Mediterranean trading patterns

The past year has seen the emergence of new trading trends in the Euro-Med region with rising energy costs, an increase in exports from non-European countries and growing demand for supplementary cementitious materials. DSG Consultants illustrates the new trading patterns observed in the Mediterranean area, plus provides an outlook for 2023.

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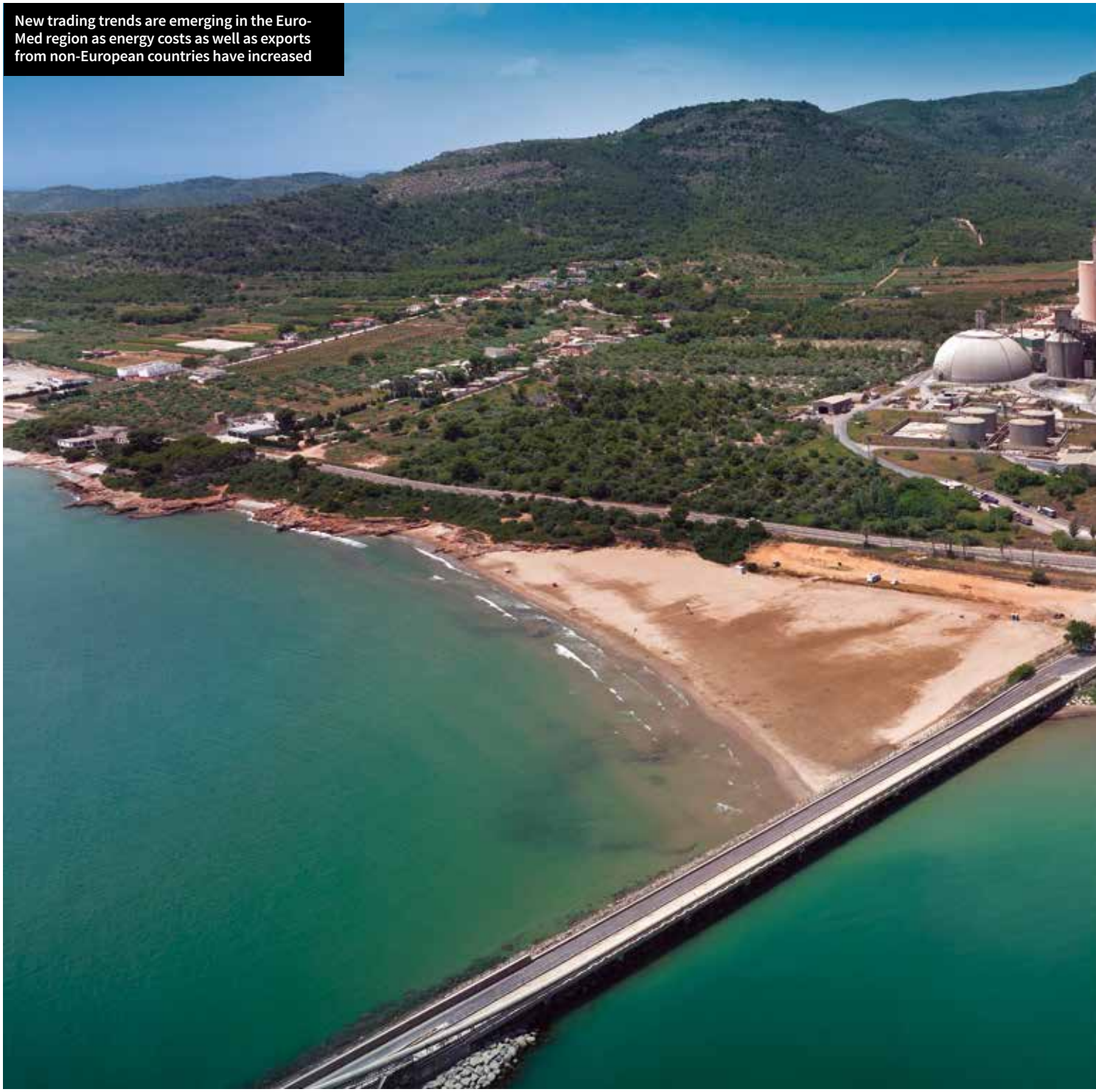
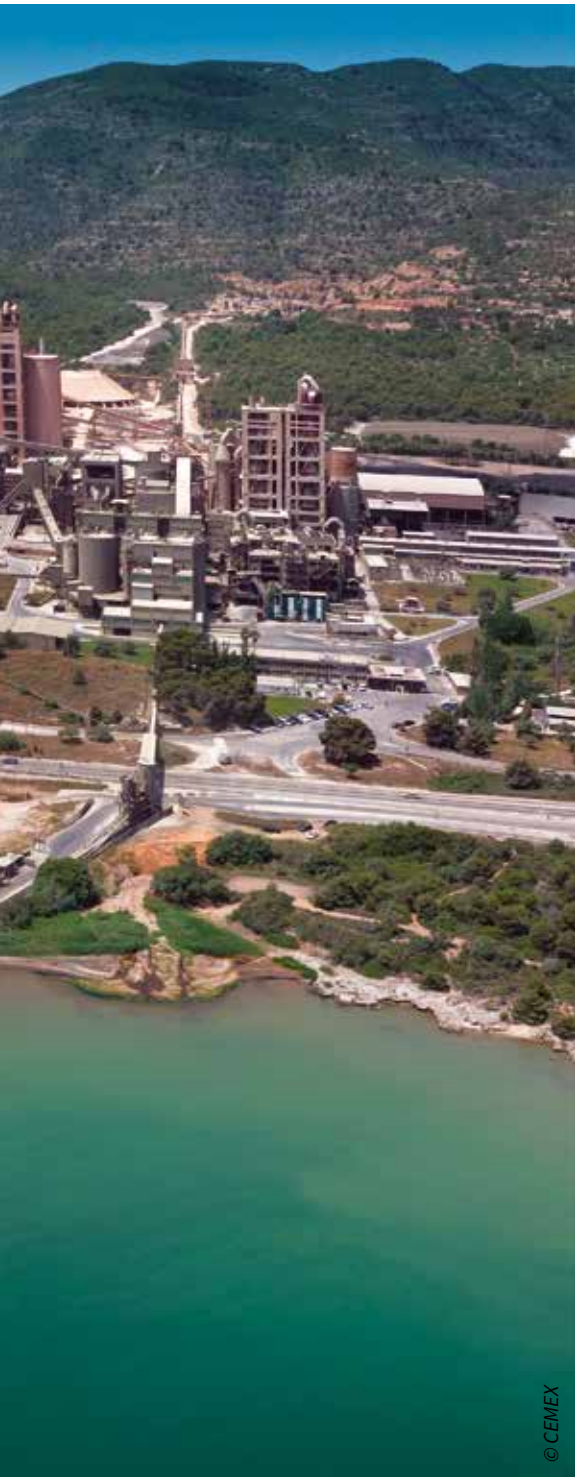


New trading trends are emerging in the Euro-Med region as energy costs as well as exports from non-European countries have increased

Last year was one of living dangerously in Europe and the Mediterranean area. The war in Ukraine revealed many weaknesses in European industry supply chains, and their high dependence on Russian coal and gas. As a result, energy costs exploded (both in terms of primary fuels and electricity) in most Euro-Med countries, including Turkey and Egypt. The energy crisis made producers who rely on imported energy and have lower alternative fuels usage rates (such as those in Spain and Turkey) more vulnerable, which affected their international competitiveness. Energy cost inflation spread over raw materials, ship bunkerage and labour forces, thereby creating global inflation on the delivered prices of all building materials. Countries with access to low-cost energy (eg, Algeria) and government price incentives (eg, Egypt) were favoured in cement international trade, especially in price sensitive markets.

In this troubling context, the new era of the Emissions Trading Systems (ETS) Phase IV and its progressive reduction of free CO_2 allowances have made exports from European countries less profitable and boosted the use of supplementary cementitious materials (SCMs) such as granulated slag to replace clinker. In Europe, imports from non-European countries increased to cover demand, a situation that is likely to continue until the Carbon Border Adjustment Mechanism (CBAM) comes into force in 2026.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In parts of the Euro-Med region more efficient logistics infrastructure is needed


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Turkey is the leading cement and clinker exporting country


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Spain's cement exports remained stable in 2022, supported by dynamic demand in the UK and France


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Slight decline in global cementitious regional trade

DSG Consultants estimates that global cementitious trade – including the import and export of cement, clinker, granulated blastfurnace slag (GBS), ground granulated blastfurnace slag (GGBS) and fly ash – reached 120Mt at the end of 2022, falling by five per cent YoY. A rebound in regional cement demand was observed during the 1H22 following the COVID-19 crisis. During the second half of the year, tensions in the bulk cement freight market and a decrease in cement demand in the area negatively impacted global trade. However, Algeria and Egypt's export dynamism and a strong level of imports into the UK, Spain and Italy helped contain the decline of global cementitious trade in the Euro-Med area.

Cement and clinker continued to dominate regional trade and represented 75 per cent of volumes in 2022. However, in recent years other SCMs, such as granulated slag and fly ash, have significantly increased their shares in global cementitious trade (accounting for ~15 per cent in 2022).

Changing cement and clinker export trends

Cement trading

Over the last 10 years, Turkey has emerged as the leading cement and clinker exporting country in the Euro-Med area (see Figure 1). In 2020 the country exported a record 31Mt of cement and clinker. However, since 2021 exports from Turkey have been decreasing and saw a further drop last year due to the energy crisis. Turkish cement producers are dependent on imported coal, with Russia being the main supplier. Therefore, Turkish producers have suffered from energy price hikes and production cost increases. As a result, Turkish exporters lost price sensitive markets such as countries in west Africa.

According to statistics from S&P Global, Turkey exported 27Mt of grey cement and clinker in 2022 (-12.6 per cent YoY). This volume comprised 9Mt of clinker (-32 per cent YoY) and 18Mt of cement (+2 per cent). During the year, Turkey maintained

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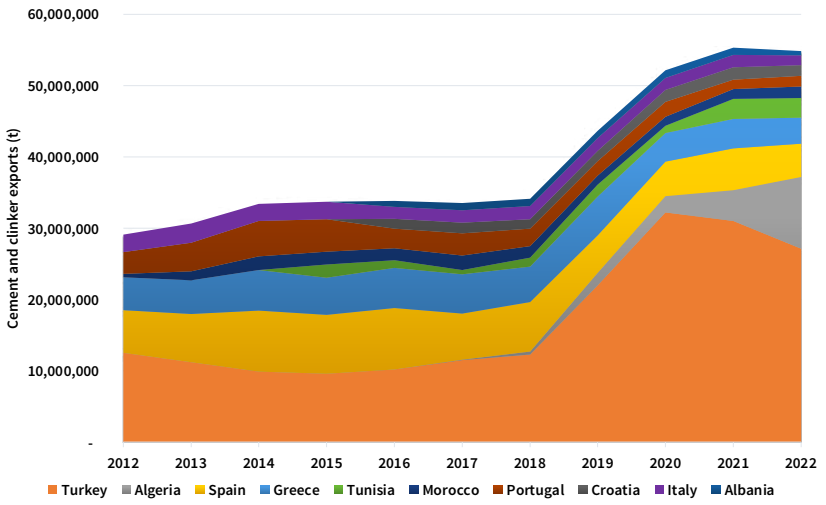
Figure 1: cement and clinker exports from key Mediterranean exporting countries, 2012-22



Source: S&P Global, Customs

its leadership status among regional exporters thanks to a significant increase in US imports. The US received 9.2Mt of (mainly low alkali) cement from Turkey (+35 per cent YoY), accounting for more than 50 per cent of Turkey's total global cement exports. Other key destinations for Turkey's cement exports were Israel and Syria which imported 3.1Mt and 1.35Mt from Turkey, respectively.

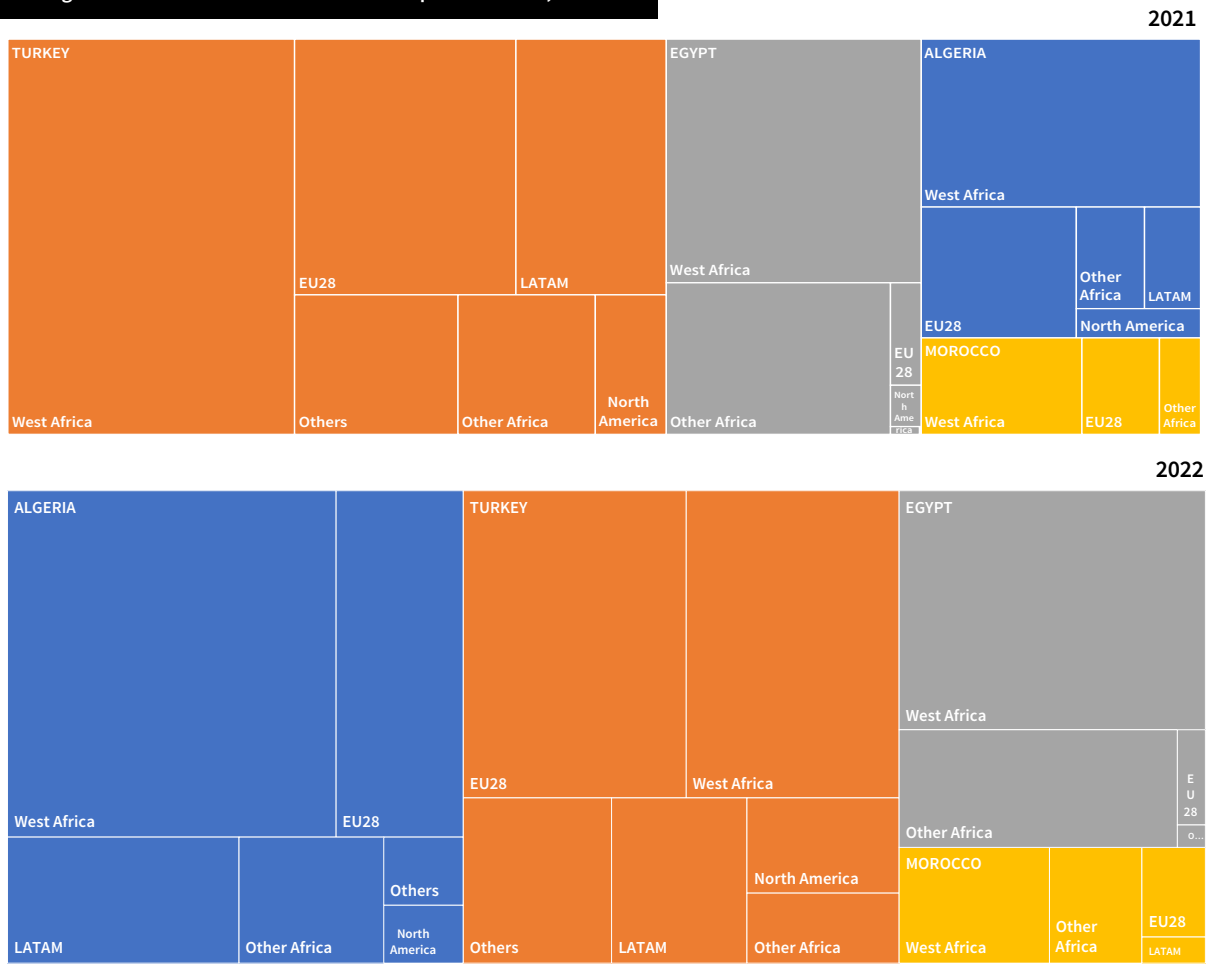
European cement exporters are still active in international cement trade. Greece saw its cement exports decline by eight per cent to 3.6Mt in 2022. However, it maintained a good position in the US (which accounted for nearly 70 per cent of Greece's cement exports) thanks to low alkali cement sales.

Spain's cement exports remained stable at 3.2Mt in 2022 due to dynamic demand from the UK and France. A total of 90 per cent of Spanish cement exports to France were delivered by road.

Portugal achieved a 35 per cent YoY increase in cement exports to 1.3Mt in 2022. The UK was once again the main end destination with volumes almost doubling.

Since 2020 EU-28 countries have mainly exported to western Europe. Intra-European seaborne shipments mostly concern flows driven by intra-group exchanges by Holcim, Titan, CRH, Cemex and Heidelberg Materials. These movements also include large quantities of inland flows between neighbouring countries (eg, from Germany to The Netherlands, and from Belgium and Spain to France).

Figure 2: regional share of Mediterranean clinker export countries, 2021-22



Sources: S&P Global, Customs, DSG estimates

Clinker trading

For the first time in 10 years, Algeria replaced Turkey as the region's leading clinker exporter. DSG Consultants estimates that Algeria exported approximately 9.4Mt of clinker in 2022 (more than 10Mt including cement). This meant that Algeria more than doubled its export volumes compared to 2021 as the country benefitted from low energy costs and attractive FOB prices.

Even though Egypt has been affected by energy hikes, it too strengthened its position as a key regional clinker supplier. The government of Egypt has put in place subsidies on freight rates to incentivise exports to defined destinations such as Africa. These aids have contributed towards improving the competitiveness of Egypt's clinker exports which surpassed 5Mt last year.

Algeria and Egypt have both increased sales to Africa, especially Ghana and Côte d'Ivoire. West Africa accounted for 53 per cent of clinker exports from Algeria and 67 per cent from Egypt, respectively in 2022. Meanwhile, Turkey accounted for 32 per cent of clinker exports to this region (see Figure 2).

Non-European countries in the region (ie, Turkey, Algeria, Egypt and Morocco) have increased their clinker sales to EU-28 countries by 20 per cent over the 2021-22 period. Clinker exports to Europe represented 20 per cent of Algeria's total global clinker exports, rising by 88 per cent. France, Belgium and Italy significantly increased clinker imports from Algeria and also Spain. Turkey remained a supplier of clinker into the EU-28 despite Algeria, Morocco and Egypt seeing their volumes grow. These non-European clinker imports are expected to continue, even when the CBAM comes into force, as a large proportion of imports are driven by established independent grinding stations such as those owned by Cementos La Unión, Elite Cementos and Cementos La Cruz in Spain, Cemin'Eu and Cimat in France and Cemminerals in Belgium.

The need for improved export logistics

Clinker is relatively easy to handle and store at export and import terminals. The major problem to overcome is dust during handling operations and storage. On the other hand, the efficient loading of cement requires dedicated silos and terminals. Turkish cement exporters benefit from good export logistics and the country's main exporters have their own port facilities with efficient means of loading cement or clinker. However, this is not the case for other regional non-European exporters.

A few plants are situated by the sea and the long distance transportation of volumes by truck is often compulsory to reach suitable export ports. In addition, cement logistics at some ports is poor with limited dedicated export terminals that allow temporary storage and efficient loading rates. In Algeria (with the exception of Lafarge Algeria which manages silos at the port city of Arzew), bulk cement is loaded directly from tanker-trucks. The situation is the same in all north African countries.

Cement producers in these countries, have improved the quality of their cement to bring it in line with European and US standards. However, to develop cement sales to Europe or the US, logistics must be improved along the entire supply chain, especially in the current context of inflation.

Some initiatives are on the way. For instance, in Egypt, UAE-based port operator AD Ports Group has recently signed a 15-year agreement with the General Authority for the Suez Canal Economic Zone (SCZONE) to develop two cement terminals and build silos with up to 60,000t of storage capacity at the Al Arish port and 30,000t of capacity at Port Said West. Both terminals could start operating before the end of 2023 and will enable the export of 1.5Mta of cement.

Bulk cement carrier availability and high freight rates also proved to be an issue for several exporters in 2022, particularly independent producers or importers who need to charter vessels on the spot market.

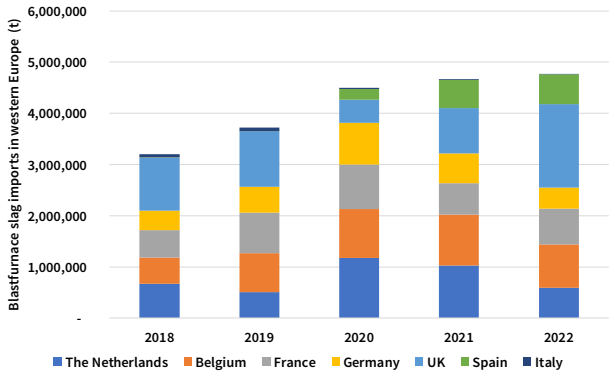
Expected decline in seaborne trade in 2023

After the devastating earthquake that struck southeast Turkey on 6 February 2023, the Turkish government has deemed reconstruction efforts a national priority in the short-term. Representatives from the Turkish construction industry have committed to limiting price increases for materials used in the reconstruction process unless there is an increase in costs. Turkish cement manufacturers' association TÜRKÇIMENTO has stated that its members are ready to supply the 10Mt of cement expected for reconstruction efforts or even more. A total of 17 plants located in, or close to, the affected provinces can supply cement to this area. Therefore, it can be assumed that the exportable potential of these plants will be significantly reduced, and exports could decline from Iskenderun terminals and the Mersin port. In 2023 global Turkish exports could decline again, leaving the way open for the other Mediterranean exporters.

Due to inflation and a slowdown in cement consumption, imports into western Europe are expected to decline in 2023 in terms of intra-group exchanges and are to be driven by independents who could take the opportunity of cement price increases in domestic markets. In the 1Q23 Turkish clinker FOB prices were US$50-53/t, while Algerian prices were US$40/t. Egyptian prices were in the middle of these two leading countries, especially at plants run by the army as they have better access to government export subsidies. Clinker demand could decrease in west Africa due to clinker price spikes and the growing use of clinker substitutes like limestone, clay, ground blastfurnace slag and fly ash.

Algeria and Egypt will retain their market shares against Turkey in Africa. US cement players could increase the use of limestone to produce blended cements and could reduce cement imports from the Euro-Med area. However, Turkey should maintain its market share in the US and receive interest in developing blended cements for export.

Figure 3: blastfurnace slag imports in western Europe, 2018-22



Source: S&P Global, Customs

Increase demand for SCMs across the Euro-Med area

Blastfurnace slag

The development of low-carbon cement and the substitution of clinker have boosted demand for SCMs across Euro-Med countries. Cement producers have increased imports of granulated slag in all western European countries. Globally, in this area, imports of blastfurnace slag rose by 35 per cent YoY in 2022 (see Figure 3).

In Europe the steel industry (like the cement sector) has the objective to reach zero carbon emissions by 2050. To achieve this goal, steel makers need to change the iron reduction process, substituting coal with hydrogen or replace blastfurnaces with electric arc furnaces, consuming scrap. The production of blastfurnace slag is due to decline and the fall has already started with a 12 per cent YoY reduction in Euro-Med slag exports (including GBS and GGBS) seen in 2022. The downward trend was accentuated during the 2H22 due to the energy price spike and the closure of several blastfurnaces. DSG Consultants estimates that global Euro-Med slag exports (seaborne and inland) bottomed at 6.15Mt at the end of 2022.

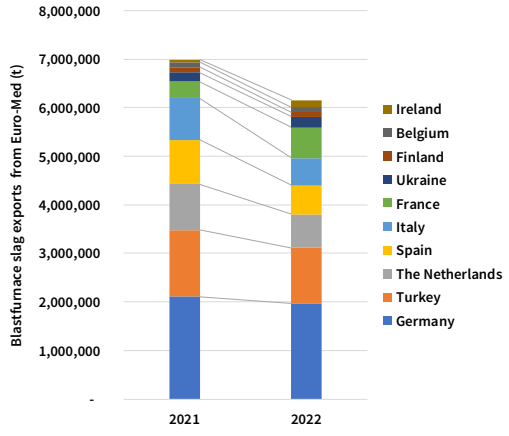
ArcelorMittal, the world's leading steel company, decreased GBS seaborne exports from all its European plants, globally by 23 per cent to 1.5Mt. Its challenger, Tata Steel, registered a six per cent decrease in shipments from The Netherlands and the UK. German steel makers focussed sales on their domestic market or exports to neighbouring captive markets, allowing Germany to remain the main GBS exporting country in Europe in terms by volume.

GBS seaborne exports from Europe declined by 30 per cent in 2022 while non-European exports to this region increased by two per cent. Since 2021 Japan has become the main non-European source of slag, followed by Turkey. In 2022 Japanese GBS exporters saw sales to Europe decline by eight per cent YoY. DSG Consultants expect exports of nearly 900,000t in 2022, mainly to the UK, Benelux and Spain. Turkish GBS exports to Europe increased slightly by two per cent. Turkish steel makers faced high energy costs during the 1H22 but then succeeded in sourcing coal from Russia during the second half of the year. In 2023 they are expected to improve their competitiveness and again lead GBS sourcing in Europe.

Japanese GBS is preferred to Turkish GBS by most importers because of its higher quality. However, Japanese GBS availability in Europe is limited (accounting for approximately seven per cent of the country's global GBS exports) and it is delivered at higher prices compared to Turkish product. In the long-term, new sources must be found to supply European cement producers and suit the growing demand for clinker substitutes. India, Vietnam or Indonesia could be alternative sources.

However, the growing GBS supply/demand deficit in Europe will limit the development of GGBS sales and cross-border movements. Seaborne exports are driven by a few players from a few countries (eg, Ecocem from France, Ireland and The Netherlands, or Edersa from Spain). Major GGBS importers in Europe are based in the UK or Scandinavia. In 2023, GGBS prices will surpass imported cement prices in these countries, with the upward trend expected to continue in the coming years.

Figure 4: blastfurnace slag exports from the Euro-Med region, 2021 vs 2022



Source: S&P Global, Customs

Fly ash

The war in Ukraine has obliged European countries to relaunch coal-fired power plants to replace Russian gas and support electricity production, pausing the European phase-out of coal expected by 2030. Therefore, an increase in coal combustion by-products is forecast and the necessity for coal combustion products marketers to find new outlets to get rid of these large quantities of pulverised fuel ash (PFA).

During 2022, PFA seaborne trade was buoyant in the Euro-Med area. DSG Consultants estimates that seaborne exports from the main western European countries reached 1Mt at the end of 2022. Exports of fly ash nearly doubled from The Netherlands, while Italy saw them multiply by three. Turkey experienced a slight increase in PFA exports to Europe and exported to the US, mainly wet fly ash.

The main destinations in the Euro-Med region were the UK, Norway, Denmark and France. Northern European countries increased imports, while in France imports grew at more moderate rate because of flat demand in the 2H22.

Nevertheless, shipping and logistics issues have limited fly ash export potential from these countries. Marketers suffered from a scarcity of bulk cement carriers for the transportation of fly ash. In addition, storage capacities at export and import ports are limited to absorb the surplus produced by all active coal-fired power plants.

Outlook for traditional and new SCMs

In 2023 these logistical constraints could have a negative impact on the development of fly ash exports, especially from Italy or Turkey. However, in the short-term Turkey should remain a good source of fly ash and GBS in the Mediterranean area. In the longer-term, new sources must be found to compensate for the decline of traditional SCM availability in Europe. In the Mediterranean rim, GBS from Algeria and fly ash from Morocco could be short-distance solutions. Cement and concrete producers will favour SCMs sourced locally, when possible, with the cheapest delivered price. Thanks to the evolution of cement standards in Europe, the use of calcined clay, limestone and pozzolan will increase and gradually replace part of the clinker and traditional SCMs. These products are available around the Mediterranean rim, especially in Turkey, Spain and Italy.

In the longer term, the development of seaborne trade for these 'nova SCMs' as well as long-distance sourcing for traditional SCMs can be expected. Supply chains will need to be adapted for these new products, especially port terminals which must evolve from small mono-product terminals to larger multi-product terminals, able to transhipment, store and dispatch different building materials at regional level. ■