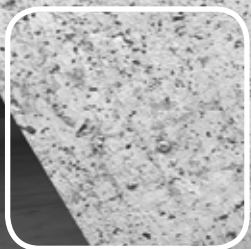
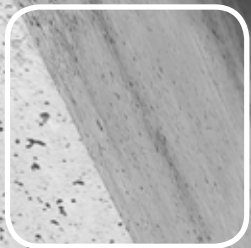




ACTIVITY REPORT 2016



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 (except for Malta and Slovakia) plus Norway, Switzerland and Turkey. Croatia and Serbia are Associate Members of CEMBUREAU. A cooperation agreement has been concluded with Vassiliko Cement in Cyprus.

The Association acts as spokesperson for the cement industry before the EU institutions and other public authorities, and communicates the industry's views on all issues and policy developments regarding technical, environmental, energy, employee health and safety and sustainability issues. In addition to the EU, permanent dialogue is maintained with other international organisations (e.g. OECD, IEA), the Cement Sustainability Initiative (CSI) and sister associations in other parts of the world.

Serviced by a multi-national staff in Brussels and with the input from its Members via four Working Groups as well as several Task Forces set up on an ad hoc basis and directly reporting to the appropriate Working Group, CEMBUREAU acts 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 its 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.

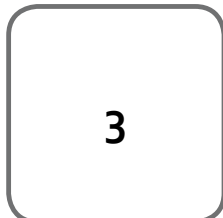
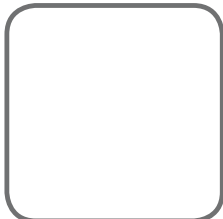
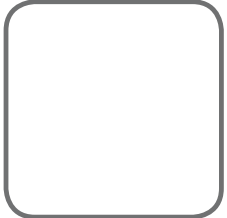
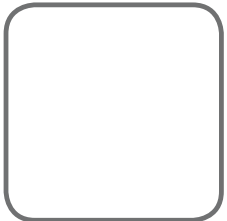


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KOEN
COPPENHOLLE



MESSAGE FROM THE CHIEF EXECUTIVE

2016 was a challenging year not only for the European Union but also from a geopolitical perspective. Inside the EU, Brexit, the refugee crisis and rising populism are areas of concern. The European Commission President Juncker has set out a number of options for the future of the European Union and the question on whether we evolve to a multi-speed Europe with different degrees of integration will be put firmly on the table in 2017.

Yet, 2016 was also a year where key policy initiatives have unfolded in the areas of climate change, the circular economy and energy transition. Thanks to a strong commitment of the CEMBUREAU Board to allocate resources and funds to studies and thanks to the continued focus of our experts in Working Groups and of our Members, CEMBUREAU has been able to leave its mark on a number of these initiatives that will shape the future of the European Union.

CEMBUREAU increasingly focuses on an integrated story whereby the cement manufacturing process does not stand on its own but is an essential component of a supply chain that uniquely contributes to biodiversity, upstream from manufacturing and provides durable, resilient and energy efficient solutions with its downstream product, concrete. One of the benefits of the commitments made by countries around the world under the Paris Climate Change Agreement is that CO₂ reduction efforts are indeed presented along the full construction supply chain.

This provides us with the opportunity to clarify that concrete is essentially a low carbon product and the material of choice for sustainable construction. The study that was undertaken by 3E consultants for The Concrete Initiative on the energy storage capacity of concrete which can be harnessed to increase the share of renewable energy in the grid, puts our industry at the center of the energy transition debate. Going forward, we need to be creative in reflecting and communicating on our role in building the society of tomorrow. We can certainly not do without the resilience and durability of concrete in building

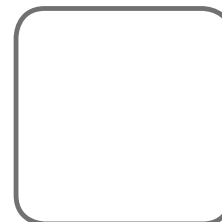
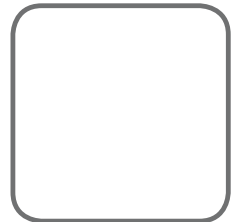
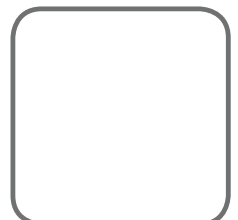
our schools, hospitals and houses but we should with equal force convey the message that energy efficiency and circular economy goals can be better achieved through the use of concrete and its inherent characteristics of thermal mass and recyclability.

Similarly we should continue along the path of highlighting the innovation efforts in our industry. In the debate on a revised EU-ETS for the post-2020 period, CEMBUREAU not only emphasised the need to focus on the continued competitiveness of the industry but has put forward the industry's innovation efforts in both conventional and breakthrough technologies. Since 1990, the industry is on a continuous CO₂ emissions reduction path and has substantially improved its energy efficiency. The post-2020 EU-ETS discussion is essentially about finding the right drivers to further incentivise industry to innovate, but to do so in a competitive environment of growth and job creation.

The competitiveness study that has been launched by the European Commission for the cement and lime industry, and which is due to be finalised in 2017, will provide us with a status report on the industry in terms of its competitiveness at a European and global level. It will in addition identify what are the drivers for the cement industry of the future in relation to the supply chain, innovation and skills. On that last aspect, we have laid the foundation for a cooperation with the European trade unions and were encouraged by their request to jointly reflect on development of skills and training to adapt our workforce to the rapidly changing working environment.

We will continue work on each of the areas set out above to ensure that we remain a trustworthy source of information for policymakers and other

stakeholders. I am grateful for a team that has strongly focused on these issues, and which has stepped up its research, advocacy and communication efforts. The CEMBUREAU staff is pleased to have an extensive network of Members, each with their own analysis, studies, research and outreach at national level and we value the cooperation with government relations experts and Working Group members who bring the expertise, sound judgment and balanced reflection to the table. Finally, we are indebted to the Board for its continuous guidance and for the steady leadership of the President and Vice-President. Personally, I particularly extend my thanks to the President for two years of intense cooperation. As Chief Executive, I felt empowered and encouraged by a President who brought business acumen to the Association, which translated into powerful messages towards our key audiences.





DANIEL GAUTHIER



MESSAGE FROM THE PRESIDENT

2016 was my last full-year as CEMBUREAU President. The “changing of the guard” is foreseen in June 2017 but I already venture a few reflections on what I consider to be relevant achievements during my Presidency. At the same time, I would consider these areas as “sites under construction” as I hand them over to the next President.

One of our most powerful messages over the past two years was the key finding of the study commissioned by The Concrete Initiative with consultants LeBipe which assigned a 2.8 multiplier factor of cement and concrete to the overall economy. The number of jobs and the added value created by the cement and concrete industry was found to be more substantial than in other sectors because our industry is firmly rooted in Europe and its local communities.

Our strong contribution to employment, growth and innovation in Europe also comes with responsibility: we must invest and operate in line with the highest standards of corporate citizenship. We also have an obligation to engage with and listen to a society which depends on our contribution in terms of products, growth and jobs, in order to find out how it views us and what its expectations are.

For that reason, my Presidency has been marked by a strong focus on outreach. First, outreach within our own sector. The work of an association is useful when it touches on the bottom-line of companies’ daily operations. There is a constant need to “feel the pulse” and this does happen through the presence of experts in our Working Groups and Task Forces, combined with operational guidance from the Board. If we truly want to represent the whole sector, we must mobilise cement industry executives who, even though aware of CEMBUREAU and its work, are not always tuned in to the latest developments and priorities. That is why we have added a “CEO event” to our General Assembly where attendees can be updated on CEMBUREAU’s latest activities in the different policy areas. I was positively impressed by the fresh pairs of eyes provided during the meeting, which generated valuable input. A similar positive impulse has been given by Board meetings organised outside Brussels, which have allowed the participation of global company CEO’s. Here as well, the challenges laid out by these executives have helped CEMBUREAU to stay focused on essential business priorities. I would hope that we continue to create “champions” for our industry at local level so that EU and national policymakers can testify first-hand on innovation and progress made by the cement industry.

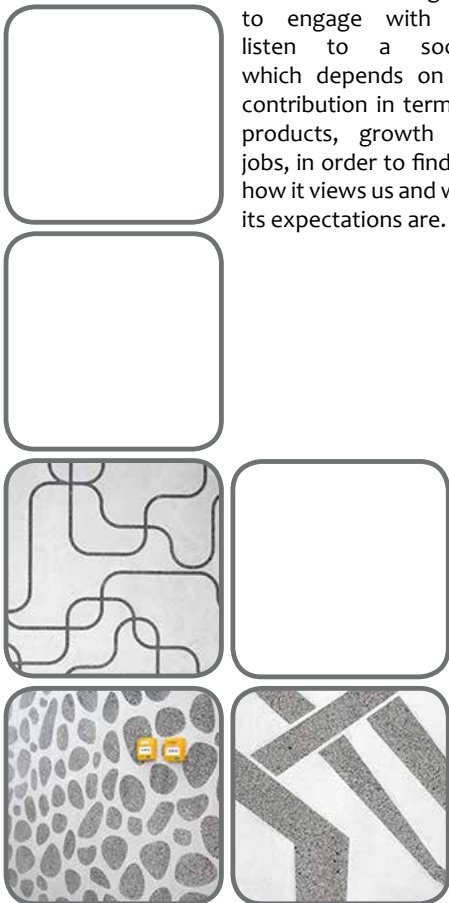
Second, outreach towards trade unions. In 2016, we initiated discussions with the European trade unions and identified areas of cooperation (climate change, EU-ETS), exchanged information (circular economy) and shared best practices (health & safety). This has encouraged us to reflect on long-term social challenges for our sector: how to incorporate health & safety requirements into the design of new plants, and how to ensure continuous training for workers in an environment with innovative

technologies. The dialogue has been enriching and useful and we look forward to working on the organization of a joint event where information and best practice sharing in areas of mutual interest will be on the agenda.

Third, via the second annual event organised by The Concrete Initiative (Concrete Dialogue 2016), we have tackled a topic that extends beyond the cement and concrete industry. The drive towards energy-efficient housing can only be successful if it is accompanied by appropriate financing mechanisms for households. By bringing together financing entities, developers, social housing organisations, contractors and our sector, we have been able to gather unique insights into the needs of each stakeholder in this debate. It did not surprise that information exchange and a call for stronger coordination were the main conclusions and will provide the platform from which we will continue to reach out in 2017.

Finally, we have intensified our interaction with the Cement Sustainability Initiative. This organisation continues to provide essential data for the cement industry through the “Getting the Numbers Right” initiative and offers useful background information and studies to our industry. Through the European Concrete Platform, CEMBUREAU (together with the CSI, cement and concrete companies and other associations) participated in the elaboration of a Responsible Sourcing Scheme for concrete. Lastly, CEMBUREAU has reached out to other regional cement trade associations with a view to identifying areas of information exchange and closer cooperation.

I am proud and pleased to have initiated and supported these initiatives within CEMBUREAU. I am also grateful for the excellent cooperation with both the CEMBUREAU team and the Members. The Presidency was a very instructive and pleasant journey during which I became even more convinced of the value of the European project for the citizens of Europe. However it is up to us to engage, suggest and dream to make it work!





THE ECONOMY

Uncertainty and volatility

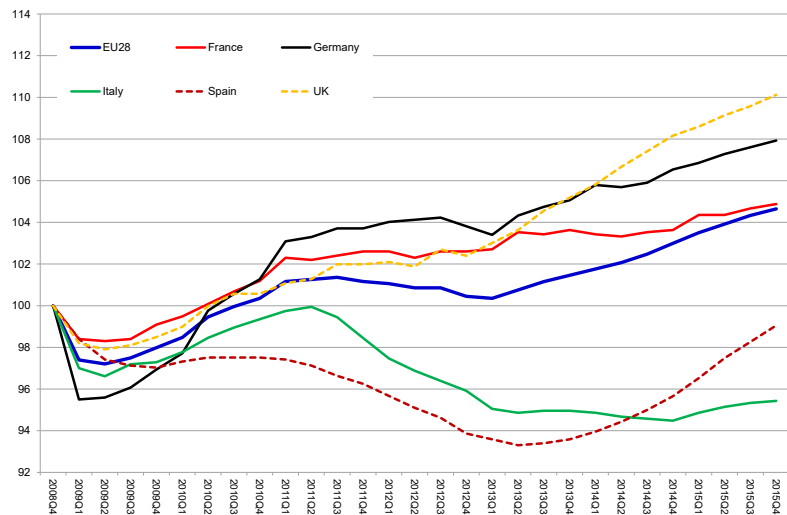
2016 will be remembered as a year filled with major political events combined with volatile global commodity and energy markets. Several incidents have set the stage for a turbulent 2016 and an uncertain 2017: geopolitical tensions, uncertainty surrounding what the new US Administration will do in terms of international trade, the current status of the European Union, the impact of Brexit on both the UK and the EU, and the recent terror attacks. These events are equally covered in all the reports which have been used in our forecasts and estimates: the International Monetary Fund, the European Commission and EUROCONSTRUCT.

2016 economy and markets

2016 global growth has been estimated at 3.1% according to the IMF, slightly lower than in 2015 (3.2%). A major difference was recorded between 'advanced economies' (+1.9% growth) and emerging markets/developing countries (+4.1% growth). The world's largest cement producing countries, China and India, recorded growth rates of 6.7% and 6.6%, respectively. By the end of 2016, the US economy started to accelerate, and is now approaching a full employment scenario. The US is expected to grow further as a result of the fiscal stimulus package promised by the new US administration.

EU28 2016 GDP growth is estimated at +1.9% according to the European Commission. Large variations between countries have been recorded with, for example, a GDP growth of 3.2% in Spain, 1.9% in Germany and 0.9% in Italy. Developments in terms of GDP growth for the five major EU economies can be seen in the above chart. It clearly shows that Spain is catching up, Germany remains steady and the result of the Brexit vote has not had a major impact on the UK. Rising energy and commodity prices will drive up inflation, particularly in countries which import many of their products. For the EU28, inflation is expected to rise from 0.3% in 2016 to 1.8% in 2017, moving the EU28 away from the risk of deflation.

GDP EU28 AND 5 COUNTRIES - INDEX
REAL GDP 2008 Q4=100 2008-2016 Q4

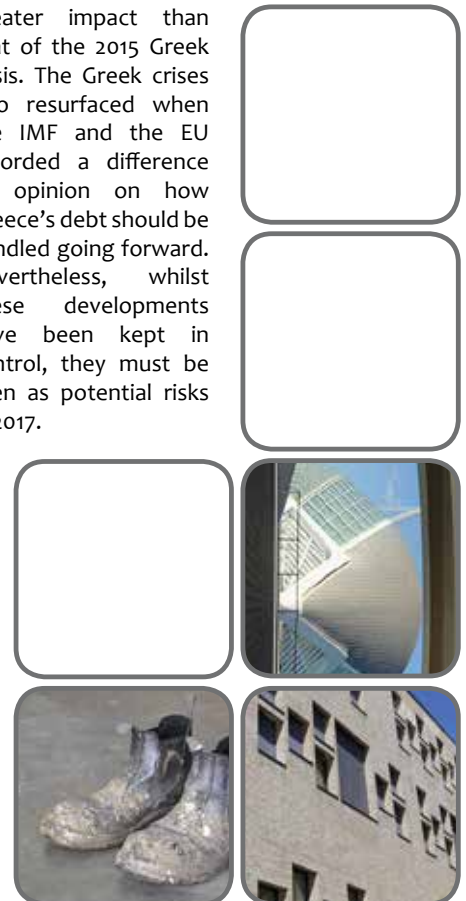


Sources: Eurostat / CEMBUREAU

Equity markets

Global equity markets received support from aggressive monetary policies (QE), which drove short and long term yields close to or below 0, leaving investors with few yield choices. The US equity markets surged to new highs in Q4 2016, driven by expectations of a 2017 fiscal stimulus. The DJ30 index has set a new all-time high and is now at the top of its long-term trend. The European markets were slightly positive in 2016. The EUROSTOXX50 index rose by a mere 5%, but is still 30% below its 2007 high, reflecting several uncertainties in the Euro area. Within the EU, Brexit sent shock waves through the system, although the actual outcome has yet to be seen, based on the two-year negotiations which started once the UK triggered Article 50. Brexit, combined with upcoming elections in several Member States, is a potential political risk for European markets given that poll results have shown themselves as not being as reliable as expected in 2016.

The outcomes will be monitored closely. In 2016, the EU was also faced with a potential Italian banking crisis which could have a much greater impact than that of the 2015 Greek crisis. The Greek crisis also resurfaced when the IMF and the EU recorded a difference of opinion on how Greece's debt should be handled going forward. Nevertheless, whilst these developments have been kept in control, they must be seen as potential risks in 2017.



EQUITIES DJ30 NEW ALL TIME HIGH EUROSTOXX 50 IN UPTREND

Dow 30: 20940

EuroStoxx 50: 3566



Source: Cimeurope/Cemreview

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	2 420.0	2 480.0	2 350.0
India	102.9	170.5	185.0	205.0	220.0	240.0	270.0	280.0	260.0	270.0
EU28 *	225.6	269.1	250.8	209.0	192.1	191.6	172.6	166.6	166.8	167.2
USA	88.9	95.5	86.3	63.9	65.2	68.6	74.9	77.4	83.2	83.4
Brazil	39.4	45.9	51.6	51.7	59.1	63.0	68.8	70.0	72.0	72.0
Turkey	30.0	49.3	51.4	54.0	62.7	63.4	63.9	72.7	71.2	72.8
Russian Federation	28.7	59.9	53.5	44.3	50.4	56.1	53.0	72.0	68.4	69.0
Indonesia	31.1	35.0	38.5	36.9	39.5	45.2	32.0	56.0	65.0	65.0
South Korea	52.0	52.2	51.7	50.1	47.4	48.2	48.0	47.3	63.2	63.0
Japan	79.5	71.4	67.6	59.6	56.6	56.4	51.3	57.4	53.8	55.0
Saudi Arabia	20.0	30.3	37.4	37.8	42.5	48.0	50.0	57.0	55.0	55.0
Mexico	33.2	38.8	37.1	35.1	34.5	35.4	35.4	34.6	35.0	35.0
Germany	32.1	33.4	33.6	30.4	29.9	33.5	32.4	31.5	32.1	31.1
Italy	39.8	47.5	43.0	36.3	34.4	33.1	26.2	23.1	24.0	20.8
France	19.1	22.1	21.2	18.1	18.0	19.4	18.0	17.5	16.4	15.6
South Africa	8.4	13.7	13.4	11.8	10.9	11.2	13.8	14.9	13.8	14.0
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
United Kingdom	11.9	12.6	10.5	7.8	7.9	8.5	7.9	8.5	9.3	9.6
Australia	6.8	9.2	9.4	9.2	8.3	8.6	8.8	8.6	9.0	9.1

Notes:

P - Preliminary

E - Estimate

Sources: CEMBUREAU, US geological Institute

* EU28 2015 data is compiled using latest available data, 3 countries data from 2014 and one country from 2012

World cement production

Total world production is estimated at 4.6 billion tonnes. It should be noted that the EU28 data has been revised for 2015, 2014 and 2013 due to statistical updates. The CEMBUREAU region's share of world production fell by 0.1% to 5.3%, with China and India topping the list.

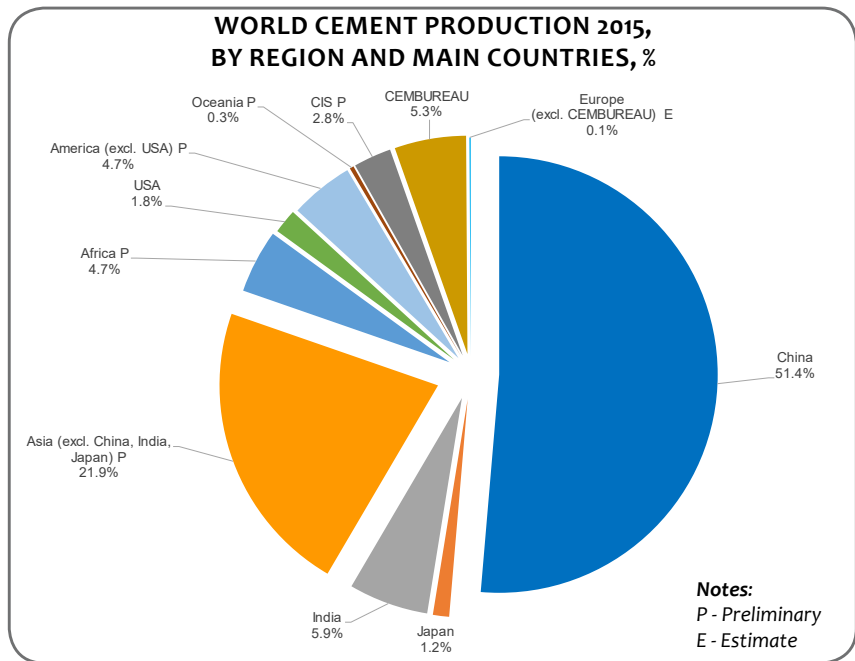
Construction and cement developments

2016 investments in construction, as seen in the matrix, can be described as steady for the EU28 with an expected increase of 1.7%. The outlook for 2017 is more positive, with a potential increase of up to 2.7%. In the US, a massive increase is foreseen from a lacklustre 1.1% to potentially 4.6% for 2017. In terms of 2016 EU28 market shares, these can be summarised as follows:

- Residential construction 47%
- Non-residential construction 32%
- Civil Engineering 21%

In 2016, new builds in the **residential segment** were estimated at 42% and renovation at 58%, with the latter requiring less cement than the former. The **non-residential market** is at an early stage of recovery. Office construction, in particular, was on the rise. 2016 new construction accounted for 52% of the market and renovation 48%. **Civil engineering** suffered from years of fiscal tightening, falling by around 1% in 2016. Most EU Member States are expected to increase expenditure on civil engineering, with Eastern European countries leading the way. The European Fund for Strategic Investments (EFSI) is expected to boost investments in Europe over the coming years. According to reports, significant funds will be available for the period up to 2020. The infrastructure of several countries requires renovation, and this will be reflected in fiscal budgets going forward, thereby increasing the importance of this segment.

Construction production has been lagging behind developments in the overall industrial production since 2006, although a relatively similar development has been recorded over the last 3 years. On a more positive note, cement production is hopefully picking up after having been very flat since hitting a bottom in 2013. This index is rising faster than the construction index. Based on EUROCONSTRUCT reports, 2016 was seen as a disappointing year compared to expectations, due primarily to uncertainty surrounding Brexit and the aforementioned political uncertainties.



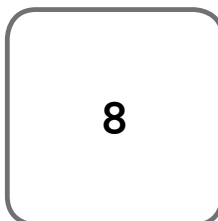
INVESTMENTS IN CONSTRUCTION

Investments in Construction Volume Year on Year Growth rates %

	2016 (Autumn EC forecast)	2016 (Winter EC forecast)	2017 (Winter EC forecast)
USA	2.4	1.1	4.6
EU28	2.0	1.7	2.7
Euro area	2.7	2.4	2.8
France	1.3	2.4	3.0
Germany	3.0	3.1	2.7
Italy	1.1	0.7	1.0
Spain	2.5	2.4	3.0
UK	0.4	0.6	1.8

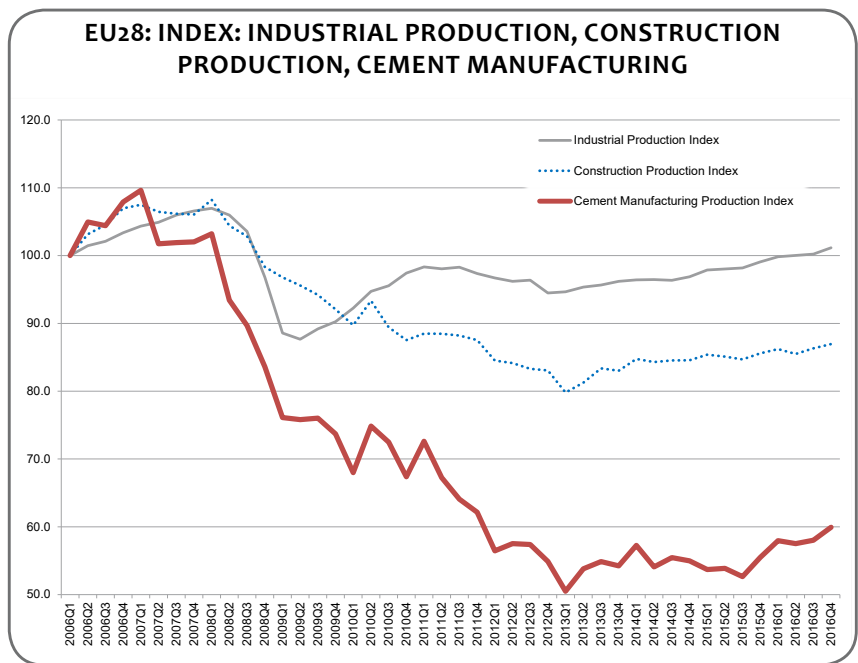
Sources: European Commission & Eurostat

One important element when looking at construction figures and cement demand estimates, is cement intensity – in other words how much cement is consumed per billion Euro invested in construction. The chart on page 9 shows developments over time, within the EU28 and the 5 major consumer countries from 2000, 2010 and the latest data from 2015. The intensity has been very stable in Germany, France, and the UK, but has fallen sharply in Spain and Italy. However, one explanation for the big fall is the sharp downward trend in new construction and the pickup in renovating or finalising projects which had been stopped after the crisis. Renovation and maintenance require much less cement than new construction, which is also the case for civil engineering.

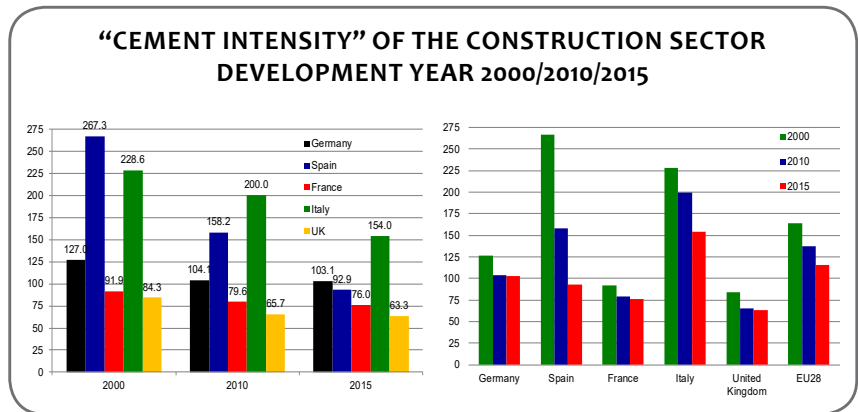


As the charts show, cement consumption has risen slightly from 2014 to 2015 within both the EU28 and the CEMBUREAU region. Production (covering cement production plus clinker exports) was slightly positive in 2015, with an additional 6Mt produced in the EU28 (making a total of 182Mt), and 1Mt in the CEMBUREAU region (totalling 259Mt).

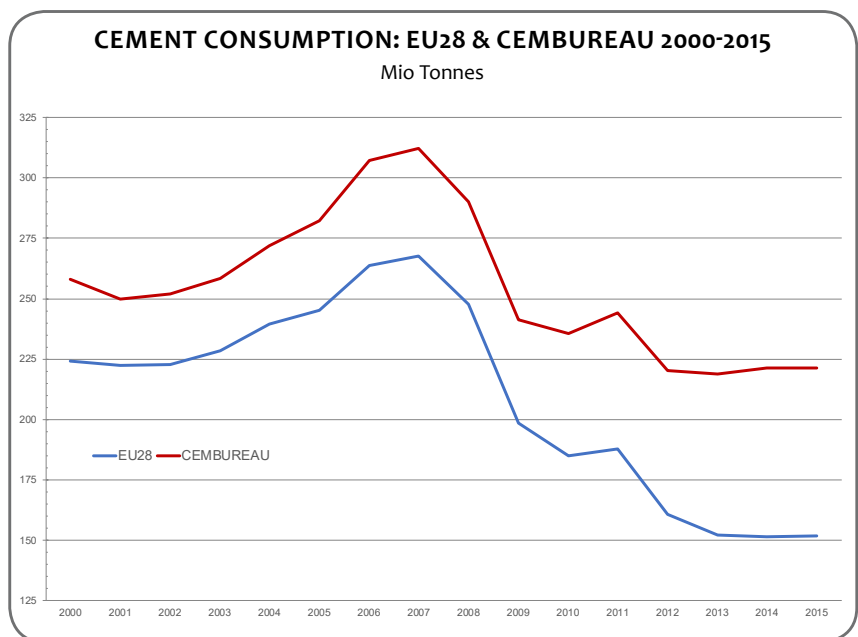
Developments in terms of cement and clinker imports and exports in the EU28 have shown a sharp surge in exports over the last 5 years, as producers searched for new markets after the crisis. This development stabilised just below the 50Mt mark, with 48Mt exported in 2014 and 47Mt in 2015. Imports remained at 20.5Mt, translating into a net export of 26.3Mt for the EU28, slightly down from 2014. Expectations for a growth in cement consumption in the EU28 and major consumer countries can be seen in the table below, with the data showing an expected EUROCONSTRUCT area (19 countries) increase of 1% in 2016. For the EU28, 2015 consumption grew by 4.9%, with France at -5.5% and Spain at + 6.1% in 2015. To end the report on a positive note, EUROCONSTRUCT expects cement consumption to rise by 2.4% and by 3.5% in 2018.



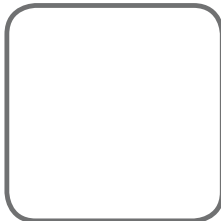
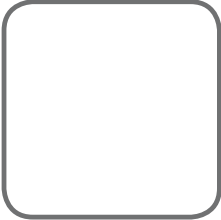
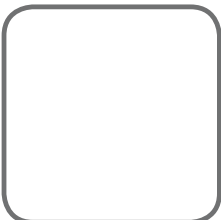
Sources: Eurostat / CEMBUREAU



Sources: CEMBUREAU own calculation based on Eurostat, EUROCONSTRUCT

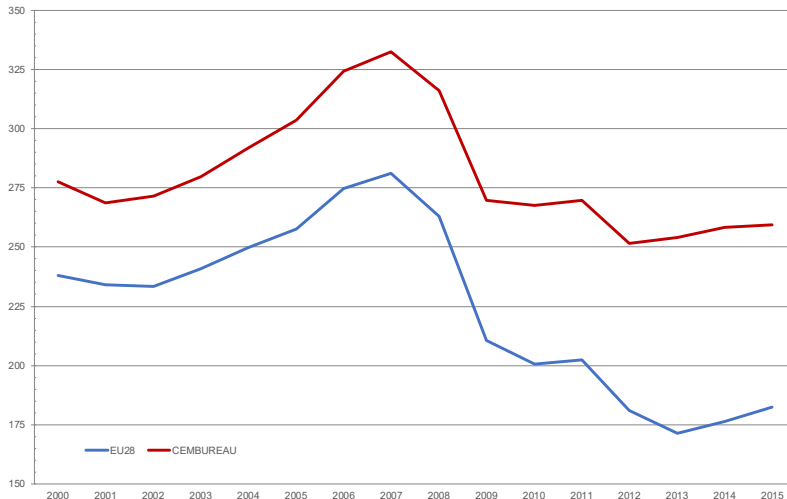


Source: CEMBUREAU



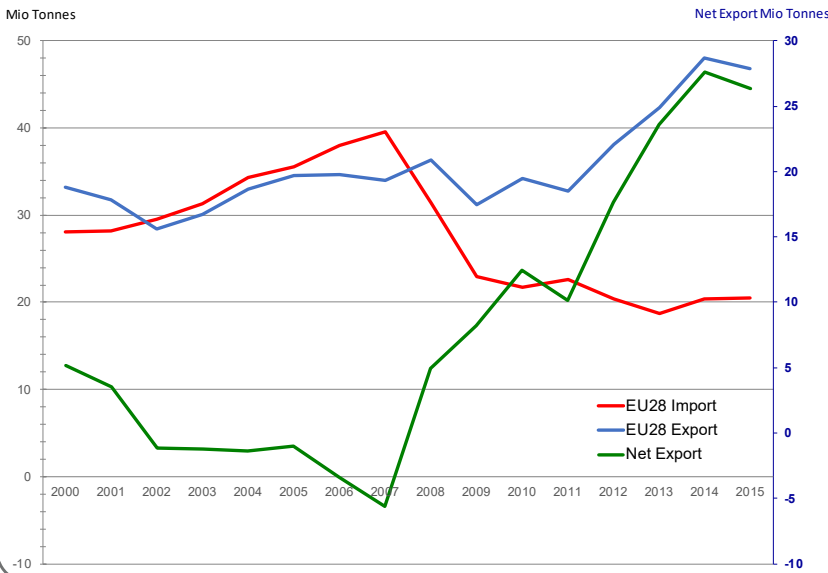
CEMENT PRODUCTION: EU28 & CEMBUREAU 2000-2015 SLIGHT INCREASES

Cement Production + Clinker exports Mio Tonnes



Source: CEMBUREAU

EU28 CEMENT & CLINKER EXPORT, IMPORT & NET EXPORT TONNES



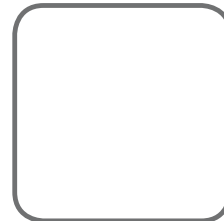
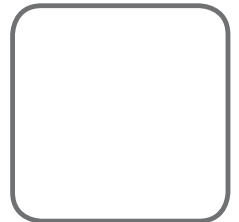
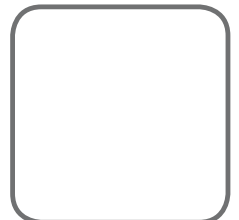
Source: CEMBUREAU

CEMENT CONSUMPTION: FORECAST 2016-18

Cement consumption, year-on-year growth rates, %

	2015 (Actual)	2016E EuroC	2017F EuroC	2018F EuroC
EU28	-4.9			
Euroconstruct 19	-0.3	1	2.4	3.5
Germany	-1.9	*	*	*
France	-5.5	2.3	4.1	3.2
Italy	-2.5	0.5	3.2	3.6
Spain	6.1	-2.2	1	3
United Kingdom	*	0.5	0.2	0.5

Sources: CEMBUREAU, EUROCONSTRUCT



COUNTRY-BY-COUNTRY ANALYSIS

AUSTRIA

Vienna faces a high number of immigrants and the amount of housing construction remains at a high level. Estimates indicate that consumption levels have remained stable. Housing construction continues at a high level in the capital. For the other sectors, big projects depend on public financing and the realisation of individual projects. For 2017, no major changes are expected in terms of cement production and consumption volumes in Austria. Considering the continuance of a high level of housing construction in Austria's capital, the cement sector is expected to remain stable in 2017.

BELGIUM

After a really good year in 2015 - with a cement consumption growth rate of around 4.6% compared to 2014 - 2016 should also record an increase in cement consumption. The rate of growth for 2016 should be around 2% on the Belgian national market, compared to 2015. The building market recorded a growth rate of around 3.7% in 2016 compared to 2015. The residential building market (new and renovation) recorded a growth rate of around 3.5% in 2016 compared to 2015. The non-residential building market recorded an even higher growth rate of around 5.5% compared to 2015. 2017 could be a particularly difficult year for the non-residential building sector. This is due to a significant reduction in the number of building permits issued during the second half of 2016. All other areas should also be confronted with a slight

decline in activities, with the exception of civil engineering which should record an increase. Nevertheless, the building market is expected to grow by around 2.2% which should translate into a 1.4% growth in cement consumption compared to 2015.

BULGARIA

In 2016, cement consumption in Bulgaria was lower than in 2015 (8% in 2016 compared to 10% in 2015). This is because of the reduced number of infrastructure projects funded by the EU, although public procurement for infrastructure projects and civil engineering remains the main driver in the sector. In 2016, there was a serious decrease in the residential building market, although several significant industrial building projects have been started up in 2016. Future prospects show some positive signals. For 2017, construction is expected to grow by 10-15%. BGN 2.5 billion in EU structural funds ("Regions in growth" programme) should be invested in public infrastructure and should provide a positive contribution to construction growth.

CYPRUS

The construction licenses issued in December 2016 amounted to 454. The total value of these licenses reached €129.7Mn and the total surface covered 113.3 thousand square meters. It is forecast that 397 residential units will be built with these construction licenses. In the period January-December 2016, 5,354 construction licenses were issued compared to 5,014 licenses in the same period of the previous year, an increase of 6.8%. The total value of these licenses increased by 8% and the total surface by +18.8%. The number of residential units increased in the order of 14.1%. Construction licenses constitute a significant indication of future activity in the construction sector. Cement consumption in 2016 amounted to 581.7 thousand tonnes versus 463.3 thousand tonnes in 2015, an increase of 25.6%. The increase over the last two years stands at 28.5%, from 452.6 thousand to 581.7 thousand tonnes. The allocation of cement to districts brings Limassol into first position in 2016 with 171.2 thousand tonnes, compared to 115.9 thousand in 2015 - an increase of 47.7% -, with Nicosia ranking second: 145.8 thousand tonnes in 2015 to 170,388 in 2016, an increase of 16.9%. The next districts are Pafos, Larnaka, Famagusta. Cement consumption will increase in the upcoming years since all factors are favourable, with positive results and developments in the construction industry.

CZECH REPUBLIC

In 2016, construction output decreased by 7.6%, year-on-year, in real terms. The building market decreased by 3.3% (contribution = -2.2%) and the civil engineering market declined by 16% (contribution = -5.4%). In 2016, the number of building orders for construction companies with 50+ employees jumped by 27%. These companies received and concluded 61,508 orders in the Czech Republic. The total value of the orders fell by 1.9%, totalling CZK 183.8 billion. In 2016, the number of building permits granted increased by 3.6% with the planning and building authorities granting 83,340 building permits. The approximate value of 2016 permitted construction accounted for CZK 284.3 billion and increased by 11.5% compared to 2015. The number of dwellings started in 2016 increased by 3.2%, totalling 27,224 dwellings. The number of family houses started increased by 15.6%, whilst multi-dwelling buildings fell by 14.3%. The number of completed dwellings in 2016 grew by 8.9%, attaining 27,333. The number of completed family houses increased by 4.8% and the number of completed multi-dwelling buildings grew by 22.7%. For 2017, cement consumption is not expected to report a significant increase.

DENMARK

Construction and building activity was slightly better in 2016 than in 2015. A positive trend was recorded for residential housing activity. The commercial building sector improved slightly from a historic low point. Publicly funded growth initiatives, especially those relating to infrastructure, hospitals and universities, remained at a high level in 2016. 2017 activity is expected to improve slightly compared to 2016. The residential building segment should continue a positive trend in 2017, helped by low interest and inflation rates. The commercial building segment is expected to continue its moderate growth from the historically low levels of recent years. Public-sector growth activities will drop in 2017 due to some big projects coming to an end. The ongoing effects of other political initiatives to kickstart the sector, combined with low oil prices, will have a positive effect on volumes. Growing international political insecurity could have a negative effect.

ESTONIA

Cement consumption rose by 11%. According to data from Statistics Estonia, in 2016 the total production of Estonian construction enterprises in Estonia and abroad was 3% higher than in 2015. The domestic construction market was affected the most by a decrease in civil engineering volumes. There was also a

decrease in repair and reconstruction work in building construction. However, new building construction, which had already recorded an upturn in 2013, continued its growth trend in 2016 as well. The number of dwelling completions increased for the fifth consecutive year. The largest share of completed dwellings was in blocks of flats. The majority of completed dwellings were situated in Tallinn, followed by the rural municipalities in the vicinity of Tallinn, and in the Tartu county. A moderate increase is expected in the near future, although the market could remain static. There are good prospects for growth in the residential sector, supported by low interest rates and growing real estate prices. There is still demand for new, high-quality dwellings in a good location. At the same time, the residential sector is the most sensitive to the overall economic situation.

FINLAND

Overall, 2016 was a busy year. Cement consumption grew by some 14%. Building repairs/renovation increased by 6%. New residential buildings grew by some 6% and the new building total remained at a 2016 level. Industrial buildings grew by 8%. 2017 cement consumption is expected to remain at the 2016 level.

FRANCE

Forecasts suggest that consumption rose by 1.5% in 2016 compared to 2015. The rise is due to better economic activity in the construction sector in France (housing, non-residential and public works). However, the level of activity remains very depressed (circa 17.4Mt whereas the 15-year average is around 20Mt). Housing will be the most dynamic sector in 2016 for cement, followed by public works and finally the non-residential sector. The housing sector has recorded a sharp rebound in France since the last trimester of 2015, particularly collective housing (due to more public investment in social housing) and individual housing (which recorded a slight – albeit little unexpected - rebound in 2016). Public works have benefitted from several public investment measures (the reduction for local collectivities has been frozen, highway plans developed, etc). Furthermore, several large projects are underway (Grand Paris). 2017 is a presidential election year in France. However, contrary to mayoral and regional elections, these elections have historically not significantly influenced the construction sector. In 2017, housing should continue its rebound and be the main driver for the cement industry. Public works, and particularly the Grand Paris project, should also be an important driver.

GERMANY

German cement consumption in 2016 is expected to have increased by 2.6% compared to 2015. The major contributor to this positive development could be the residential building sector. According to recent estimations, 13% more apartments were completed in 2016 than in the previous year (i.e. 279,900 units). Further minor growth impulses could result from the commercial building sector (completions are estimated to be +2.1% in 2016 compared to 2015), and from civil engineering. German cement consumption is expected to continue its growth in 2017 at a rate of more than 1%. Residential construction is likely to further stimulate this growth. According to recent estimations, 340,100 housing units could be completed during 2017, but to meet the ongoing high demand, especially in agglomerated areas, there is an annual need for around 400,000 apartments. Further positive effects are likely to originate from the public civil engineering sector. The Federal Government has significantly increased its annual financial contributions 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 to realise necessary construction projects.

GREECE

2016 domestic consumption is equal to, or slightly higher than that of 2015. The building sector fell by 3% approximately, based on provisional data from the Greek Statistics Authority. Prospects for 2017 are not expected to be any better than 2016.

HUNGARY

The volume of construction output was 14.9% lower in December 2016 than a year earlier. Output decreased in both of the main construction groups: building construction decreased year-on-year by 5.8% and civil engineering works by 25.5%. Based on seasonally and working day adjusted indices, the construction output increased by 1.4% in December compared to the previous month. For the year as a whole, construction production decreased by 18.8% and construction producer prices rose by an average of 2.8% compared to 2015. The volume of output decreased in both of the main construction groups compared to 2015: by 3.7% in building construction and by 33% in civil engineering works. The largest decrease occurred in the output of road

and railway construction companies. Valid building permits in this year totalled around 17-20,000, and EU funds are encouraging a boom in the sector, first of all in the construction of motorways, as well as in the other segments. The new governmental support for big families will also have an effect on growth. GDP growth is expected to be around 2.4-4%.

IRELAND

Growth continued in 2016 with an ongoing construction recovery, albeit from a low level. Recovery in the Irish residential market is continuing but at a slow pace. Construction is still low and below housing demand requirements with this trend expected to continue until 2018/2019 due to ramping up and skills shortages emerging in the wider construction industry. Commercial development is strong in Dublin but at a slower pace in the other regions. A new fund established for infrastructure to facilitate residential development was launched in 2016 and due to be started in 2017. A new Capital Expenditure Plan and National Planning Framework will be introduced in 2017. Uncertainty due to Brexit, and its impact on programmes and the industry, is a concern.

ITALY

In 2016, Italian cement consumption recorded a decrease with respect to 2015 (-4.7%). The analysis by type of construction activity shows that the decrease hit all sectors. Italian cement consumption forecasts for 2017 suggest a decrease (-3%) due, in particular, to the public sector.



LATVIA

A gap year in EU structural funding adversely impacted construction volumes. Infrastructure was down by 25%. A resumption of EU funding would trigger a recovery to 2015 levels.

LITHUANIA

Demand for cement in the domestic market increased by 7% in 2016 compared to 2015. This led to investments in the Lithuanian construction sector, which includes residential buildings and infrastructure projects. In 2016, the scope of non-residential building construction and civil engineering works decreased by 8%. The significant decrease in the usage of EU funds had a major influence on this development. However, the scope of work for residential building construction increased by 10.4%. This growth has been mostly influenced by reconstruction, repair and restoration work, as well as the construction of new homes. 2017 volumes are expected to remain at around 2016 levels in Lithuania. The expected growth in public works and government spending will have a positive effect on volumes.

LUXEMBOURG

2016 was marked by a stronger domestic market, especially in the office building segment. Exports also went up due to better market conditions in France, Germany and Belgium. Despite a difficult start to the year, due to weather conditions, 2017 is expected to become a strong year because of a favourable market outlook in all delivered countries. No change is expected in 2017.

NETHERLANDS

Cement consumption in The Netherlands rose in 2016 by about 4% compared to 2015. The total construction sector output increased by 7% in 2016 (source: EIB). This rise is due to the high increase in the residential buildings market: +13.5%. The residential sector is

the main driver behind the increase in the total construction sector output. The total number of new dwellings in 2016 attained approximately 54,000 (compared to less than 40,000 in 2014). The commercial subsector of the non-residential sector (halls and sheds and halls with offices) was the only subsector to grow in 2016. Buildings for logistics centres (e.g. e-commerce, trade etc) are, in particular, increasing in terms of both numbers and size (m² and height). For 2017, the total construction sector output is expected to increase by around 4.5%. The total number of permits for residential buildings released in 2016 is lower than in 2015. This affects output from the residential sector. The transformation of old offices into mainly residential apartments and the renovation of old dwellings into low energy housing generates a construction output with a very low use of cement. The prognosis for 2017 cement consumption in The Netherlands ranges from +1% to +3%.

NORWAY

All time high activity since 1982 in residential construction. Growth within civil engineering related to ongoing infrastructure projects was 10% compared to 2015. Stable activity within non-residential construction, remaining at 2015 levels. Stable activity expected in the non-residential construction sector, and an increase of around 5% within the residential construction sector in 2017. Activity within civil engineering will continue to increase, and the prognosis for 2017 is an 8% increase compared to 2016.

POLAND

Accurate cement production and consumption data for 2016 are not available, hence estimates have to be given. According to the Association's estimates a slight increase (approximately 1.5%) in 2016 cement consumption was recorded, attaining 15.7Mt. In 2016, GDP grew by 2.8% which is lower in relation to the forecast level of 3.6%. In 2017, GDP growth is expected to attain 3.2% thanks to domestic demand and investments. The Polish Cement Association foresees a further increase in cement consumption of about 2%, reaching a level of 16.1Mt in 2017. It will be due to the construction and modernisation of road and rail infrastructure, as well as investments in the power sector and housing.

PORTUGAL

Cement consumption in 2016 decreased by an estimated 3.8%. Portugal's real GDP rose by 1.4% in 2016. The second half of the year showed strong economic performance, driven by tourism, and has improved the outlook for the Portuguese economy. Weak investment has weighed negatively on growth but is set to rebound. Despite some improvements in confidence, most construction investment indicators remain weak. The construction sector evolution estimate for 2016 was sharply revised downwards to -3.3%, mainly because of the greater than expected cut in public investment. The construction subsectors performed as follows: civil engineering decreased by 8%, residential buildings increased by 5% and non-residential buildings decreased by 1.7%. Portuguese real GDP growth is forecast to reach 1.6% in 2017 and 1.5% in 2018. Private consumption is expected to grow more moderately this year and the next, in line with more stable wage dynamics, sustained deleveraging pressure and rising prices. Construction investment is set to improve marginally, driven by some recovery in public investment, whereas machinery and equipment investment is expected to continue its positive trend. Projections for 2017 suggest that Portugal's export sector will grow, helped by the strong performance of the tourist sector. Carryover effects will keep the country's market share on the rise in 2017 before stabilising in 2018. Construction activity is expected to increase by around 2.6% in 2017. Both the civil engineering sector (2%) and different building segments show positive prospects. Residential and non-residential buildings are expected to increase by 3% and 3.1% in 2017, respectively. Cement consumption is expected to increase by approximately 7.8% in 2017.

ROMANIA

2016 cement consumption decreased by 5.1% compared to 2015, due to the lack of new construction projects. The construction works which received financing were completed, but no new major infrastructure projects have been started. In 2016, the volume of construction works decreased by 4.8% compared to 2015. In terms of structural elements, decreases were registered as follows: 23.5% for capital repairs, and 2.7% for new construction works. Maintenance and current repairs increased by 1.5%. By construction type, the volume of civil engineering works decreased by 11.2%. Residential buildings registered an increase of 12.1% and non-residential buildings 1.1%. Despite the fact that the official data from the National Commission for Prognosis estimates an increase of 5.8% for the construction

market, 2017 cement consumption will probably be maintained at the same level of 2016 and may even register a small increase.

SERBIA

Cement consumption increased by 8% in 2016 compared to 2015. The value of the construction works that contractors from the Republic of Serbia carried out in the period January – December 2016 increased by 2.6% compared to the same period in 2015. With regards to the type of construction, during the period observed the value of building works increased by 17.2%, while the value of other construction works decreased by 3.3%. The value of new contracts with contractors from the Republic of Serbia for the period January – December 2016 increased by 22.8% when compared to the same period in 2015. The total number of building permits issued for the period January – December 2016 increased by 21.3% compared to the same period in 2015. The number of building permits issued increased by 23.8%, and for other constructions it increased by 14.6%. Based on the building permits issued, and when the period January – December 2016 is compared to the same period in 2015, the number of dwellings increased by 27%, while the useful floor space of dwellings increased by 17.8%. Reforms in the field of construction and labour legislation, along with the positive effects of fiscal consolidation, have been a strong contributor to the improvement of the investment environment in Serbia, which is based on progress in the World Bank's Doing Business list for 2017. The reform of the cadastre is expected to trigger further progress, and the plan is that until 2020 Serbia will be in the top 15 to 20 countries of the world, ranked by the business environment. Domestic construction companies and their workers will be able to count on contracts worth 977.7 million euros in 2017.

SLOVENIA

Further to one cement plant in Slovenia stopping production in March 2015, that cement plant now imports cement from Austria and Hungary to be sold on the Slovenian market and, as a result, cement imports increased significantly in 2016. Consumption increased more than expected due to the construction of a power plant in Slovenia. The slight recovery in the construction sector in 2016 relates to this new power plant. Building permit statistics show that there are fewer permits issued each year. So, 2017 is expected to be worse than 2016. The government plans to increase GDP in the construction sector by 6% for 2017 and 6% in 2018. However, according to

experts in construction activity, future prospects are still not very good. No major construction projects are planned.

SPAIN

The evolution of cement consumption in Spain during 2016 has modified the growth trend which manifested itself at the end of 2014. Indeed, throughout the year, cement consumption registered a decline of 3%, attaining 11.1Mt. This drop has remained more or less uniform throughout the year and, as a result, cement consumption in Spain has stagnated at approximately 11Mt over the last four years, a remarkably low figure when compared with the volumes that Spain traditionally recorded: between 1970 and 2014 the average annual consumption was around 25Mt. In recent years, the low level of cement consumption in Spain has pushed the Spanish industry to search for a way to mitigate the strong drop in activity via foreign markets. As a result, Spanish exports of cement and clinker have been consolidated over recent years, reaching a figure of 9.78Mt in 2016, of which 5.63Mt were clinker exports. This means that Spain remains the leading EU export country, and it is the first country exporting outside of the European Union. The low level of cement consumption in Spain has been caused by a drop in construction activity, both residential and non-residential and civil engineering. However, in 2016, a recovery in building construction was recorded, although this growth has not been enough to compensate the decline in civil engineering works. In 2017, building construction is expected to continue its growth trend, and whilst civil engineering works will continue to decline, building construction will compensate this drop. Depending on the evolution of public works programme, cement consumption figures could grow around 10%.

SWEDEN

Continued high activity in the residential sector, with a slight increase expected in 2017 and a levelling out in 2018. The office building sector has levelled out after a strong 2016. Strong growth in infrastructure with the starting up of several large projects at end of 2016. The housing sector as a whole is expected to increase in comparison to 2016. Strong growth in the infrastructure and non-residential sectors.

SWITZERLAND

Cement consumption increased by 3.2% in 2016 compared to the previous year. The total construction volume (contractors) reached a level of roughly CHF 20 Billion (EUR 18.7Bn). This increase was driven by infrastructure projects as well as the housing sector. Cement consumption will remain more or less stable in 2017, but as from 2018 on, the housing sector is likely to decrease due to a slower growth in population. The infrastructure sector will remain strong, compensating the fall back in private housing to a high degree.

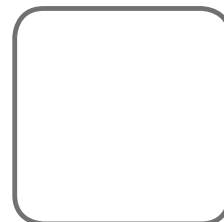
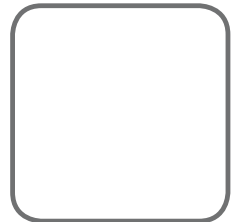
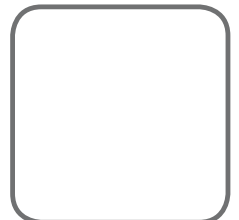
TURKEY

The Turkish economy grew by 2.9% in 2016. During this period, the construction sector also grew by 7.2%.

The cement industry plays an important role in the Turkish economy with its nearly \$2.8 billion in turnover, \$495 million in export revenues, as well as providing direct and indirect employment for 18,000 people according to 2016 figures. The industry produced about 76.9Mt of cement in 2016. 2015 output was 72.8Mt, indicating a 5.6% increase in cement production.

The Turkish cement industry recorded 68.2Mt in domestic sales in 2016, 66.8Mt of which were recorded by TCMA member plants. In 2015, TCMA member plants recorded sales of 63.7Mt out of a total of around 65Mt. Domestic sales grew by 4.9% for both Turkey as a whole and TCMA members. Progress in the cement sector can be considered as being similar to the construction sector.

At the end of 2016, 7.6Mt of cement and 3.8Mt of clinker were exported, translating into a 2.6% decrease in cement exports and an enormous 31% increase in clinker exports compared to the previous year.



This decline in cement exports has mainly arisen due to the troubles afflicting foreign markets.

Due to the unsteady atmosphere in nearby geographies, Turkish exporting activities went through difficult times. Political problems in the MENA Region and decreases in the Syrian and Libyan markets are signs of unfavourable times ahead. If these circumstances continue, then export volumes will not increase in the near future.

With the installation of new capacities, clinker production capacity attained there existed 80.1Mt at the end of 2016. There are some on-going projects therefore this increase in production capacity will continue in the upcoming years.

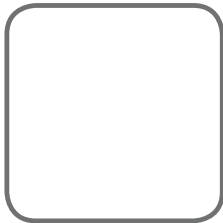
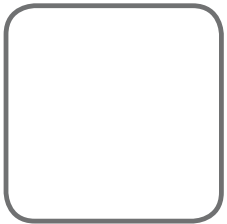
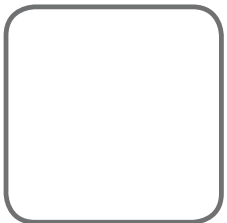
In terms of new markets, the cement sector places emphasis on increasing the construction of concrete roads and barriers in our country. With solutions like the use of new technologies and roller-compacted concrete pavements, concrete roads and barriers should have their place in Turkey's infrastructure as their manufacturing cost is nearly the same as the alternatives, they have a low maintenance cost and are resistant to climatic & environmental conditions.

Growth in the cement sector is expected to be around 5% in 2017 with investments in housing reconstruction within the scope of urban renewal, infrastructure projects such as high-speed trains, metros, and highways, as well as energy investments which aim to decrease Turkey's energy dependence.

UNITED KINGDOM

Sales volumes for ready-mixed concrete increased by 4.2% in 2015 compared to 2014. Despite a general slowdown in housing activity through 2015, particularly in the second half of the year, RMC sales volumes actually grew faster (+4.2%) in 2015 than in 2014 (+3.6%), driven by sales in London, the East Midlands and Scotland. In London, ONS construction output figures suggest this was mostly driven by private commercial (and some housing) activity, but sluggish growth in commercial activity outside London suggests that RMC sales have been driven by other sectors in the East Midlands and Scotland. There were notably bigger contributions from private industrial and infrastructure work in the East Midlands, whilst infrastructure work explains the vast majority of construction growth in Scotland. Big projects include the Aberdeen Ring Road and the new Forth Road Bridge. Construction output grew

at an annualised rate of 3.2% in 2015, down from 7.5% growth seen in 2014, and driven by infrastructure new work. The current (Jul-15) Infrastructure Pipeline includes 564 projects worth a total value of £411bn (£268bn to take place between 2015/16 and 2020/21). Looking forward, the outlook for the construction sector remains positive, albeit slower than in 2014/15. In its latest (Winter-2015) forecast, the Construction Products Association expects construction output to grow by 3.6% and 4.1% this year and next, driven by the three largest construction sectors. Private housing is expected to see further, albeit milder, growth over the forecast period, supported by demand-boosting Government policies such as Help to Buy, including the newly-announced London Help to Buy and the Help to Buy ISA, along with the Starter Homes programme. Commercial activity is also expected to pick up, driven by construction of offices with large projects underway and planned in London, Birmingham, Manchester and some other major cities. However, infrastructure is the sector that is expected to see the biggest rise, projected to grow by 57% by 2019, with large projects planned in the roads, rail, water and energy sectors.





POLICY FOCUS

Through its four Working Groups, CEMBUREAU covers a wide range of policy areas with the aim of providing policymakers with useful input for the design of a competitive and sustainable regulatory framework. CEMBUREAU and its Members also engage in a continuous reflection on the contribution of our industry to building the society of tomorrow. While the reports below are structured by topic, there is no doubt that a strong positioning of our sector on climate change challenges, the circular economy or its essential contribution to sustainable construction, requires a constant exchange of views between Working Groups and strategic guidance from CEMBUREAU Members.

The common theme for all CEMBUREAU activities is the need for an overarching industrial policy at European level that allows our industry to grow, invest, employ, innovate and compete globally.

CLIMATE CHANGE AND ENERGY

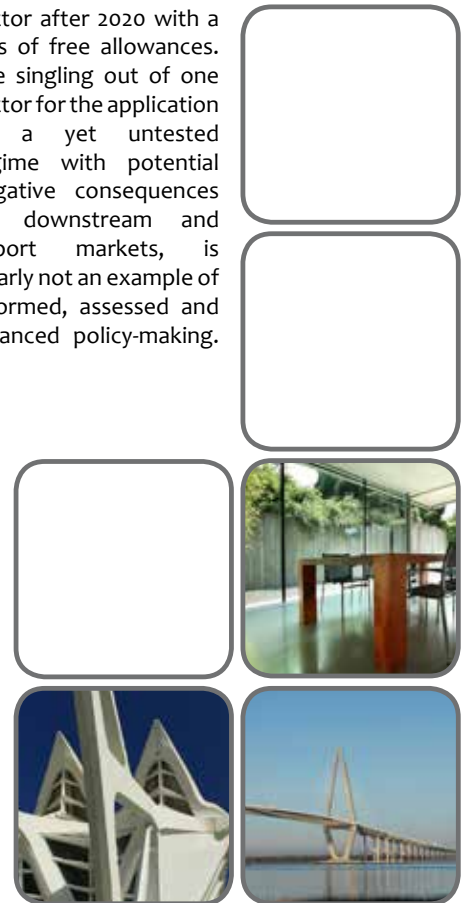
The Paris Agreement on climate change entered into force on 4 November 2016. For the first time, the Agreement brings together a large number of countries who commit to reducing their CO₂ emissions. CEMBUREAU has always emphasised that climate change is a global challenge that requires a global solution. It is our responsibility as a sector to reflect on our contribution to these worldwide goals and to set out a long-term climate change strategy based on our 2050 low carbon Roadmap entitled “**The role of the cement industry in the 2050 low carbon economy**”. CEMBUREAU intends to assess a further contribution to the low carbon economy of the future. This work is due to be taken forward in 2017, with conclusions becoming available at the end of 2017, beginning of 2018. This will allow the cement sector to highlight its innovation potential and efforts undertaken to further reduce CO₂ emissions ahead of the stock-taking exercise on progress achieved under the Paris Agreement, due to take place in 2018.

At European level, CEMBUREAU actively participates in the debate on the design of the **EU Emission Trading System (EU-ETS)** for the 2020-2030 period. Following the publication of the European Commission’s legislative proposal, both the European Parliament and the Council have suggested amendments to the text and the cement industry has maintained a strong dialogue with stakeholders both in Brussels and at national level. In these discussions, the cement industry has highlighted that it has reduced its net CO₂ emissions per tonne grey clinker by -17% between 1990 and 2014 and is able to demonstrate that it can further reduce its emissions going forward. The industry was also keen to point out that it is developing breakthrough pilot and demonstration projects in carbon capture (CCS and CCU) that can provide a solution to address process emissions that are irreducible under the currently available conventional technologies. CEMBUREAU has welcomed the strong focus of both the European Parliament and the Council on financial support from the innovation fund for carbon capture and use in addition to carbon capture and storage.

CEMBUREAU also argues, however, that investment for breakthrough innovation and for aligning plants to the benchmark requires a regulatory framework that does not impose a financial burden beyond the best performer, especially when similar burdens are not imposed on operators outside Europe. Therefore, CEMBUREAU’s main message to policy makers is to ensure that free allowances at the level of best-performers are available for all plants under a continued carbon leakage protection system and that benchmarks are elaborated based on real data. Throughout the discussions, CEMBUREAU has also made it very clear that it favours a dynamic allocation system closely aligned to production so as to avoid an overallocation for the sector.

CEMBUREAU believes that an ambitious regulatory ETS framework that incentivises emission reductions while, at the same time, preserving the competitiveness of the industry can be achieved by a flexibility in the auctioning share whereby up to 5% of the auction can be used, if needed, to provide free allowances to all, at the level of the best performer.

The solution presented by CEMBUREAU avoids the application of the cross-sectoral correction factor which would not allow for free allowances at the level of the best performer and thus run against the European Council Conclusions of October 2014 that require no undue costs. It would further avoid solutions that are legally challengeable in that they introduce a discrimination between sectors, such as a tiered approach or a differentiated cross-sectoral correction factor. In the same vein, CEMBUREAU has been vocal in opposing the initiative taken by the Environment Committee in the European Parliament whereby an import inclusion scheme would be introduced for the sector after 2020 with a loss of free allowances. The singling out of one sector for the application of a yet untested regime with potential negative consequences on downstream and export markets, is clearly not an example of informed, assessed and balanced policy-making.



CEMBUREAU will always keep the need for legal certainty, proper assessment and non-discrimination as key requests for policy-making.

CEMBUREAU believes that its proposals for a revised EU-ETS are workable and the Association will maintain its active role in contributing to the trilogue discussions initiated in April 2017 as well as in the elaboration of delegated acts that further execute specific provisions of the Directive.

CEMBUREAU further continues to facilitate the Isofication process of CEN/TC 264/WG 33 “Greenhouse gas (GHG) emissions in energy-intensive industries” standards. Although the process is not yet finalised, it is still on track. CEMBUREAU believes that having an international standard available for CO₂ monitoring is a must.

Finally, CEMBUREAU started to analyse the so-called Winter Package on Europe’s “Clean Energy Transition” published by the European Commission on 30 November 2016. The package provides opportunities for our sector to showcase energy efficiency achievements in both our manufacturing process (kilo efficiency) as well as in the use of our downstream product, concrete, for sustainable construction. On both items, studies have or are being carried out and CEMBUREAU aims to play a key role in upcoming policy discussions on the Winter Package. In that same context, CEMBUREAU will also assess the proposed Energy Efficiency Directive and the Renewable Energy Directive under the Package in order to better understand the interaction with climate change and circular economy initiatives and flag up where potential synergies exist or overlaps can be avoided.

RESOURCES AND PROCESSES

The Commission’s Winter Package cannot be dissociated from its Circular Economy policy initiatives. The European Union’s ambition is to be a global leader on combining economic growth with an energy-and resource efficient use of our raw materials. As set out below, the cement industry is uniquely placed to help Europe achieve these goals.

In 2016, the European Commission continued to investigate ways in which the EU’s **waste-to-energy** potential can be fully exploited, as part of the **Energy Union strategy and Circular Economy package**. With this in mind, it undertook an analysis of the solutions currently available across the EU, whilst at the same time evaluating the challenges faced by waste-to-energy operations. The focus is primarily on the best possible utilisation of waste streams that are non-preventable, non-reusable, non-recyclable, in line with the waste hierarchy. In order to feed into this, CEMBUREAU commissioned Ecofys to provide information on how the European cement industry can contribute to the EU Energy Union Strategy and the Circular Economy Package by showing the potential waste uptake of existing cement plants across the EU with benefits in terms of fossil fuel savings, CO₂ emissions mitigation, resource efficiency and recycling. According to the Ecofys report, published in July 2016, Member States could save between €9-16 billion by utilising existing capacity in the cement industry, an amount that corresponds to the investment required for the construction of new waste-to-energy incinerators. Furthermore, it found that with additional investment, the cement industry has the technical potential to replace 60% of its fuels with waste and, in the future, this percentage can rise to 95%. Given that the report initially focused on three countries to illustrate progressive stages of waste market development, namely Greece, Poland and Germany, CEMBUREAU agreed that it would prove fruitful if such an analysis were to be undertaken in other Member States. Ecofys has now initiated work to extend the geographical scope of the study, with the final report expected in April 2017.

CEMBUREAU also continued to promote **material recycling** which occurs at the same time as energy recovery in cement production. Several Member States (Belgium, Bulgaria and France,

for example) already account for the recycling of the inorganic content of end-of-life tyres in cement manufacturing. CEMBUREAU’s aim is to get recognition at EU level. As a result, CEMBUREAU advocated actively in favour of its inclusion under the proposal to review the **Waste Framework Directive** (part of the 2015 Circular Economy package) for municipal solid waste, which made its way through the European Parliament and Council in 2016/2017.

The cement industry also monitored the review of three Best Available Techniques Reference Documents (BREFs) of relevance to the sector, namely:

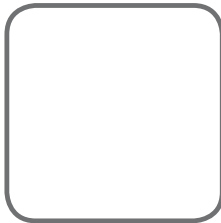
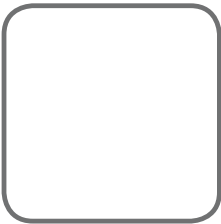
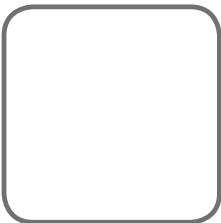
- the **Waste Treatment BREF**, where the association liaised closely with EUCOPRO
- the **Waste Incineration BREF**, with CEMBUREAU participating in several workshops organised by the incineration sector
- and the **Mining Waste from Extractive Industries BREF**, with CEMBUREAU submitting comments on the first draft of the revised BREF.

CEMBUREAU has now also joined the Technical Working Group that will develop the **Waste Gas Treatment in the Chemical Sector BREF**.

In 2016 CEMBUREAU commissioned the European Cement Research Academy (ECRA) to carry out a study on the **energy efficiency of cement kilns**. This study takes a holistic approach, which will include fact-based evidence of the features that contribute to the high net energy efficiency of cement kilns, and will highlight the unique feature of co-processing, in which energy recovery and material recycling are simultaneously combined when using waste in the kiln. The study will be finalised in 2017 and will prove useful in backing up CEMBUREAU advocacy on securing supply of affordable energy to the EU cement industry.

CEMBUREAU interacted with the CSI and its experts in the drafting of the “**Guidance for reducing and controlling emissions of mercury compounds in the cement industry**”. This document aims to complement the UNEP guidance on BAT/BEP for cement. In November, CEMBUREAU met with the CSI and UNEP to discuss the state-of-play and way forward of the Cement Partnership, and the ongoing update of the UNEP Global Mercury Assessment.

The Association also responded to a public consultation on **Sustainable Bioenergy Policy** for the period after 2020. In its response, CEMBUREAU indicated that policy initiatives related



to biomass for heating and cooling and electricity are having an impact on the biomass market, thereby limiting the fuel switch in energy intensive industries from fossil fuel combustion to biomass. It was also noted that the sustainability risks related to domestic biomass production originating from waste where no land-use change occurs, are very low.

In terms of **biodiversity**, at the end of the year CEMBUREAU was pleased to see that the European Commission shared our view that whilst the Birds and Habitats Directives are not necessarily perfect, they are fit for purpose. It was also positive to note that DG Environment plans to identify ways of improving their implementation at national level. Here, the cement industry looks forward to a fruitful dialogue which will allow for a correct implementation of the Directives and a win-win for both economic actors and biodiversity.

HEALTH AND SAFETY

Health & Safety is a top priority for the cement industry, both at company level as well as at the level of the European and national associations. As a reinforcement of that message, the Health & Safety Working Group has introduced a “safety moment” in each of its meetings. This allows companies or national associations to present and share their best practices and helps to build a common safety culture across the European cement industry.

As part of its commitment to Health & Safety, CEMBUREAU undertakes an annual safety data collection covering the main Key Performance Indicators of relevance to safety in the cement industry. The table below shows that the cement industry is continuously improving its performance in the field of worker safety.

CEMBUREAU is also a proud member of the European Social Dialogue Agreement (SDA) NEPSI relating to Respirable Crystalline Silica (RCS). Through this unique cooperation platform between employers and workers, a comprehensive set of guidance documents and assessments that address the minimisation obligations have been developed, taking into account the wide diversity of industrial circumstances and the best ways to address them with specific sectoral expertise.

When the European Commission issued a proposal in May 2016 to include work related exposure to RCS dust under the Carcinogens and Mutagens Directive (CMD), CEMBUREAU advocated strongly in favour of a formal recognition of the work undertaken by NEPSI under the CMD. The reason for this is that the SDA is complementary to the general requirements of the Directive and, by following the NEPSI Guidance, the signatories implement these requirements in an informed and tailored way.

The proposed revision of the CMD further suggested a binding Occupational Exposure Limit Value (ELV) of 0.1 mg/m³, which was deemed reasonable by CEMBUREAU. Discussions on the proposal will continue in 2017 with the European Parliament and Council likely to take an opposite stance in relation to the ELV whereby the first intends to advocate for a 0.05 mg/m³ after a transitional period of 5 to 10 years. The Council sticks to the 0.1 mg/m³ ELV and CEMBUREAU will closely monitor the developments in 2017.

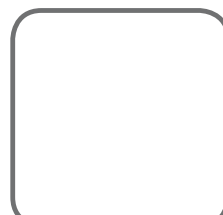
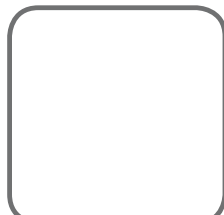
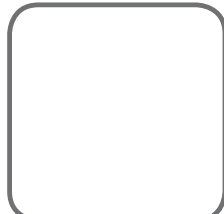
2016 was furthermore a NEPSI reporting year. Thanks to the efforts of CEMBUREAU members, 100% reporting of the identified sites has been achieved, 97.4% of employees potentially exposed

to Respirable Crystalline Silica (RCS) are covered by a risk assessment and an improvement was seen in relation to all Key Performance Indicators (KPI).

Via its liaison status under CEN TC 137 WG3 (Assessment of workplace exposure to chemical and biological agents – particulate matter), CEMBUREAU is working on the introduction of a cement-specific annex to the Size Weighted Respirable Fraction of Crystalline Silica (SWerFCS)-specific European Standard which allows for content of RCS in bulk products to be measured. This methodology will enable the cement industry to classify its products in accordance with the Classification, Labelling and Packaging (CLP) legislation.

CEMBUREAU continues to work on the national implementation of the EURATOM Directive which aims to protect the health of workers and the public against the dangers arising from ionizing radiation. Furthermore, as the European Commission is performing a review of the REACH legislation, CEMBUREAU maintains a close monitoring of any possible changes which may affect the cement industry. Finally, the European Commission has adopted a new legislative text concerning the harmonisation of information provided to poison centres. In its present state, the implementation of this legislation is not viable for the construction industry. CEMBUREAU, along with other construction product industries, has managed to convince the European Commission to perform a study on the implementation issues and will be part of a stakeholders’ debate to assess pragmatic solutions.

Safety Indicators	2009	2010	2011	2012	2013	2014	2015
Lost day Severity Rate Directly Employed (per million man hours) working days basis	196	230	170	149	164	151	150
Lost Time Injury (LTI) frequency rate directly employed (per million man hours)	12.6	11.7	8.2	8.9	8.2	8.1	7.2



MARKETS AND PRODUCTS

Energy efficiency is also one of the key drivers for the sustainable construction agenda. Buildings are responsible for 40% of energy consumption in the EU and the European Commission estimates that about 35% of buildings in the EU are over 50 years old. There is a significant potential to improve energy efficiency in housing and therewith tackle one of the most pressing social problems today, which is the growing energy poverty of European citizens. According to Eurostat data, around 54 million people cannot afford to heat their homes in winter.

Concrete is a heavyweight material with a high thermal mass and can therefore play a key role in addressing the energy efficiency challenges faced by society. A study commissioned with 3E consultants by The Concrete Initiative also highlights the potential of buildings' thermal mass to maximise the use of renewable energy. The study refers to a potential 25% CO₂ reduction per dwelling, up to 50% reduction in the need for peak electricity supply capacity and savings of up to €300 per household per year.

The Concrete Initiative has now firmly established itself as a key interlocutor with policymakers and stakeholders from a wide range of interest groups. The second annual event of the project held on 17 November 2016 focused on the need to develop the drive towards energy-efficient housing in parallel with citizens' access to financing for renovation. The Concrete Initiative and its partners in the cement, concrete and aggregates industry, succeeded in launching roundtable discussions with contractors, financing companies and banks, social housing organisations and policymakers at national and European level. The input received from that meeting has formed the basis for the 2017 Work Plan for the

Concrete Initiative which focuses on energy efficiency, affordable housing with an outreach to banks, flexible housing developments and opportunities for our sector, increased messaging at national level through local initiatives and the engagement of local and regional actors in Brussels, e.g. the Covenant of Mayors.

Recycling of concrete is another focus area for The Concrete Initiative in 2017, which will build on the ECRA study carried out in 2016 using a life-cycle analysis to evaluate the impact of using recycled concrete aggregates. The study demonstrates the value of a whole life approach, which is also the key message put forward by The Concrete Initiative. It is from this three-pillar approach that the project will continue to focus on issues such as fire safety and durability which touch on the social contribution of concrete in addition to highlighting its economic or environmental benefits.

An area that has been given particular attention in 2016 is the increased recognition of the role carbonation of concrete can play in climate change mitigation. Further research will be done on the potential for concrete to act as a carbon sink, particularly when recycled at end of life. Once properly assessed, communication around the topic will contribute to creating a positive image for our industry.

Apart from supporting the development of The Concrete Initiative, the Working Group Markets and Products has provided valuable industry input into the development of workable standards.

CEMBUREAU has fully supported the development of the revised EU harmonised standard for common cements by CEN Technical Committee CEN/TC 51, which will include new low carbon cement types, and has provided constructive input with the relevant regulatory bodies to ensure that this new standard is implemented in practice as soon as possible.

Industry is further lending its expertise to the work of CEN Technical Committees CEN/TC 51 and CEN/TC 104 dealing with cement and concrete and follows closely the developments in CEN/TC 350 'Sustainability of Construction Works' to ensure that future sustainability standards set fair and equitable

criteria for sustainability assessment. Performance concepts are increasingly gaining ground in standardisation bodies (CEN/TC 104 and CEN/TC 250 when revising the Eurocodes). CEMBUREAU aims to ensure that the development of performance concepts, as they apply to concrete specification, is well grounded and backed up by appropriate testing regimes.

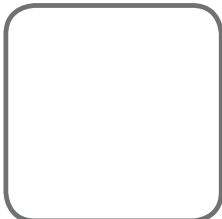
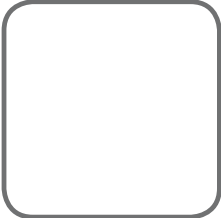
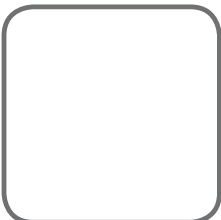
CEMBUREAU was an active partner in two sustainability initiatives by the European Commission: one to develop a protocol for **construction & demolition waste management**, and a second to develop a **framework for environmental assessment of buildings**.

Work also continued on updating the CEMBUREAU publication "**Cement Standards of the World**". This document was finalised and published in early 2017, and is available for purchase from here: <http://cembureau.eu/media/1550/csw.pdf>

As a member of **European Concrete Platform (ECP)**, CEMBUREAU remained involved in the Concrete Sustainability Council (CSC) **responsible sourcing scheme for concrete**. The project was initiated by the World Business Council for Sustainable Development's (WBCSD) Cement Sustainability Initiative (CSI). In 2016, NGOs were invited to provide their feedback on the scheme prior to its launch. This useful input was integrated into the CSC scheme, which was launched in early 2017.

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 has now become a full Board Member. In 2016, FSEU successfully raised the profile of fire safety as an item for the European agenda through a strong outreach to Members of the European Parliament, the European Commission and relevant policymakers at national level.

With the ECP, CEMBUREAU continued to be active in giving industry input to the revision of the **Eurocodes** by CEN/TC 250.





INNOVATION

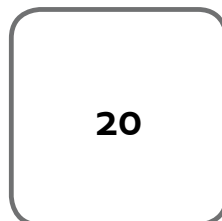
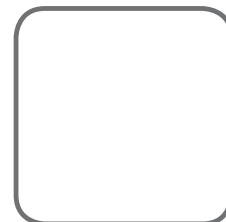
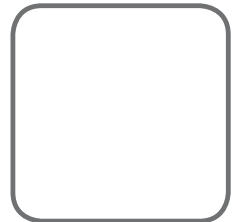
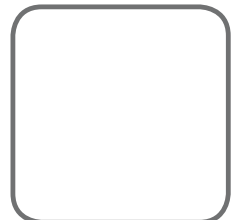
The cement sector is committed to remaining in Europe. By investing in Europe, providing jobs to European citizens and adding value to Europe's economy, we are maintaining a fully local cement and concrete supply chain. This supply chain provides jobs to 413 thousand people and adds €22 bn to the European economy. The final product in our supply chain is concrete. A material which is durable, energy efficient and resilient. A material which helps us build our homes, our roads, our public transport, our hydropower dams, our wind energy farms.

The cement sector strongly believes that innovation drives our competitiveness and contributes to sustainable growth and job creation. Our innovation efforts are also part and parcel of contributing to the climate change, circular economy and energy efficiency goals of the European Union.

The sector is proud to be the world leader in different areas of innovation some of which are set out below (for more details on the projects, please visit our website: <http://cembureau.eu/innovation/>)

- **Carbon capture:** research on relevant technologies for large scale implementation; post-combustion pilot project and pilot testing of oxyfuel and direct separation technologies nearing demonstration phase;
- **Carbon reuse** with a focus on algae cultivation, methane or other transport fuels and CO₂ mineralisation and carbonation;
- **Development of innovative clinkers and binders** with lower environmental footprint;
- **Development of innovative concrete** in order to provide prefabricated building envelope components with reduced carbon footprints, better insulation properties and reduced cost;
- **Research on the energy storage potential of concrete.**

CEMBUREAU is also a Member of the technology platform SPIRE which is a public-private partnership representing innovative process industries. The mission of SPIRE is to ensure the development of enabling technologies and best practices along all the stages of large scale existing value chain productions that will contribute to a resource efficient process industry. This network has allowed cement companies to join multisector consortia for cross-sectoral project calls applying for EU funds in combination with private funding.





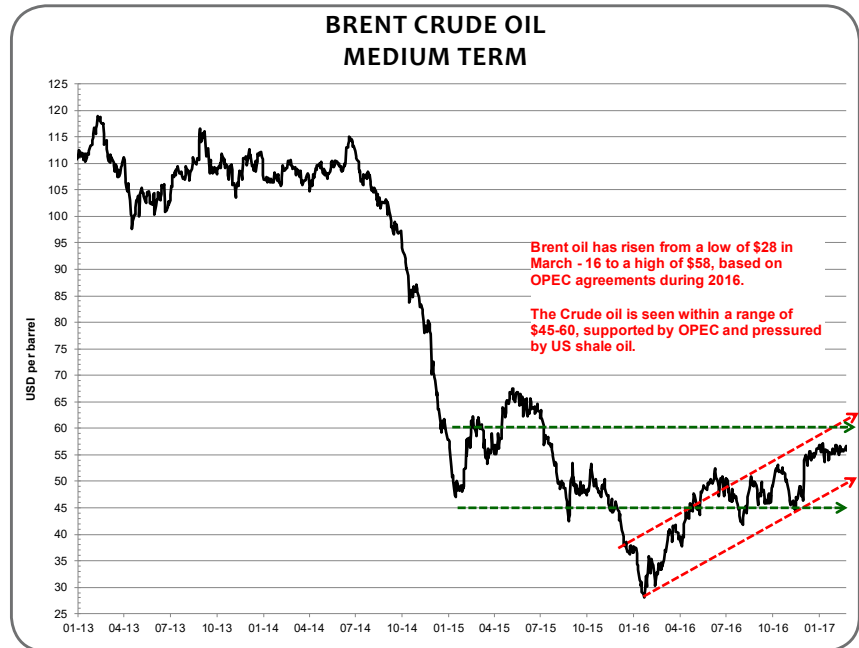
CIMEUROPE ACTIVITIES

2016 was characterised by high volatility in the energy markets, which recorded a multi-year low level in March before rallying to a new high 8 months later. The overall energy complex was first driven down by the price of crude oil, due primarily to attempts by Saudi Arabia to push prices so low that US shale oil production would no longer be competitive.

In March, Brent crude oil fell below \$30 (see Chart 1). At this point, there were indications that OPEC member countries could be considering implementing a pricing policy given the impact of low oil prices on their economies. Further to a series of meetings, including several with non-OPEC members, crude oil rose steadily, rising above \$45 by the summer - a 50% price increase, even before any agreements were on the table. During H2 of 2016, OPEC (and even some non-OPEC countries) reached an agreement to cut production during H1 of 2017, with the aim of achieving a crude oil target price of around \$60. The oil market reacted positively to the news and, at the time of writing, was trading within a \$50-60 band.

Nevertheless, higher oil prices in Q4 2016 encouraged US shale oil production. In addition, several US shale oil producers have been able to reduce their production costs from around \$70 to \$45-50.

Chart 1



Source: Cimeurope/Cemreview

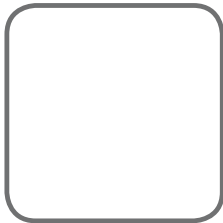
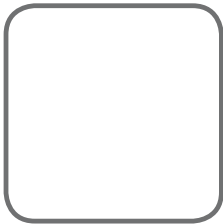
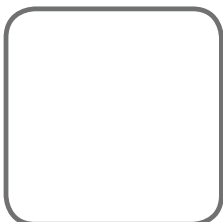
US production has thus risen steadily over the last few months, keeping a lid on oil prices at around \$58-60.

In terms of the coal and petcoke market, which are the two fossil fuels traditionally used by the cement industry, these followed a similar trend to oil, with both API4 coal and USGC 4.5% and 6.5% sulphur petcoke recording multi-year lows.

The coal market had been in a steady decline since 2012 where highs of \$120 were recorded. Coal reached a low of just under \$50 in Q1 2016, which has not been seen since 2005. This was driven by the overall rise in energy prices. Coal was initially driven upwards by higher oil prices, as well as by a decision taken by China to reduce the amount of domestic coal mining operation days from 330 to 276. This decision, taken during the summer, was prompted by attempts to reduce pollution and encourage higher coal prices. Nevertheless, it had the

adverse effect of triggering massive import volumes into China turning coal into the most wanted commodity. South African coal (API 4) rallied to highs last seen in 2013, rising above \$105 in November. Faced with a huge increase in power production costs, combined with a cold winter, the Chinese authorities reversed their decision, allowing virtually all mining companies to return to full production until March 2017. More coal then became available and prices dropped in December by around 25%, trading at around \$80 for one month deliveries and \$65 for annual deliveries (at the time of writing).

The petcoke market aligned with coal, with USGC 6.5% sulphur hitting lows of just under \$20 and USGC 4.5% sulphur of \$25 (Chart 2 - red & blue line). At this point, petcoke prices (which trade at a discount to coal based on a Kcal value calculation) were trading at a discount of more than 65% to coal. The discount to coal, combined with an increase in demand - particularly from India - triggered a rally in prices for all petcoke grades. Over a four-month period, petcoke's discount to coal fell to 30% as, even though coal prices rose, petcoke (which tends to react faster given its small market size)





EVENTS

In 2016, The Concrete Initiative organised two events. The first was a workshop and the second its annual Concrete Dialogue event.

International Seminar on Thermal Mass

The International Seminar on Thermal Mass, held in Madrid on 2 March 2016, was organised by IECA (the Spanish Institute for Cement and its Applications), PTEH (the Spanish Concrete Technology Platform) and The Concrete Initiative. The seminar was aimed at a wide range of stakeholders active in the field of construction, including policymakers, architects and engineers. This event delved into the details of thermal mass, with a particular emphasis on its contribution to energy efficiency in buildings. Expert speakers gave their insights on themes including:

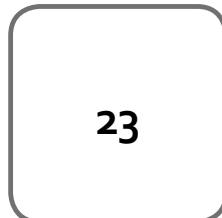
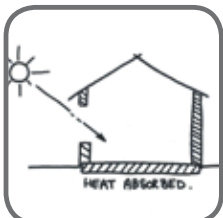
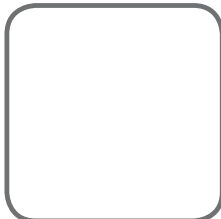
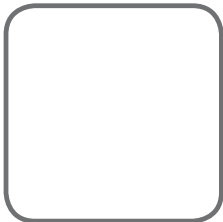
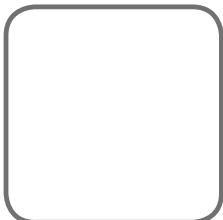
- A European perspective on the thermal mass of concrete
- The Spanish regulatory framework covering energy efficiency and thermal mass
- Specific tools for the assessment of thermal mass

Concrete Dialogue 2016 - Responsible solutions to Europe's housing and infrastructure challenges

There is a growing need for more affordable, energy efficient, comfortable housing, especially in our cities. We need innovative new collaborations from key players with scalable responses to these pressing challenges. This event, held on 17 November 2016, provided a shared space for a range of stakeholders to consider what more the construction sector can do to help deliver solutions. The scene was set by Marie Donnelly (Director of Renewables, Research and Innovation, Energy Efficiency, DG Energy, European Commission) and Greg Foster (Area Vice President Europe, Middle East and Africa, Habitat for Humanity), who provided their views on:

- The nature and scale of challenges which people are facing today
- Energy policy and implications for the construction sector

This was followed by a series of short interventions by key stakeholders who gave their views on what needs to be done. In contrast to previous events, the floor was then handed to participants, with roundtables allowing each and everyone to discuss, debate and reflect upon what they feel we need to do to make a real difference. The outcomes from these roundtables will feed into the work which The Concrete Initiative, in conjunction with the wider construction industry, plans to take forward in 2017 and beyond.





PUBLICATIONS

Below is a series of publications and fact sheets produced or commissioned by CEMBUREAU and The Concrete Initiative during the course of 2016.

<http://cembureau.eu/news-views/publications/>

Publications

- Market opportunities for use of alternative fuels in cement plants across the EU (Ecofys study)
- Cement, Concrete & the Circular Economy
- Closing the loop: What type of concrete re-use is the most sustainable option? (ECRA study)
- Structural Thermal Energy Storage in Buildings: Analysis and recommendations to provide flexibility to the electricity grid (3E consultants study)

Factsheets

- Fire safety with concrete
- Energy efficient & low CO₂ buildings with concrete
- Renewable energy in buildings: Unleashing the potential of thermal mass for electricity grid flexibility





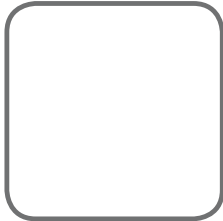
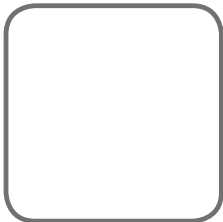
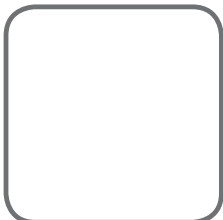
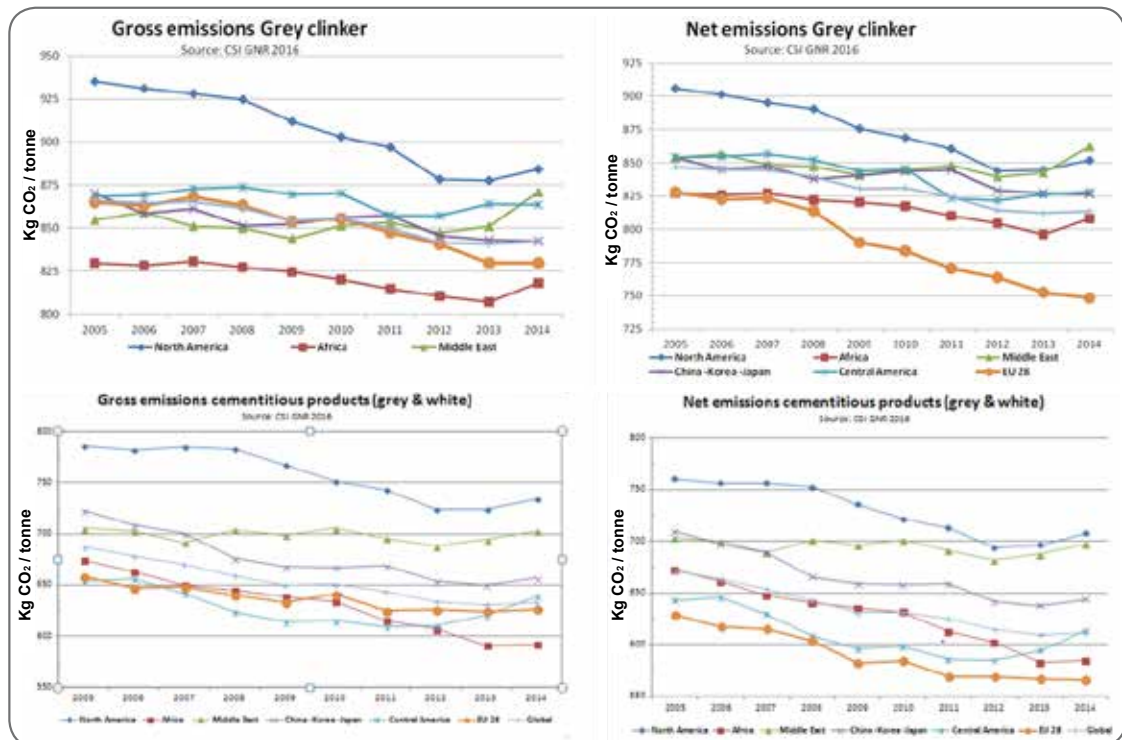
EMISSIONS REPORTING - GNR & BEYOND

Since its launch, CEMBUREAU has contributed 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 CO₂ emission trends from the cement industry at global level. The GNR project is a CO₂ and energy performance information system, based on emission data from individual cement installations. The system gathers information on each factor or lever that impacts CO₂ 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.

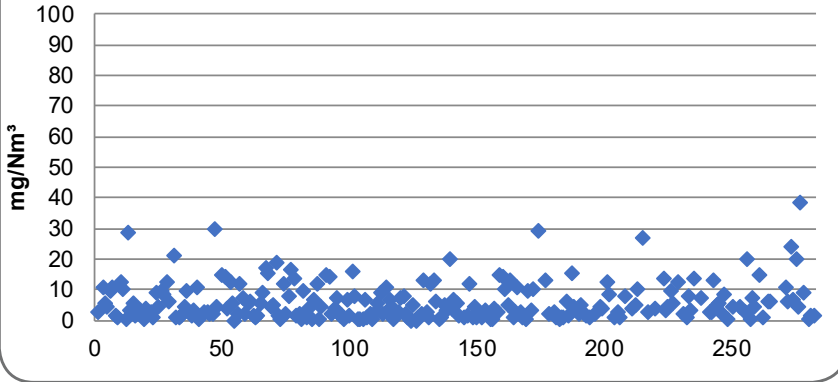
According to the latest data available, in 2014 the European cement industry has continued to reduce its emissions per tonne of product. This data, published by the GNR project, shows that between 2005 and 2014, the EU28 cement industry has reduced its:

- gross CO₂ emissions per tonne clinker by -4%
- net CO₂ emissions per tonne clinker by -10%
- gross CO₂ emissions per tonne cementitious by -5%
- net CO₂ per tonne cementitious by -10%

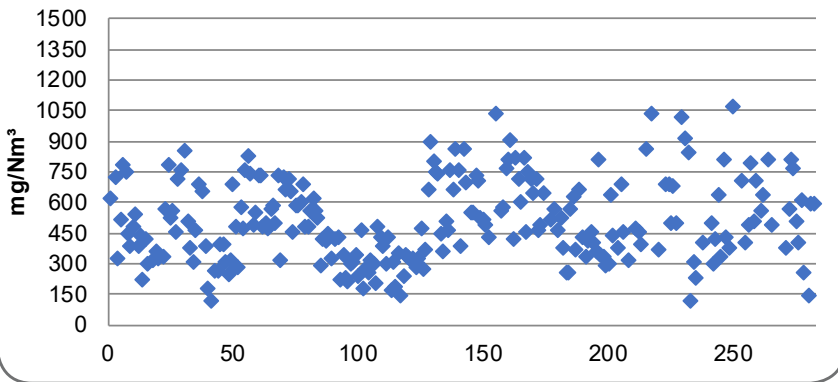
As the data shows, the European cement industry is still amongst the world's best performers and on a continuous decreasing trend. It is important to note that whilst the data for the EU covers close to 100% of plants (the ones of company members of CSI as well as non-CSI companies reporting to GNR through CEMBUREAU coordination) this is not the case for other jurisdictions, where it is mainly the best performing plants which are contributing to the GNR data collection (the ones of companies belonging to CSI only).



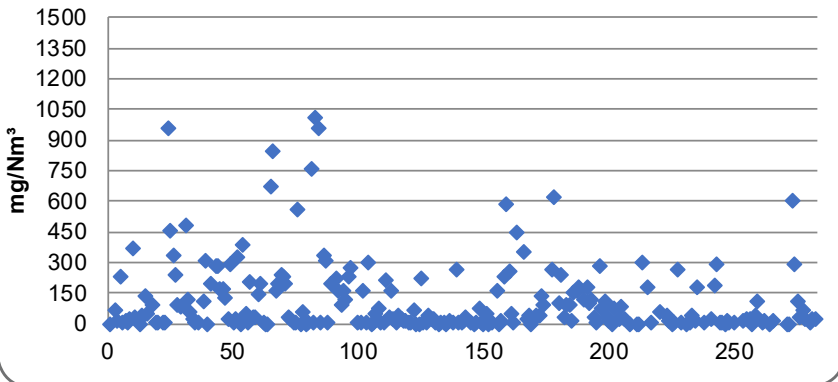
DUST Emissions - Continuous - 2014



NO_x Emissions - Continuous - 2014



SO₂ Emissions - Continuous - 2014



In 2016, CEMBUREAU continued to collect emissions data for other key elements emitted during the clinker burning process including dust, NO_x and SO₂. The latest report includes emission values collected for 274 kilns from the CEMBUREAU member countries for 2014.

Some of the key findings from the latest emissions report (2014 data) can be described as follows:

- NO_x emissions continued to decrease as shown by the average yearly emissions which were 690 mg/Nm³ in 2000, dropping to 508 mg/Nm³ in 2014.
- Dust emissions are increasingly within the Best Available Technique (BAT) Associated Emission Level (AEL) ranges.

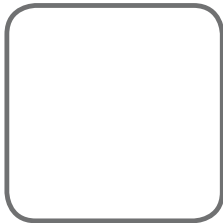
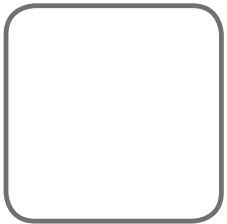
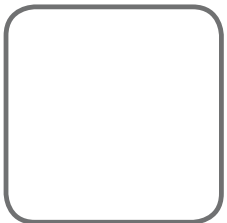




PARTNERSHIPS

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)
- Alliance for a #FairETS
- Business and Biodiversity Platform (B@B)
- Construction Products Europe (CPE)
- European Association for Co-processing (EUCOPRO)
- European Cement Research Academy (ECRA)
- European Concrete Paving Association (EUPAVE)
- European Concrete Platform (ECP)
- European Minerals Day (EMD)
- European Network for Silica (NEPSI)
- European Network for Sustainable Quarrying and Mining (ENSQM)
- Fire Safe Europe (FSEU)
- Industrial Emissions Alliance
- Non-Energy Extractive Industries Panel (NEEIP)
- Raw Materials Supply Group (RMSG)
- REACH Alliance
- Sustainable Process Industry through Resource and Energy Efficiency Public-Private Partnership (SPIRE)
- World Business Council for Sustainable Development – Cement Sustainability Initiative (WBCSD-CSI, global)

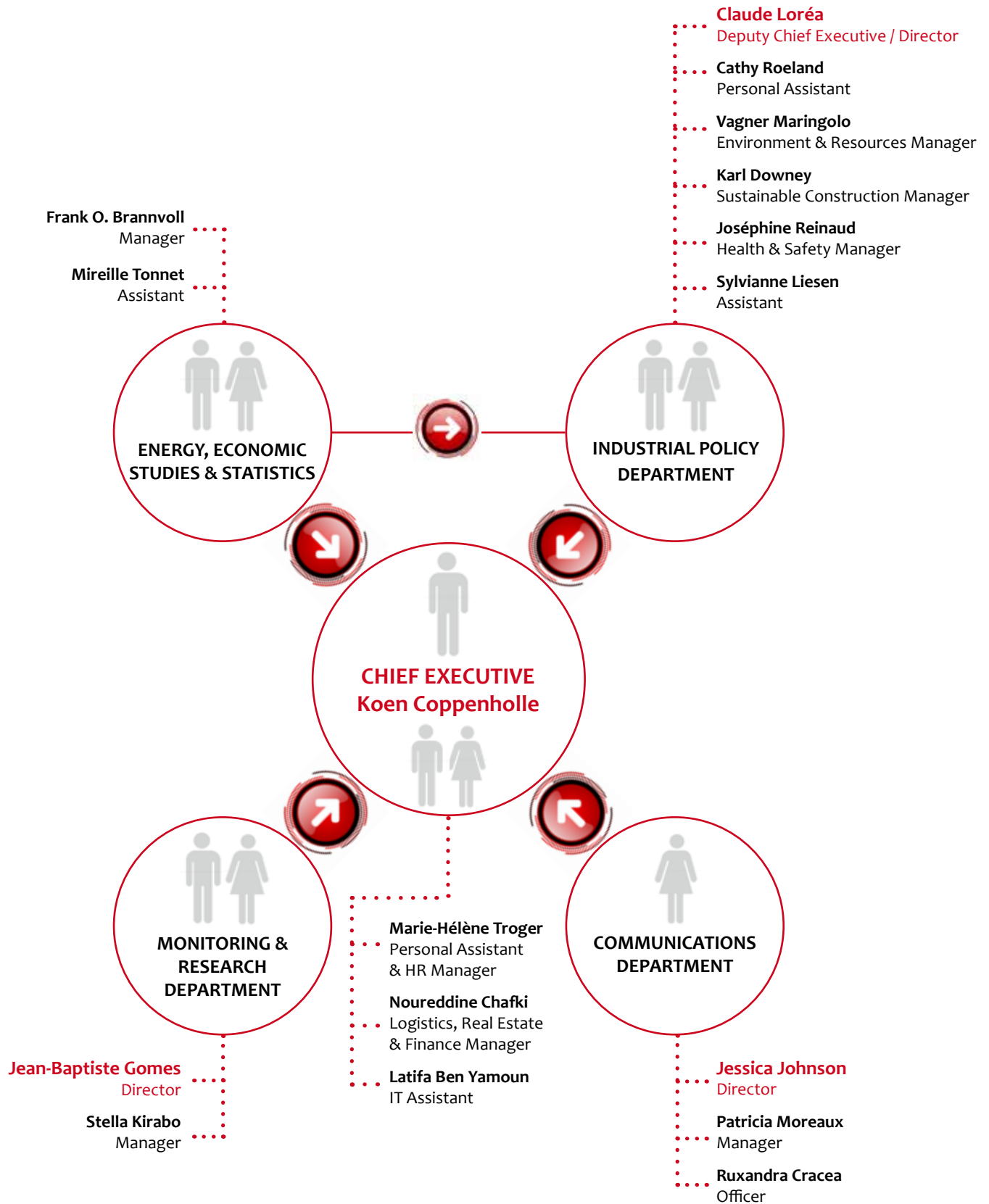




ABOUT CEMBUREAU

(Situation on 15 May 2017)

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ABOUT CEMBUREAU (Situation on 15 May 2017)

MEMBERS

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Belgium:	Febelcem – Fédération de l'Industrie Cimentière Belge a.s.b.l. (<i>Association of the Belgian Cement Industry</i>)
Bulgaria:	BACI – Bulgarian Association of Cement Industry
Czech Republic:	Svaz výrobcu cementu CR (<i>Czech Cement Association</i>)
Denmark:	Aalborg Portland A/S
Estonia:	KNC - AS Kunda Nordic Tsement (<i>Kunda Nordic Cement Corporation</i>)
Finland:	Finnsementti Oy
France:	SFIC – Syndicat Français de l'Industrie Cimentière (<i>Association of the French Cement Industry</i>)
Germany:	VDZ – Verein Deutscher Zementwerke e.V. (<i>German Cement Works Association</i>)
Greece:	HCIA – Hellenic Cement Industry Association
Hungary:	MCSZ – Magyar Cement-, Beton- és Mészipari Szövetség (<i>Hungarian Cement, Concrete and Lime Association</i>)
Ireland:	CMI - Cement Manufacturers Ireland
Italy:	AITEC – Associazione Italiana Tecnico Economica Cemento (<i>Italian Technical and Economic Association of Cement</i>)
Latvia:	CEMEX LATVIA
Lithuania:	Akmenės Cementas AB
Luxembourg:	CIMALUX s.a.

Netherlands:	ENCI BV - Eerste Nederlandse Cement Industry
Norway:	Norcem A.S.
Poland:	PCA – Stowarzyszenie Producentów Cementu (<i>Polish Cement Association</i>)
Portugal:	ATIC – Associação Técnica da Indústria do Cimento (<i>Technical Association of the Cement Industry</i>)
Romania:	CIROM – Employers' Organisation in Cement Industry and other Mineral Products for Construction in Romania
Slovenia:	Salonit Anhovo
Spain:	Oficemen – Agrupación de Fabricantes de Cemento de España (<i>Association of Spanish Cement Producers</i>)
Sweden:	Cementa AB
Switzerland:	cemsuiss - Verband der Schweizerischen Zementindustrie
Turkey:	TÇMB – Türkiye Çimento Müstahsilleri Birliği (<i>TCMA - Turkish Cement Manufacturers' Association</i>)
United Kingdom:	MPA – Minerals Products Association - Cement

ASSOCIATE MEMBERS

Croatia:	Croatia Cement, g.i.u.
Serbia:	CIS - Cementna Industrija Srbije (<i>Serbian Cement Industry Association</i>)

COOPERATION AGREEMENT

Cyprus:	Vassiliko Cement
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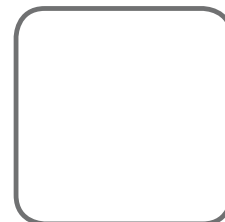
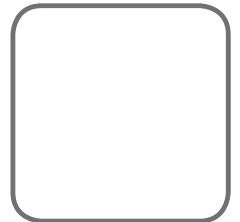
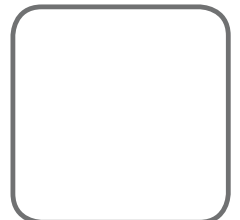


FOR MORE INFORMATION ABOUT OUR MEMBERS, PLEASE SEE
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ABBREVIATIONS GLOSSARY

AEL	Associated Emission Level
BAT	Best Available Techniques
BEP	Best Environmental Practices
BREF	Best Available Techniques Reference Document
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
EFSI	European Fund for Strategic Investments
ELV	Exposure Limit Value
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
KPI	Key Performance Indicators
LTI	Lost Time Injury
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
SWeRFCS	Size Weighted Respirable Fraction of Crystalline Silica
UNEP	United Nations Environment Programme
WtE	Waste-to-Energy



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