus of this site visit was to show the biodiversity and nature which thrive in cement & aggregate quarries. The visit offered a real life demonstration of what the sector is doing, with participants taken on a guided tour of an aggregates quarry, combined with detailed explanations on the flourishing nature and biodiversity.

## **30 June 2015 – Concrete's contribution to Europe's economy**

The Concrete Initiative gathered together national cement & concrete associations, economists and other relevant stakeholders to discuss methods for analysing the contribution of the sector to Europe's economy. The aim of this debate was to gain an initial insight as input to the work undertaken by Le BIPE, which assessed in detail the contribution of concrete to Europe's economy.

## **21 September 2015 – EU Emissions Trading System post-2020**

In order to discuss the European Commission's proposal for a revised EU-ETS post2020, CEMBUREAU organised a roundtable together with relevant representatives from the Permanent Representations. Some of the key issues discussed included allocation of free allowances to best performers, ensuring that the Historical Activity Level applied is more closely aligned to recent production, as well as compensation for indirect costs.

## **25 September 2015 – European Minerals Day launch event**

As a key partner in the European Minerals Day, the cement industry played a central role in the launch event of this initiative, with members CIMALUX hosting the event at a cross-border site in Luxembourg and France. Held under the auspices of the Luxembourg Presidency of the Council of the European Union, speakers at the event included The Minister for the Interior of Luxembourg Dan Kersch, Daniel Calleja Crespo, Director General (DG Environment) from the European Commission, and Claude Turmes, Member of the European Parliament. The





primary focus of this event was to raise awareness about the importance of minerals to Europe and its citizens.

**19 November 2015 - Citizens at the Heart of the Sustainably-built Environment**

This year saw the very first Concrete Dialogue, an annual event of The Concrete Initiative. Entitled, ‘Citizens at the Heart of the Sustainably-built Environment’, this event brought together Members of the European Parliament, European Commission and civil society for a concrete dialogue roundtable to debate issues of relevance to sustainable construction. As part of this event, a study commissioned by The Concrete Initiative and produced by consultants Le BIPE, was launched: “Cement and concrete industry: Multiplier on the economy and their contribution to a low carbon economy”. Furthermore, the Joint Research Centre of the European Commission also presented its study ‘Building Design for Safety and Sustainability’, published in 2014. In addition to presentations, two round table debates were held with input provided by, amongst others, the European Commission, European Investment Bank, and the European Climate Foundation.

**3 December 2015 - Thematic Lunch ‘Modernising buildings and infrastructure’**

Stakeholders gathered for this thematic lunch in order to debate the modernisation of buildings and infrastructure with a smart mix of new, rebuilt and renovated construction works. Participants included representatives from both the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs and the Directorate-General for Energy of the European Commission as well as the Permanent Representation of Spain, the Belgian Demolition Association and experts in the field of sustainable development from industry and academia. During the debate participants explored drivers for achieving an energy-efficient and sustainable building and infrastructure stock. All agreed that addressing the existing building stock is fundamental to increase the global energy efficiency of a country or a region.

- [www.cembureau.eu](http://www.cembureau.eu)
- [www.theconcreteinitiative.eu](http://www.theconcreteinitiative.eu)
- [www.mineralsday.eu](http://www.mineralsday.eu)

Or follow us on twitter!  
 @cembureau  
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# PUBLICATIONS

Below is a series of publications and fact sheets produced or commissioned by CEMBUREAU/The Concrete Initiative during the course of 2015.

## Publications

- March 2015 - How can the cement industry contribute to EU recycling targets? (<http://www.cembureau.eu/how-can-cement-industry-contribute-eu-recycling-targets>)
- November 2015 - Cement and Concrete Industry: Multiplier Effect on the Economy and their Contribution to a Low Carbon Economy (<http://www.theconcreteinitiative.eu/newsroom/publications/143-cement-and-concrete-industry-multiplier-effect-on-the-economy-and-their-contribution-to-a-low-carbon-economy>)

## Factsheets

- August 2015 - Thermal mass: The smart approach to energy performance (<http://www.theconcreteinitiative.eu/newsroom/publications/136-thermal-mass-the-smart-approach-to-energy-performance>)
- October 2015 - Policy do's and don'ts for construction and demolition waste (<http://www.theconcreteinitiative.eu/newsroom/publications/139-policy-do-s-and-don-ts-for-construction-and-demolition-waste>)
- December 2015 - CO<sub>2</sub> and the built environment: The positive role of concrete (<http://www.theconcreteinitiative.eu/newsroom/publications/153-co2-and-the-built-environment-the-positive-role-of-concrete>)

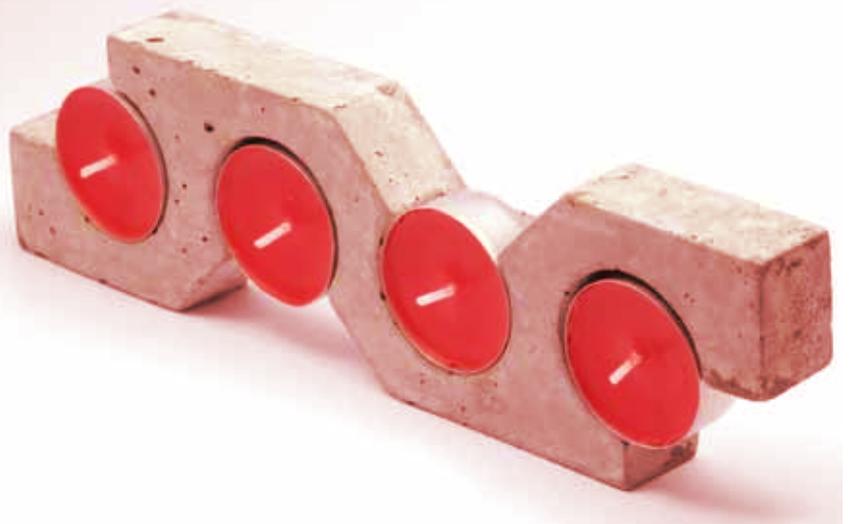




## PARTNERSHIPS

CEMBUREAU is a key player in the mostly Brussels-based scene of European Trade Associations. CEMBUREAU interacts regularly with a number of these associations, often joining forces under alliances in order to achieve a common goal:

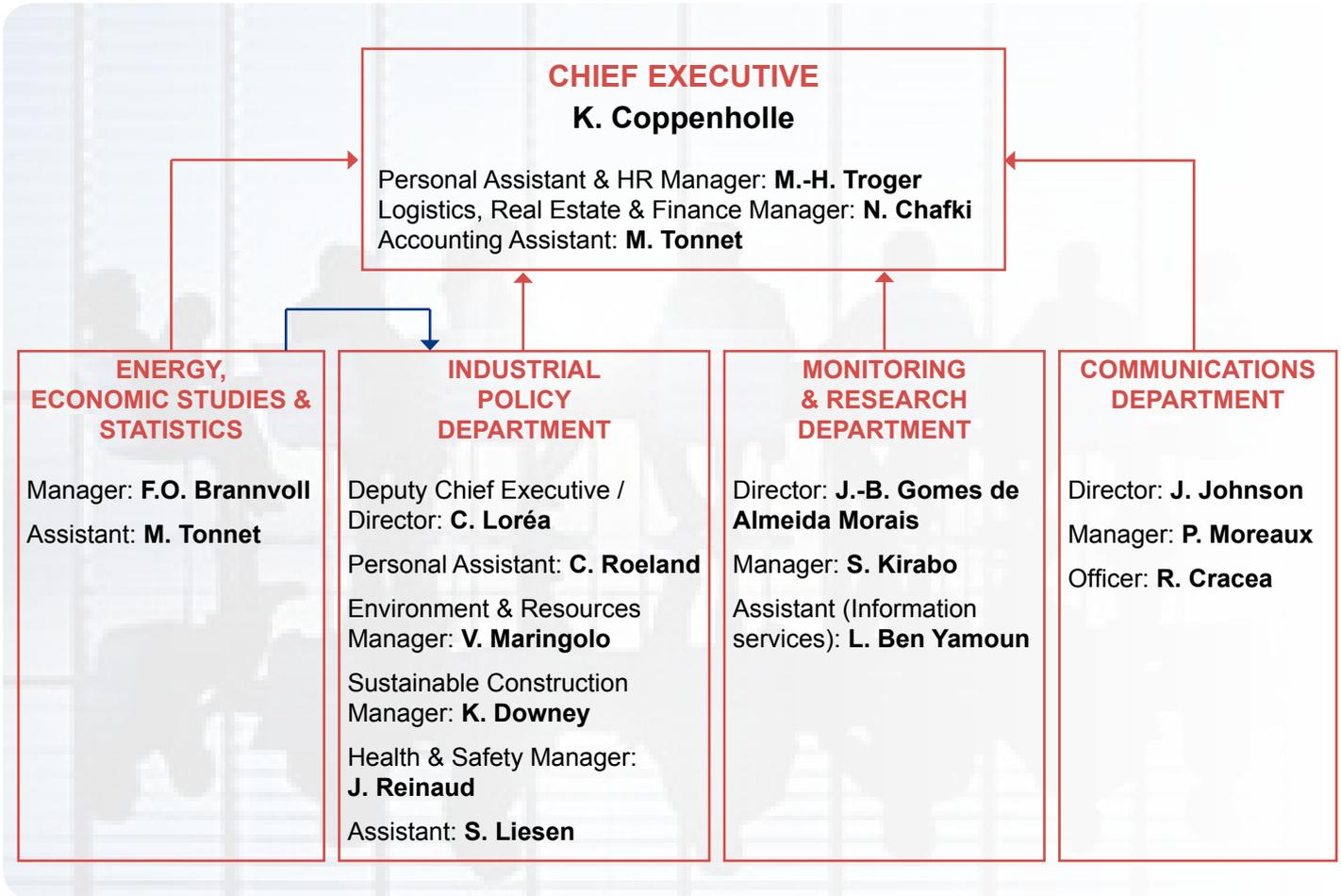
- Alliance for a Competitive European Industry (ACEI)
- Alliance of Energy Intensive Industries (AEII)
- Business and Biodiversity Platform (B@B)
- Construction Products Europe (CPE)
- European Cement Research Academy (ECRA)
- European Concrete Paving Association (EUPAVE)
- European Concrete Platform (ECP)
- European Minerals Day (EMD)
- European Network for Silica (NEPSI)
- Fire Safe Europe (FSEU)
- Non-Energy Extractive Industries Panel (NEEIP)
- REACH Alliance
- Sustainable Process Industry through Resource and Energy Efficiency (SPIRE)
- World Business Council for Sustainable Development – Cement Sustainability Initiative (WBCSD-CSI, global)



# ABOUT CEMBUREAU

(Situation on 15 May 2016)

## Meet the team!



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## MEMBERS

**Austria:** VÖZ – Vereinigung der Österreichischen Zementindustrie (*Association to the Austrian Cement Industry*)

**Belgium:** Febelcem – Fédération de l'Industrie Cimentière Belge a.s.b.l. (*Association of the Belgian Cement Industry*)

**Bulgaria:** BACI – Bulgarian Association of Cement Industry

**Czech Republic:** Svaz výrobcu cementu CR (*Czech Cement Association*)

**Denmark:** Aalborg Portland A/S

**Estonia:** AS Kunda Nordic Tsement (*Kunda Nordic Cement Corporation*)

**Finland:** Finnsementti Oy

**France:** SFIC – Syndicat Français de l'Industrie Cimentière (*Association of the French Cement Industry*)

**Germany:** VDZ – Verein Deutscher Zementwerke e.V. (*German Cement Works Association*)

**Greece:** HCIA – Hellenic Cement Industry Association

**Hungary:** MCSZ – Magyar Cement-, Beton- és Mészipari Szövetség (*Hungarian Cement, Concrete and Lime Association*)

**Ireland:** CMI - Cement Manufacturers Ireland

**Italy:** AITEC – Associazione Italiana Tecnico Economica Cemento (*Italian Technical and Economic Association of Cement*)

**Latvia:** CEMEX LATVIA

**Lithuania:** Akmenès Cementas AB

**Luxembourg:** CIMALUX s.a.

**Netherlands:** ENCI BV - Eerste Nederlandse Cement Industry

**Norway:** Norcem A.S.

**Poland:** PCA – Stowarzyszenie Producentów Cementu (*Polish Cement Association*)

**Portugal:** ATIC – Associação Técnica da Indústria do Cimento (*Technical Association of the Cement Industry*)

**Romania:** CIROM – Employers' Organisation in Cement Industry and other Mineral Products for Construction in Romania

**Slovenia:** SLOCEM – Slovenian Cement Producers Association

**Spain:** Oficemen – Agrupación de Fabricantes de Cemento de España (*Association of Spanish Cement Producers*)

**Sweden:** Cementsa AB

**Switzerland:** cemsuisse - Verband der Schweizerischen Zementindustrie

**Turkey:** TÇMB – Türkiye Çimento Müstahsilleri Birliği (*TCMA - Turkish Cement Manufacturers' Association*)

**United Kingdom:** MPA – Minerals Products Association - Cement

## ASSOCIATE MEMBERS

**Croatia:** Croatia Cement, g.i.u.

**Serbia:** CIS - Cementna Industrija Srbije (*Serbian Cement Industry Association*)



For more information about our Members, please see  
<http://www.cembureau.eu/about-cembureau/members>

# ABBREVIATIONS GLOSSARY

AEL	Associated Emission Level
BAT	Best Available Techniques
BEP	Best Environmental Practices
BREF	Best Available Techniques Reference Document
BRICS	Association of five major emerging national economies: Brazil, Russia, India, China and South Africa
CAD	Chemical Agents at Work Directive
CC	Carbon Capture
CCS	Carbon Capture and Storage
CCU	Carbon Capture and Utilization
C&DW	Construction and Demolition Waste
CEN	European Committee for Standardisation
CHRS	Comprehensive Health Risk Study
CLP	Classification, Labelling & Packaging
CMD	Carcinogens and Mutagens Directive
CSI	Cement Sustainability Initiative
ECB	European Central Bank
EPDs	Environmental Product Declarations
EU-ETS	EU Emissions Trading System
FED	Federal Reserve System
FOB	Freight on Board
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GNR	Getting the Numbers Right
HAL	Historic Activity Level

# ABBREVIATIONS GLOSSARY

IUCN	International Union for the Conservation of Nature
KPI	Key Performance Indicators
MEPs	Members of the European Parliament
NEC	National Emission Ceilings
NEPSI	The European Network for Silica
PCR	Product Category Rules
RCS	Respirable Crystalline Silica
REACH	Registration, Evaluation and Authorisation of Chemicals
RMC	Ready-mixed concrete
SDA	Social Dialogue Agreement
SOP	Standard Operating Procedure
UNEP	United Nations Environment Programme
WtE	Waste-to-Energy
WTI	West Texas Intermediate

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