Situation of GBFS + GGBS maritime movements & sourcing in Euro-Med

June 2021

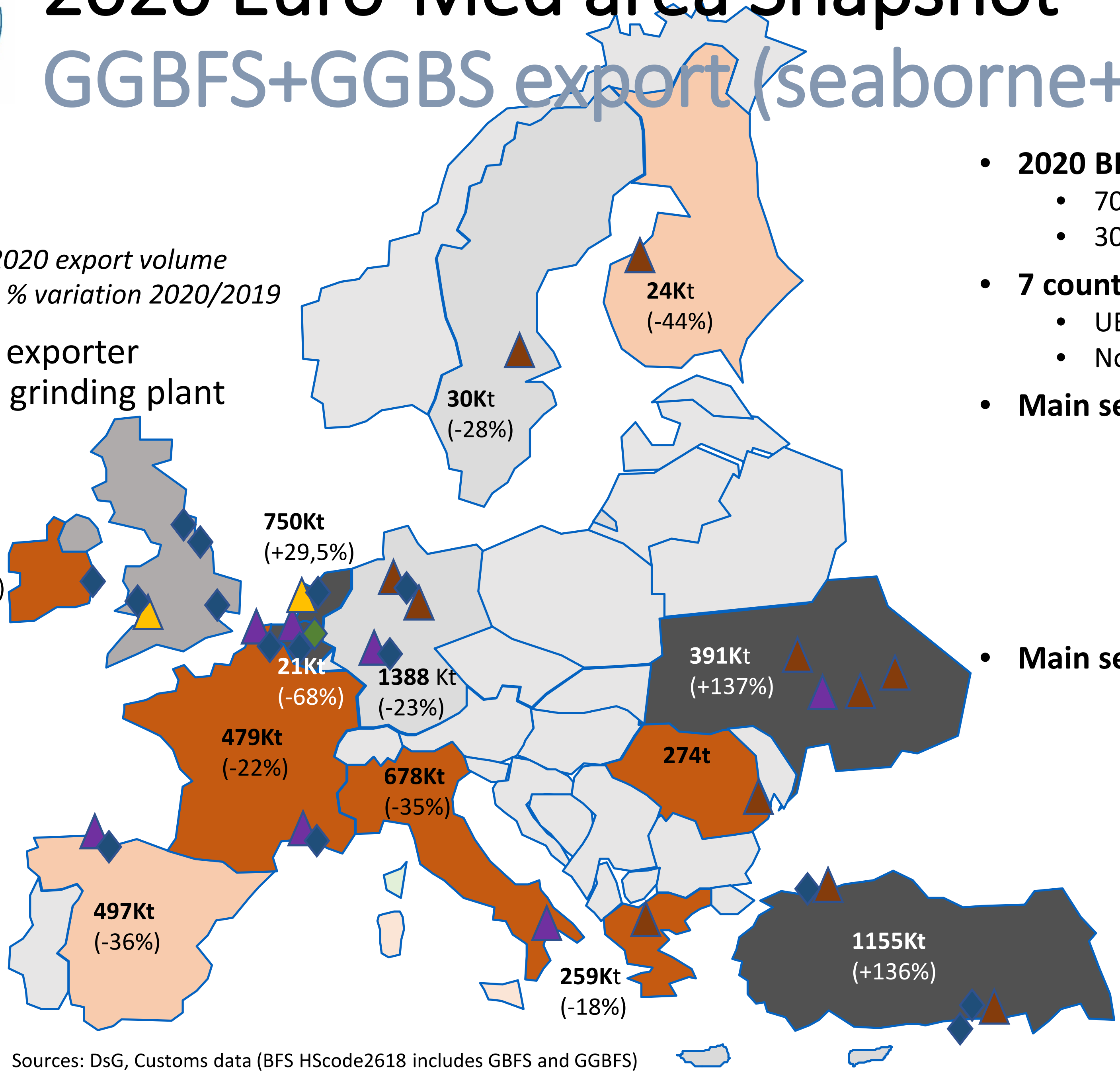
Contents

2020 Euro-Med area Snapshot

GGBFS+GGBS export (seaborne+inland)

5,6Mt *2020 export volume*
(-9,9%) *% variation 2020/2019*

BFS exporter
Slag grinding plant



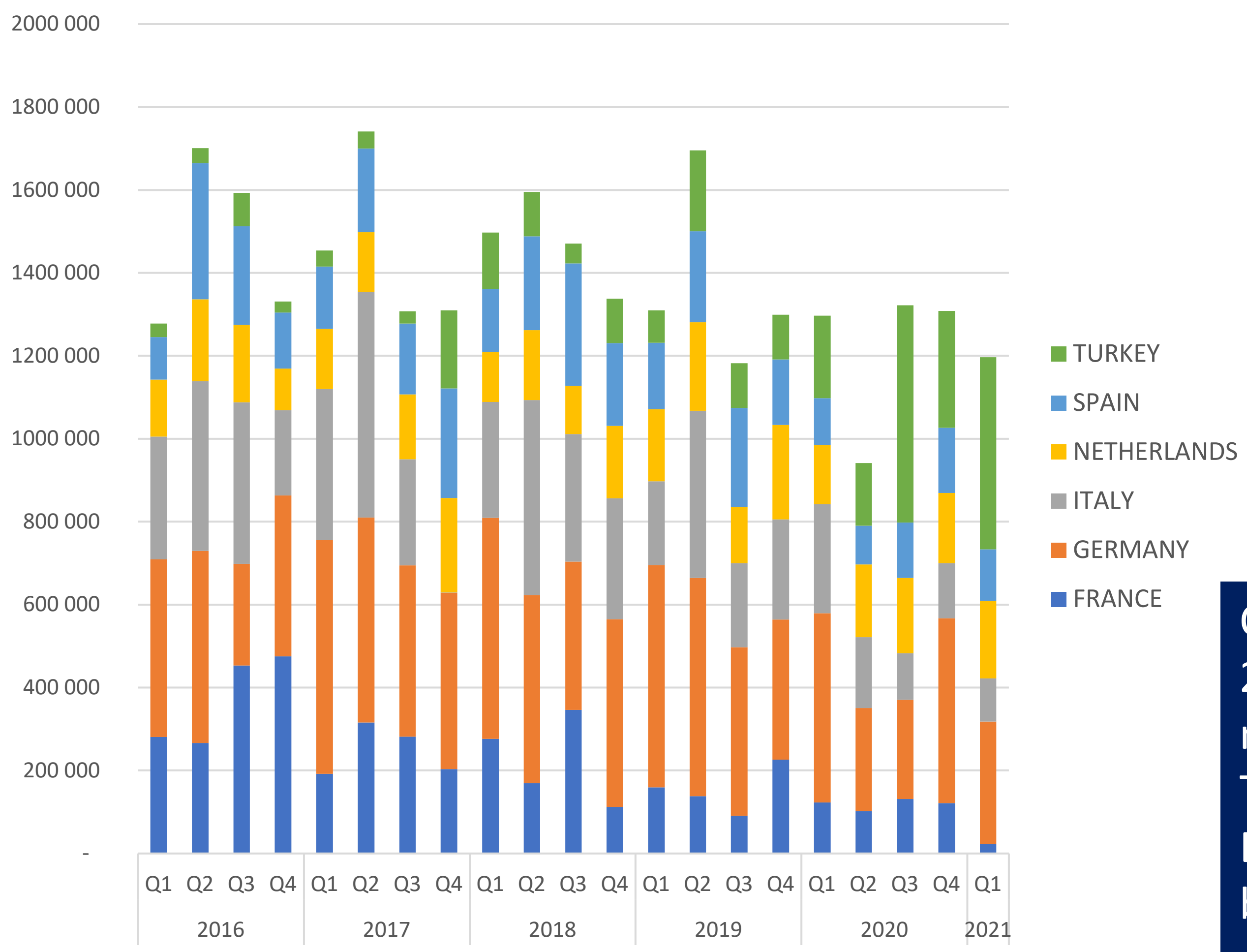
- **2020 BFS exports = 5,6Mt (-9,9%)**
  - 70% seaborne
  - 30% inland
- **7 countries represents 90% Euro-med exports**
  - UE28: Germany (80% inland), Italy, Spain, Netherlands, France
  - Non-UE28 : Turkey, Ukraine
- **Main seaborne GBFS exporters**
  - ArcelorMittal (Fos, Dunkirk, Taranto, Gijon, Ghent, Bremen)
  - Tata Steel (Ijmuiden, Port Talbot)
  - ThyssenKrupp (Duisburg)
  - Ruukki (Raahe)
  - Oyak (Iskenderum, Eregli)
- **Main seaborne GGBFS exporters**
  - Ecocem (Dublin, Fos, Dunkirk, Moerdijk)
  - LafargeHolcim Germany (Duisburg, Bremen)
  - Edersa (Gijon)
  - Isdemir/Adana Cement (Turkey)

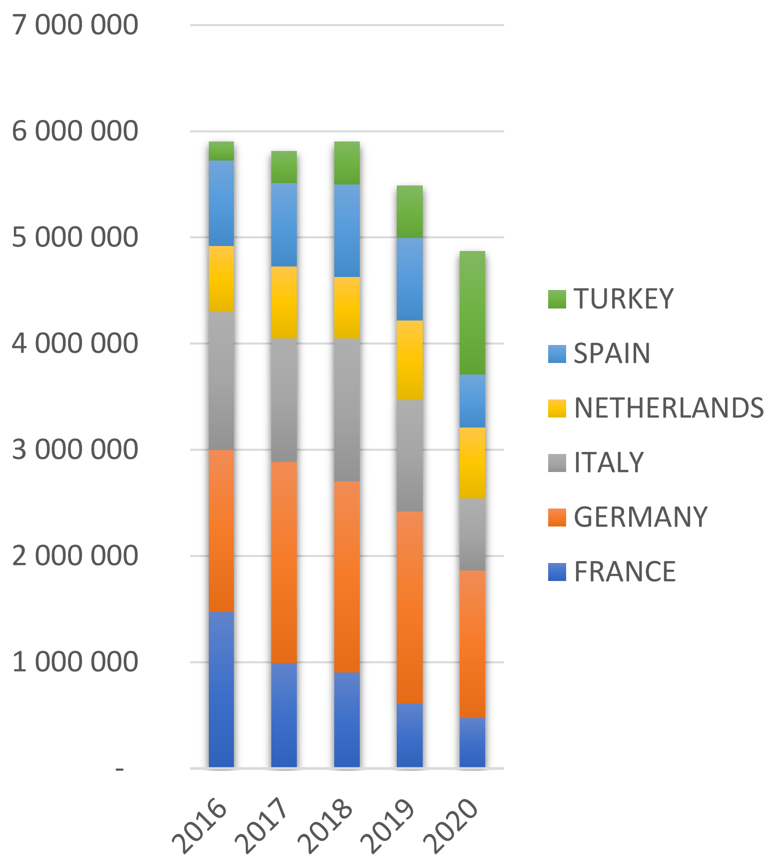
NB. The other European steel makers like Ruukki in Finland, Liberty Galati in Romania or ArcelorMittal in Belgium made limited granulated slag exports in 2020. Greece slag exports from Halyvourgiki plant are not granulated slag but slag from landfill.

Sources: DsG, Customs data (BFS HScode2618 includes GBFS and GGBFS)

Top 6 Euro-med BFS exporters

evolution from 2016 to 2021-Q1

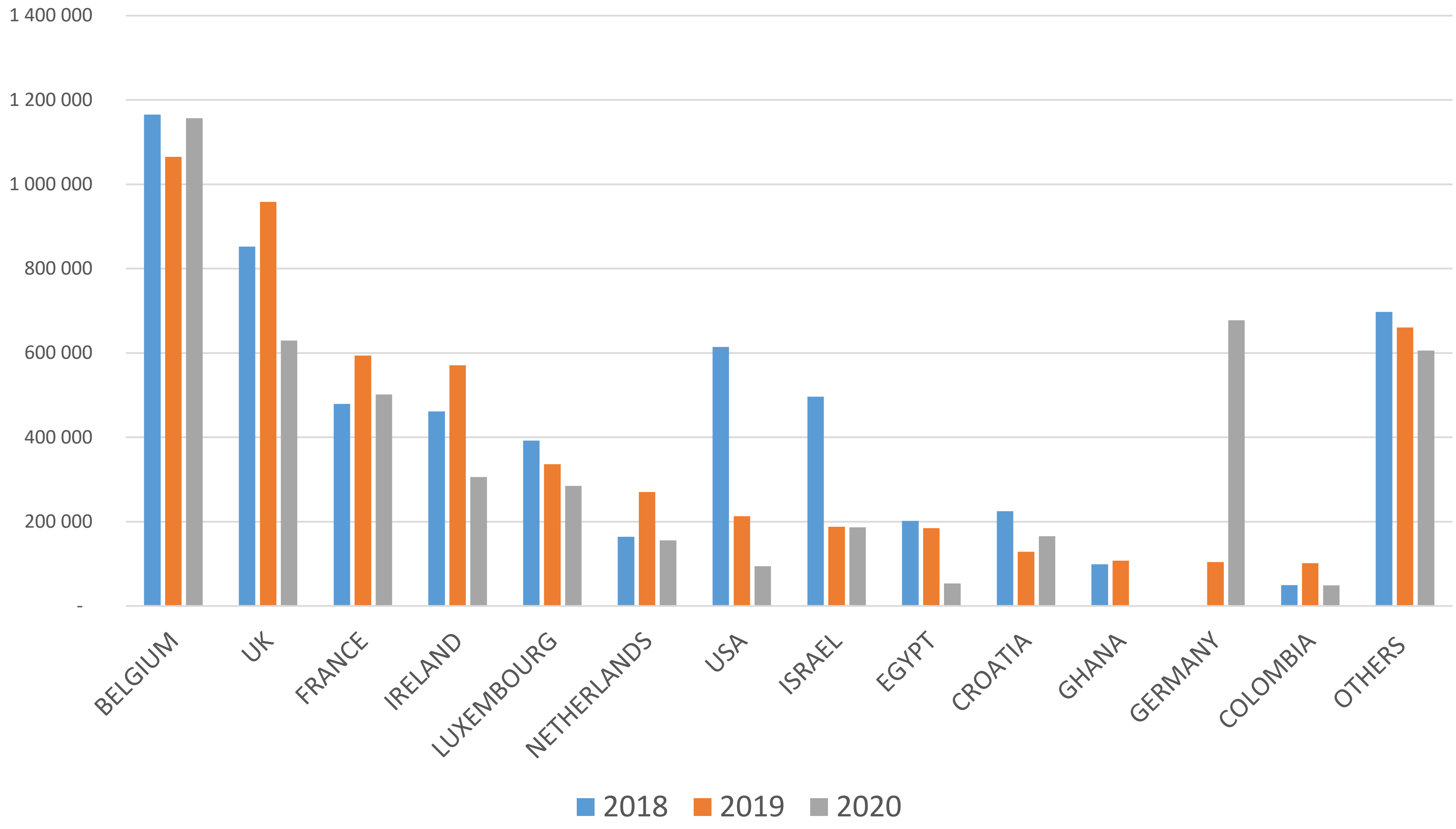




Comments: we note a decline by 17.5% in 2020 compared to 2019. This decline was important for France and Italy and more progressive for Germany and Spain. At the same time, Turkey multiplied by 3 its exports to reach 1,2Mt in 2020. During last quarter of 2020, global volume of exports came back to the second half 2019 levels. Exports during 2021 first quarter have decreased compared to the same period last year but they should improve in the coming months.

Sources: DsG, Customs data (based on BF Slag HScode261800 includes GBFS and GGBFS)

Main destinations
of top 6 exporting countries (BFS)



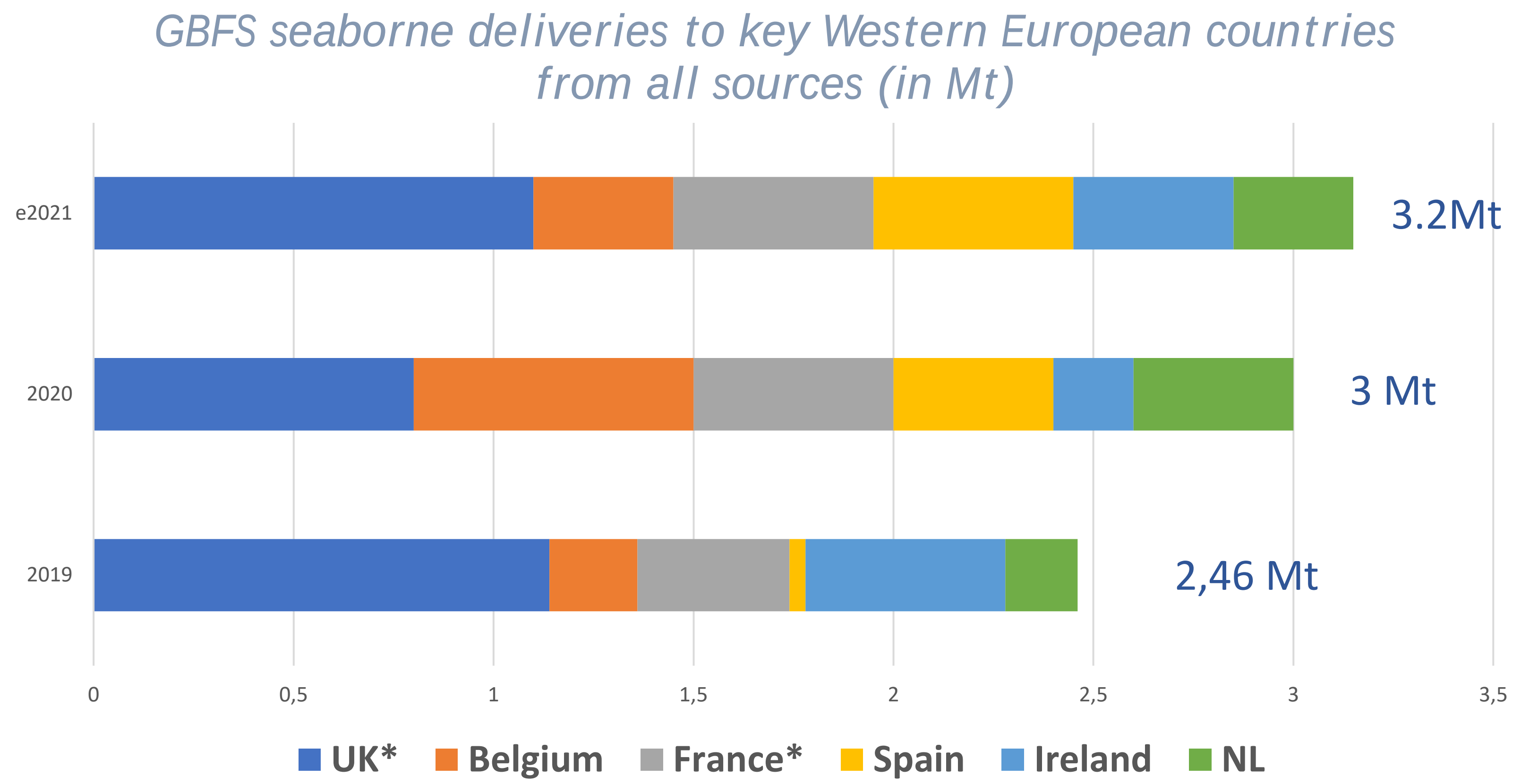
Comments

- Belgium led slag imports, with volumes increased last year compared to 2019.
- UK is still a key destination for slag, but imports decreased in 2020
- France also slightly decreased imports in 2020 compared to 2019 but imports increased with regards to 2018. This was due to the local shortage that happened with the closure of 50% of ArcelorMittal production capacity.
- Germany imported big volumes of GBFS also to compensate the domestic deficit.
- On the contrary, like UK, Ireland and Netherlands have decreased imports last year due to the contraction of construction activity. Euromed exports to the US have dramatically felt since 2018. Same situation for exports to African countries or Colombia.

- Globally, exports from Euro-med are concentrated on fewer destinations, mainly in Europe.

Sources: DsG, Customs data (BF Slag HScode2618 includes GBFS and GGBFS)

Expected evolution of GBFS seaborne deliveries (import + cabotage) to W. Europe*



Sources: DsG's estimates

***W. Europe = UK, Belgium, France, Spain, Ireland, NL*

Note that domestic seaborne deliveries are incl. in these figures for UK, France and Spain

Comments:

At the end of March 2021, we registered 0,8Mt of GBFS imported in main Western European countries. On the basis of our most recent data, we expect that GBFS imports at the end of 2021 could reach 3,2Mt and surpassed 2020 level.

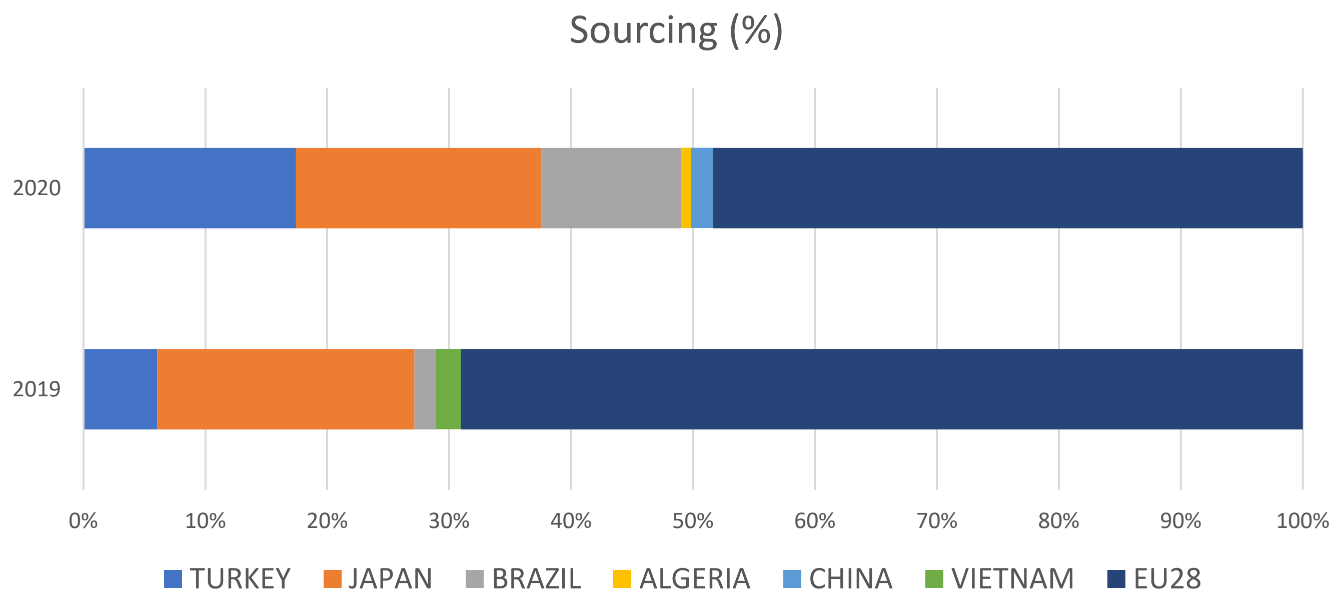
We note some differences among the importing countries. Since January, GB and Ireland have increased imports with regards to 2020 and this trend will be confirmed in the coming months. In the meantime, we observed a slowdown of imports in Belgium and Netherlands, maybe because the domestic steel producers in Benelux, but also in Germany, are again producing at full capacity and able to satisfy large part of the local demand.

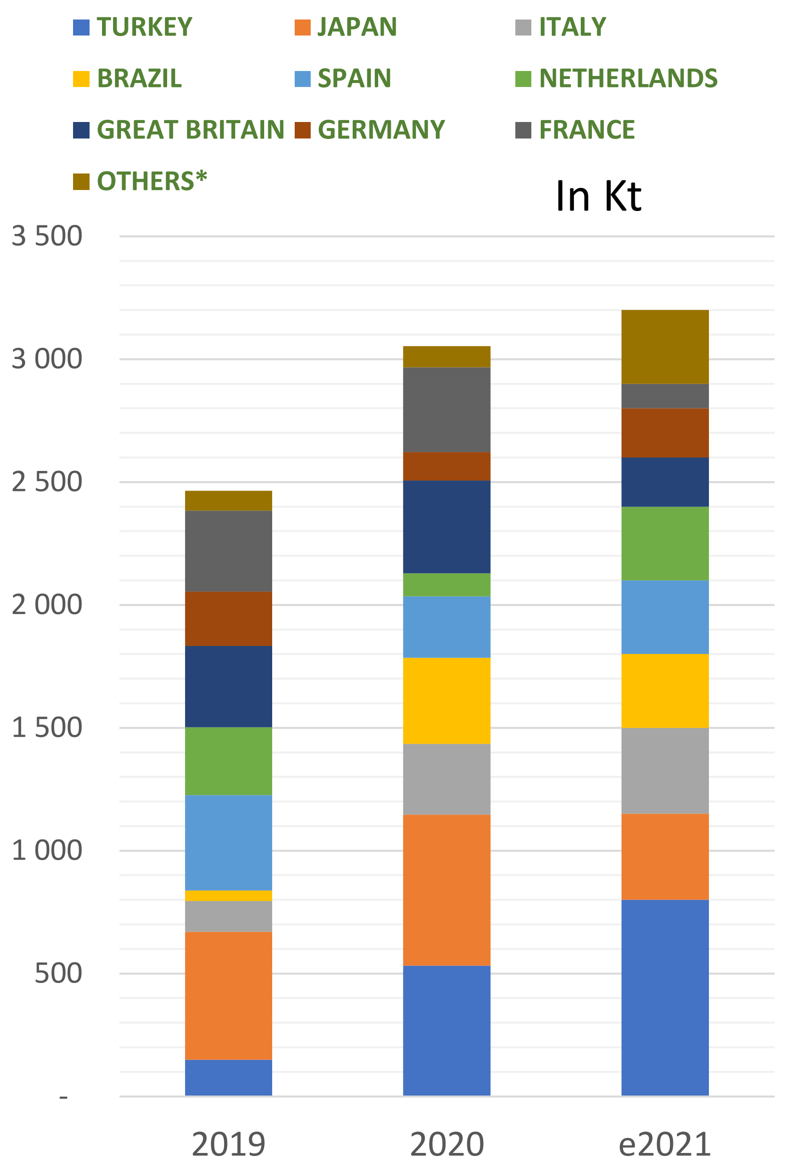
In France, the shortage that we faced last year seems to be partly solved with the restart of all ArcelorMittal blast furnaces. So, imports could remain steady and even slightly decrease. Spain registered increasing volumes of GBFS imports since last year and this situation will last all along the year.

The European market has been upset by covid consequences last year with several production capacity shutdowns. Shortage was experienced by most countries, putting pressure in supply and prices.

In 2021, we expect that the market will continue to be under pressure as the demand is increasing.

Non EU28 seaborne GBFS sourcing will continue to rise





- Non-UE GBFS sourcing increased since 2018
  - Between 2019 to 2020 from 31% to 52% or global imports in W. Europe
- Japan and Turkey are main non-UE suppliers of Western Europe. Both countries made up 70% of non EU28 imports last year.
- Alternative seaborne sourcing: Brazil (with increased volume since 2020), Vietnam, Algeria (spot shipments to Spain), China (spot shipment to NL) but also in the future India, Ukraine or S. Korea

Sources: DsG data & estimates (based on vessels' movements and customs data)
*Western Europe includes Belgium, France, Netherlands, UK, Spain and Ireland-
Others incl. China, Vietnam, Algeria, Finland.

2021 key trends for GGBFS seaborne trade in/out W. Europe

Supplier	Export country	Q1 2021 (Kt)	Q1 2020 (Kt)	2020 (Kt)	Var. vs 2020
Ecocem	France, Ireland, Netherlands	70	100	370	☹
Edersa (Tudela)	Spain	50	100	460	😐
LafargeHolcim	Germany	n/a	50	150	😐

- We estimate that the volume of GGBS seaborne deliveries was at about 1Mt in Western Europe last year. And we observed a decline by 11% since January 2021.
- Most GGBS importers in Europe are mainly located in UK but they have decreased their GGBFS purchase since last year. Scandinavian countries (mainly Sweden) are demanding markets and imports have increased to this area over last two years.
- In 2020, UK and Sweden represented abt 85% of global GGBS seaborne deliveries in Western Europe.

Comments:
From Spain, Edersa (the JV made between ArcelorMittal and Tudela Veguin at Gijon) leads by now GGBS export trade and, last year, thanks to the development of trade flows to new destinations like Ireland or France.
However, we can highlight the increasing position of Ecocem from its grinding units in France, Ireland and Netherlands in terms of production capacity. Ecocem has became the first European independent GGBFS supplier. They secure part of their production by exports to their own terminals located in UK (at Sheerness and Runcorn) and Sweden (at Gavle). Since January 2021, they seem to favor their domestic markets and thus, show lower availability for exports to third parties.
Another important GGBFS is LafargeHolcim who exports from Germany mainly to UK and Sweden. Last year, their exports decreased and could continue to decline in 2021.

Import country	Q1 2021 (Kt)	Q1 2020 (Kt)	2020 (Mt)	Var. vs 2020
UK	115	190	745	☹
Sweden	35	20	110	☺

Sources: DSG's estimates based on Vessel's movements and Customs data

What can we learn for 2021 ?

- The supply side will remain very tight even if the production in Europe came back to 2019 levels
- Non European sourcing, especially from Turkey will continue to rise
- Delivery prices to European countries are still very high favoring imports of cement & use of other domestic SCMs
- GGBFS Domestic production tends to remain in the country limiting seaborne trade
- Development of the demand for slag in low-carbon cement could create shortage of GGBFS in some countries and favour imports
- Long distance sourcing for GBFS and GGBFS impose another logistics
- Innovation must focus on the other slags optimization for cement & concrete production

- Multi-clients & customized market studies
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