# Positive signs of recovery

CEMBUREAU released figures this summer on the production performance of its members in the European cement sector in 2015. They reveal a modest positive annual growth rate of 0.9 per cent to 248Mt, when compared to the year before.

■ *by* ***ICR Research,*** *UK*

The annual growth registered by the European cement sector in 2015 reflects positive signs of recovery. Even with significant differences across EU member states, the construction market seems to have picked up. However, following the events surrounding Brexit, uncertainty looms.

On an international level, China remains a very important player in the global market, representing 51.3 per cent of the world's production. In comparison, CEMBUREAU member countries and the EU28 represent 5.4 and 3.7 per cent, respectively, of global output.

In Turkey cement production has more or less stagnated over the past three years after a steady and significant increase since 2007 – a period when EU countries saw their output reduced.

The growth experienced by Europe's cement industry in 2015 reflects positive signs of recovery

## Recent developments

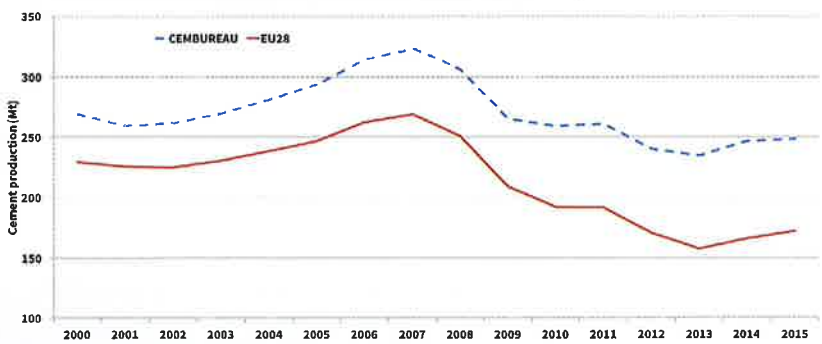
**ICR: What are the main trends in CEMBUREAU member countries underlying this modest performance? What factors constrained growth in 2015 and do you see the situation evolving in a positive or negative way in 2016?**

**CEMBUREAU:** Individual European markets recorded a mixed performance, but cement demand in 2015 was in line with the partial upturn in the general economic and construction environment.

In 2015 the CEMBUREAU member countries recorded a moderate growth in cement production, rising by 0.9 per cent YoY to 248Mt (see Figure 1). This was the third consecutive year of recovery due to a revision of historical data.

Spain reported another positive performance in cement production and attained a growth of 3.3 per cent, while in Italy the recession in cement production continued (-3.4 per cent in 2015, further to -7.4 per cent in 2014), as it did in France (-5 per cent in 2015, further to -3.1 per cent in 2014).

Figure 1: cement production in Cembureau and EU28 countries




Source: 2015 Cembureau Activity Report

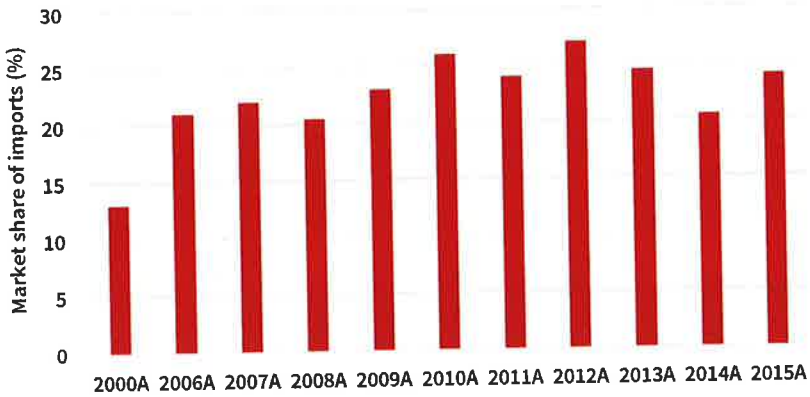
Cement production gained more ground in several eastern European countries, with strong performances in terms of YoY growth in the Czech Republic, Hungary and Romania in particular. In the EU28 as a whole, cement production increased by 3.7 per cent YoY – ie from 165.8Mt (revised figure) to 172Mt – marking the second consecutive year of recovery.

The factors constraining growth include a slow uptake of the construction market, which has been further fuelled by political uncertainty in some countries.

**ICR: Why was growth so much stronger in the EU28?**

**CEMBUREAU:** Firstly, growth is very unequal among EU countries and in some, such as the UK, Ireland and Spain, is influenced by political uncertainty. However, the construction sector is registering positive performances in many countries. In some areas the housing sector is picking up again, with a focus being placed on infrastructure. High immigration rates in Germany is one major reason for the registered residential construction growth in the country. Finally, the expression of growth in percentages and

Figure 2: market share of imports into Belgium, 2000-15




*Source: Intrastat/Febelcem*

the substantial difference between the EU28 and the CEMBUREAU area masks the proportions. With 72Mt, Turkey is at a level of production equal to 42.3 per cent of the EU28 output. The near-stagnation of Turkey's production since 2014 compared to an increase in European output results in the percentages referred to, but growth in Europe remains fragile.

**ICR: Italy and Spain were both hit hard by the 2007 financial crisis. How has their industry responded to the crisis, and how would you describe their current status?**

**CEMBUREAU:** Both Italy and Spain experienced a substantial drop in production until late in the crisis. Still in 2014 Italian cement consumption showed an eight per cent decrease compared to 2013. The Spanish cement consumption resumed its growth in the 2H14, but across the entire year remained low at 10.78Mt compared to an average annual consumption of around 25Mta between 1970 and 2014.

Since 2014 Spain has experienced five per cent growth in cement consumption, reaching 11.4Mt in 2015 (but well below the historical levels). However, this growth remains fragile as it was felt strongest during the first half of the year (eight per cent), while dropping significantly during the second half of the year (2.9 per cent). The 1H15 experienced a recovery in civil engineering and there has been some growth in residential and non-residential construction.

While future trends for Italy seem more positive, 2015 was still a year of subdued consumption (-2.5 per cent) and affected all construction sectors, in particular the residential sector.

**ICR: How significant are trade flows within Europe and what are the prevailing trends?**

**CEMBUREAU:** Trade flows are vital to keep markets moving within Europe. According to data from the Federation of the Belgian Cement Industry (FEBELCEM), for example, intra-EU clinker imports into Belgium were estimated at 846,932t in 2015, whereas exports totalled 554,198t. In the same year grey cement imports reached 982,813t, in comparison to exports, which accounted for a total of 1, 700,225t.

**ICR: Belgium's cement market saw a significant rise of 18.1 per cent in imports in 2015 – is this likely to continue and what are the main reasons for this?**

**CEMBUREAU:** In 2015 total imports increased 18.1 per cent to 1,512,618t in comparison to 1,280,552t in 2014. This represents a 23.6 per cent market share (see Figure 2). When considering the prior decade, the market share of imports was the highest in 2010 and 2012, when just over a quarter of cement consumption was met by imported product. The higher share of imports in 2015 can be explained by the presence of the VVM cement grinding plants in the ports of Antwerp and Ghent. The lower figure of 2014 can be attributed to HeidelbergCement-owned CBR acquiring the Ghent plant of Espabel, another importer.

Looking ahead, a rise in imports is not expected and the market share of imports is forecast to remain below 25 per cent.

**ICR: What effect do you see Brexit having on the UK cement sector in terms of its market, competiveness and regulatory regimes?**

**CEMBUREAU:** The UK cement sector will be impacted by Brexit and the resulting effect on the broader UK economy and in particular construction activity. Some of the immediate effects include heightened uncertainty, volatile financial market movements and drags on consumer sentiment. In the medium- and long term, Brexit implies a fundamental change in how the UK interacts with the rest of the world.

Whilst every piece of information and statistics are being closely watched to understand what impact Brexit will have on the UK economy, official statistics of post-referendum activity will only become available from October-November.

Independent analysts believe that by 2018 UK GDP will be between 2-3 per cent lower as a result of the UK's decision to leave the EU, depending on the ultimate trading arrangement arrived at. In the longer run, GDP should partially recover and the impact could be minimal if reasonable trading arrangements have been concluded.

The Mineral Products Association (MPA) has carried out a scenario-based analysis of the impact of Brexit on construction activity. The analysis shows that that, in the short term, leaving the EU is detrimental to construction. Over the next two years, construction output is expected to be between 7-8 per cent lower compared to if the UK remained an EU member. This is followed by a partial recovery, but there is still a permanent loss of construction in the long-run. Construction output growth rates will be weakest in 2017 and remain soft through 2018 before beginning to recover from 2019.

Overall, this suggests that demand for cement will remain flat over the next couple of years, followed by a steady recovery and returning to normal growth rates from 2019.

In terms of how cement manufacture is regulated, we do not expect a great deal to change in the short term. The UK regulatory regime for cement production is likely to stay broadly similar as EU Directives have been transposed into UK law. EU Regulations and Decisions may have to be transposed into UK law where appropriate after Brexit. The UK has contributed fully to the development of the EU regulations, codes and standards, and until Article 50 enters into force, the country will need to continue to engage and play a proactive part in

the future development of Regulations and Directives. After the UK's Article 50 notification enters into force there may be some opportunities for simplifying UK legislation, but the latitude of the UK to diverge from EU regulatory approaches will most likely hinge on whether the UK remains a European Free Trade Association (EFTA) member or has another type of trade agreement with the EU.

## Short-term expectations

**ICR: Where do you see the main growth markets in Europe in 2016 and what is driving consumption in these markets?**

**CEMBUREAU:** 2016 will hopefully see a better recovery in the construction sector with a strong emphasis on infrastructure works as well as a boost in construction and refurbishment of buildings, driven by energy efficiency goals.

In the 2015 CEMBUREAU Activity Report we have indentified the following countries where growth is expected:

- Bulgaria: increase in residential and office buildings, also helped by financing schemes. Priority attributed by the government to public infrastructure investments.
- Czech Republic: residential buildings
- Denmark: increase in residential building helped by low interest rates
- Estonia: moderate growth in residential buildings. New cycle of EU funding 2014-2020 will be felt in 2016 construction volumes, especially infrastructure.
- France: some increase in residential housing is likely, but decline is expected in public works and civil engineering.
- Germany: likely one per cent increase in residential construction. Federal Government increased its annual financial contribution to preserve and extend national transport infrastructure, but further cooperation is key to execution.
- Italy: an increase between 0-2 per cent due to recovery in the public sector. The residential sector has fallen substantially. There exists a need to assess the fall-out of the Italian banking crisis.
- Lithuania: growth is expected due to increased demand in civil engineering and infrastructure projects.
- Luxembourg: higher cement consumption due to better performance in both residential and non-residential sectors.
- The Netherlands: cement demand will increase in residential, non-residential and civil engineering, but cement consumption growth will be lower than construction growth as transformation (offices into houses) and renovation form a good part of construction growth.
- Poland: cement consumption likely to increase by four per cent linked to construction and modernisation of road and railway infrastructure, as well as investments in power and housing.
- Portugal: expected increase of 2.5 per cent in construction activity, with an improved performance expected in civil engineering, residential and non-residential building.
- Romania: cement consumption likely to increase (due to residential construction, road modernisation and railway construction), but major infrastructure works are lagging behind.
- Spain: cement consumption growth

# Cement production and the circular economy

**ICR: The circular economy was a key focus of CEMBUREAU advocacy at the European Commission in 2015. What does this approach aim to achieve for the environment and what new challenges/ opportunities will it present to the European cement industry?**

**CEMBUREAU:** The circular economy aims to ensure that we make better (and less) use of our primary resources and engage in forms of industrial symbiosis where economic operators use waste from one industry as source for another. It offers the opportunity to the cement industry to show itself as a prime example of this industrial symbiosis through its co-processing technique. Through co-processing, clinker is manufactured, while different waste streams are taken up in the kiln to serve either as alternative fuel to primary fuel sources (coal and petcoke) or as alternative raw material to primary raw materials. Substitution of clinker in cement is another example of the positive contribution of the European cement industry to efficient resource management and moving towards the use of circular models. Without co-processing, the waste which replaces primary fuels would have to be landfilled or incinerated, with its corresponding greenhouse gas emissions. Examples of alternative fuels include biomass, used tyres and waste oil.

CEMBUREAU has just finalised a study with Ecofys which demonstrates the potential for increased uptake of alternative fuels in Europe. In addition, material recycling in the kiln constitutes a full recycling of waste into the final clinker product, with no waste left and thus deserves to be counted towards the national recycling targets.

Through The Concrete Initiative, a project jointly set up with the European precast and ready-mix associations and with the aggregates association, CEMBUREAU also wants to promote the recyclability of concrete which requires a full life-cycle analysis of buildings, but again demonstrates the key role of the cement sector, up to its end-product, concrete, to the circular economy.

is likely but political uncertainty may influence expansion negatively.

- Sweden: new infrastructure projects can spur growth.
- Turkey: cement consumption is expected to grow by around three per cent in 2016 thanks to investment in housing and major infrastructure projects (tram, metro, highways).
- UK: construction growth was foreseen before Brexit but the decision casts doubt on the growth prospects.

## Long-term trends

**ICR: In the longer-term, do you expect Europe will ever return to the 2007 peak levels (269Mt) of cement consumption?**

**CEMBUREAU:** It is difficult to predict to what levels we will go back to, but it is important to compare the current modest growth to the sharp decline in cement output since the onset of the crisis in 2007, which noted a production of 269Mt for the EU28. The CEMBUREAU 2014 Activity Report mentioned a cumulative peak-to-trough fall in EU cement output of 50.5 per cent since 2007. For the EU28 countries, cement production in 2015 was 37.3 per cent below the 2007 peak.

Even if future growth were to mirror GDP growth or even be slightly above, returning to 2007 levels will be a challenge.

**ICR: What is the market outlook for cement producers in Europe for 2017?**

**CEMBUREAU:** Based on the forecasts for cement consumption, there is still a mix of both increases and decreases in cement production, depending on the country. Overall, we hope for a modest recovery of the sector, but political uncertainty in a number of countries and the overall economic performance in Europe may have a dampening effect on the uptake of activities. We are cautiously optimistic for 2017, but we will need to assess the situation following a most probably turbulent second half in 2016.

In addition, Brexit will undoubtedly have a significant impact on investment decisions over the next 12 months.

Currently, we are seeing an effort from European central banks, specifically the European Central Bank, to stimulate the European economies.

## Cement and climate change

**ICR: What are the key policy concerns that will dominate the agenda in the last period of 2016 and 2017?**

**CEMBUREAU:** CEMBUREAU has identified climate change/energy and the circular economy (see box) as two major policy areas that will be put at the forefront of the political agenda in 2016-17.

In addition, both the EU health and safety legislation on respirable crystalline silica and continued technical input into the standardisation bodies to allow the development of reliable and safe standards for sustainable construction in Europe will require attention.

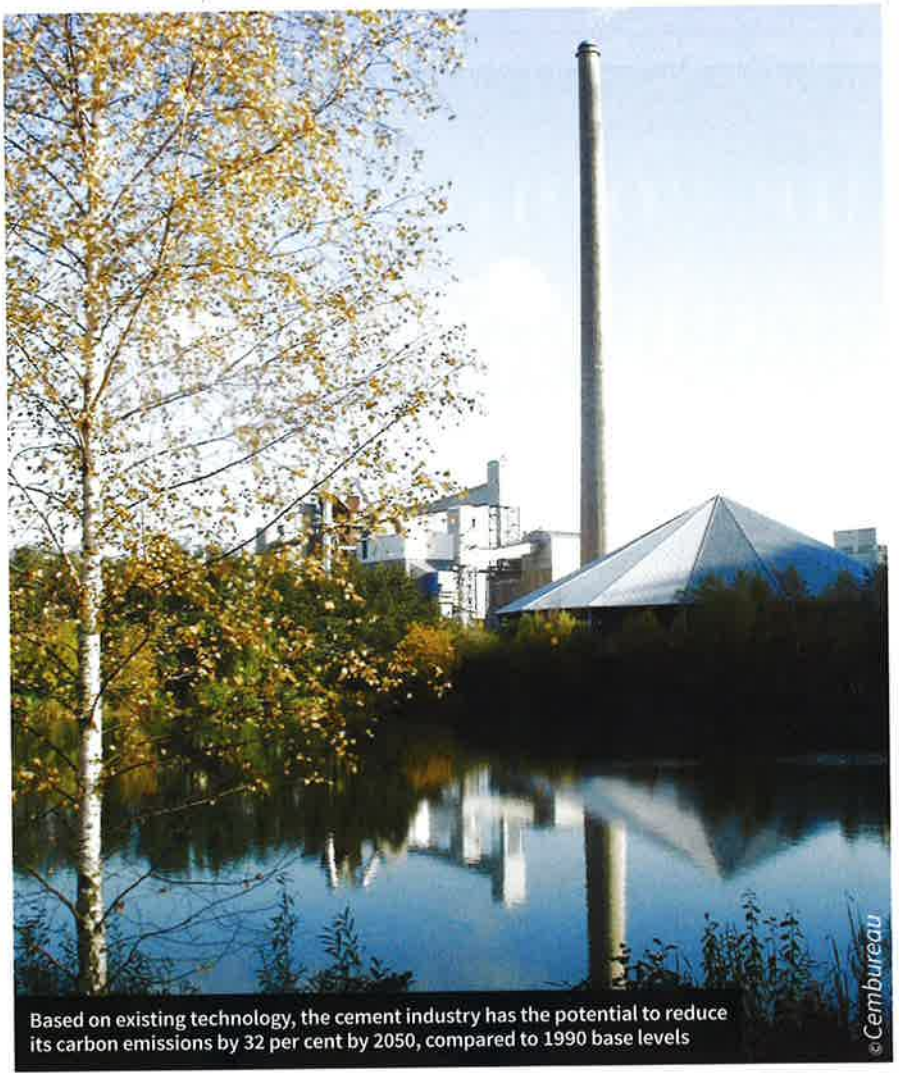
It is important to mention that we do not label these policy initiatives as concerns. Our work is geared towards ensuring that competitiveness for the sector is maintained (through a workable EU ETS) to further enhance the opportunities in the area of the circular economy and to promote our material, concrete, as a material of choice for sustainable construction, all with respect to high standards in health and safety.

**ICR: What is the status of the European Commission (EC)'s proposal to reform climate change legislation for Europe (EU ETS) and what are the implications for the cement industry post 2020?**

**CEMBUREAU:** The Commission's proposal is currently before the European Parliament and the European Council under its co-decision procedure.

In our view the revision of the EU ETS should adhere to the following key principles:

- The programme should ensure that emission reductions are achieved at the lowest cost.
- The review must be consistent with EU growth ambitions and industrial policy.
- It should be carried out under the acknowledgement that the UNFCCC process has been sub-optimal in delivering carbon cost equalisation.
- The revised Directive must ensure that the most efficient installations do not face undue costs, in line with the EU Council conclusions (October 2014).
- Understanding that the current EU ETS with a linear cut by the cross-sectoral correction factor for energy-intensive industry will de-industrialise Europe before it decarbonises European manufacturing.
- Technical limitations on reduction



Based on existing technology, the cement industry has the potential to reduce its carbon emissions by 32 per cent by 2050, compared to 1990 base levels

due to non-combustion source streams and process emissions in the cement industry must be recognised.

- The reduction effort for the cement sector must take into consideration the real reduction potential within the 2020-30 timeframe, which lies in the reduction of emissions from combustion source streams.
- Support must be provided towards a low-carbon economy by hypothecation (earmarking) of revenues from allowance auctions and direct innovation support to those sectors facing the greatest abatement challenges.

**ICR: How well are European cement producers performing in terms of $CO_2$ reduction?**

**CEMBUREAU:** Between 1990 and 2005, the European cement industry has reduced its $CO_2$ emissions arising from cement production by 13 per cent. In addition, and as outlined in our Roadmap entitled 'The role of cement in the 2050 Low Carbon Economy', based on existing technology, by 2050 the cement industry has the potential to reduce its carbon emissions by 32 per cent, compared to 1990. With breakthrough technologies, such as carbon capture, this reduction could potentially attain 80 per cent.

The COP21 meeting in Paris in 2015 was also a major catalyst for action and resulted in the Low Carbon Technology Partnerships initiative, under which the global cement industry will seek to reduce 1Gt of $CO_2$ by 2030.

**ICR: The recent Ecofys report, co-authored by CEMBUREAU, claims the EU member states could save €9-16bn by utilising existing capacity to dispose of more waste material destined for landfill. What are the technological and regulatory barriers in achieving these elevated co-processing levels?**

**CEMBUREAU:** Although appropriate EC regulations about waste management are in place, compliance levels vary considerably between EU member states, thus large differences exist in the status and prospects of co-processing across the EU.

Among the barriers for increased alternative fuels use in cement production, the report mentions infrastructural (eg, availability of suitable waste, high landfill rates in some states, competition with waste-to-energy incineration plants in others), political/social (eg, attitude of governments and public at large towards co-processing and waste-to-energy incineration plants, privileges for biomass-based energy generation and lengthy permitting processes).

**ICR: The European Cement Research Academy (ECRA) is an important vehicle for research and development. What progress is being made with the research into carbon capture technology and other $CO_2$ reduction technologies?**

**CEMBUREAU:** According to CEMBUREAU's 'The role of cement in the 2050 Low Carbon Economy' report, approximately 60 per cent of cement plants in the EU should be equipped with carbon capture technology by 2050. Based on the need to develop this breakthrough technology, ECRA is investigating its technical and economic feasibility in a CCS research project. A focus is also being placed on $CO_2$ re-use in cooperation with the University of Mons, Belgium.

Post-combustion and oxyfuel technology are the two potential capture solutions for the cement industry. Post-combustion is the tail-end separation of $CO_2$ from flue gas by, for example, chemical absorption, adsorption, membranes or calcium-looping. Important ongoing projects include Norcem's Brevik project (pilot testing) and CEMCAP (prototype testing). Oxyfuel technology is combustion with pure oxygen instead of air, in combination with flue gas recirculation to increase the $CO_2$ concentration. It requires process and design adaptations. Important projects include ECRA's complete oxyfuel project, for which the cement industry is now envisaging the next steps towards an industrial scale oxyfuel cement kiln. Reasearch partners include, LafargeHolcim/ AirLiquide/ FLSmidth (pilot testing of partial oxyfuel), and CEMCAP (prototype testing). ■


Climate change policy initiatives aim to ensure the sector's competitiveness is maintained