

World Soda Ash Conference 2022

(Oct 11-13, Sorrento ITALY)



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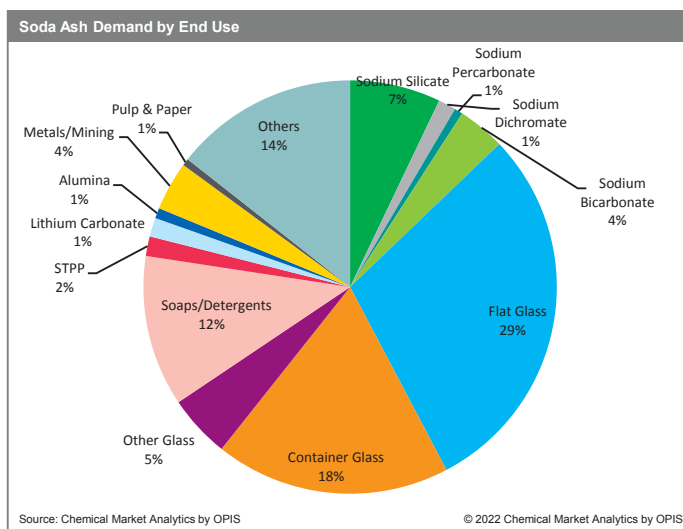
INTRODUCTION

The COVID-19 pandemic has been a defining event that has had massive repercussions both on our personal lives and from a commercial perspective. But just as many countries around the world were tentatively emerging from COVID-19 restrictions, a war broke out after Russia invaded Ukraine. After February 24th, a lot has changed in the World in the midst of escalating sanctions against the Russian state. The impact of yet another major event on the soda ash industry and many other industries has been significant.

Events in 2020 set the stage for where the soda ash industry is today. Soda ash is used as a raw material in the production of a number of basic goods such as architectural and automotive glass, glass packaging, sodium silicates and soaps and detergents, as well as a number of other smaller applications. As such, the temporary closure of large sections of many economies, in a bid to tame the spread of COVID-19 across the world, had a significant negative impact on demand. Despite some end use sectors faring better than others, overall demand for soda ash fell by about 5.5%, year-on-year, or a loss of 3.4 million mt. This was though followed by a strong recovery in 2021 with growth of about 8.2%, or 4.9 million mt. As such, demand in 2021 exceeded pre-COVID levels. Our expectation for 2022 was that growth would continue but we were aware that soda ash capacity was

in decline with the total world capacity this year about 1.0 million mt less than the total in 2020. As such, we were anticipating tight market conditions this year. This has proved to be the case, but in fact, conditions are even tighter than anticipated following Russia's invasion of Ukraine.

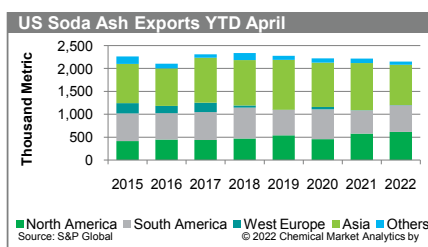
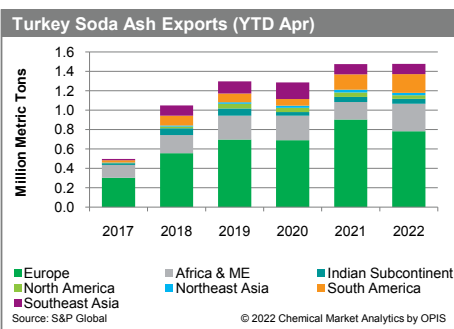
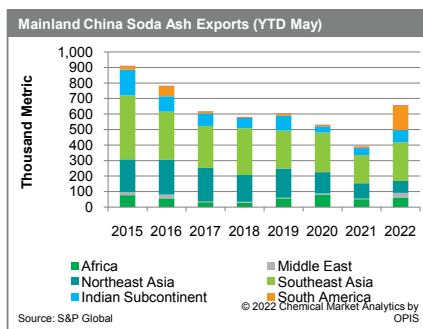
Contextually, Russia is not a significant player in the world soda ash market, even less so Ukraine. Russia accounted for 4.3% of world soda ash demand in 2021 and Ukraine just 0.4%. The Russia/CIS region is traditionally quite self-contained and while Russia is a fairly significant exporter of soda ash, with volumes in the past three years averaging 720,000 mt, exports are primarily to countries within the CIS region. In 2021, 84% of Russian soda ash exports were delivered within the CIS, and 68% in 2020. However, in today's market, when soda ash is extremely tight, diminishing exports from Russia places additional pressure on markets like the Indian Subcontinent and Africa, which traditionally purchase regular small spot volumes from Russia. None-



the-less, while there has been some impact from the conflict on soda ash trade the main influence of the war in Ukraine is on energy prices and at times energy availability.

TRADE

Trade is very important for the soda ash industry given that about a quarter of soda ash produced is shipped to another part of the world to be consumed. The US is by far the world's biggest exporter accounting for about 40% of world trade, followed by Turkey in 2nd place with about 27%. China and Bulgaria vie for 3rd place due to the fact that Chinese export volumes can swing significantly from year to year. Chinese exports can switch from over two million in a year to under one million mt, as was the case last year. The Black Sea, is an important trade route for soda ash. Exports from Bulgaria via the Black Sea are at risk due to the Russia/Ukraine conflict, as well as imports



from Turkey to Central Europe via the same route.

The trade patterns so far this year also help explain the global market tightness. To date exports from key sources are up by just 5% or 243,000 mt which is mainly due to increased availability from China. Exports from the US, to date are down by 3% or 66,000 mt, year-on-year, and exports from Turkey are flat, year-on-year. Another interesting observation in terms of trade is that for China the biggest increase in exports has been to South America, which is not a traditional destination for Chinese product. China's exports to the region to date have totalled 123,000 mt, while in January-May last year the total to South America was just 7,000 mt. A lack of spot availability in South America has encouraged this shift in trade from China.

ENERGY/RAW MATERIALS

The Russia/Ukraine conflict is having a major impact on energy prices, especially in Europe. Energy availability can also be an issue. In Europe, soda ash plants typically use either coal or natural gas as energy sources. In addition, for the synthetic Solvay soda ash process, either anthracite and/or coke are used to provide an energy

source for limestone decomposition, as well as generating additional CO₂ required for the production process. We understand that typically more anthracite is used in Europe rather than coke because it tends to be cheaper.

Russia accounts for about 40% of West/Central Europe's natural gas supply. In addition, Russia is responsible for about 81% of global anthracite exports, 13% of global coke exports and about 16% of global seaborne thermal coal exports.

Soda ash production in West/Central Europe has been impacted indirectly by the conflict because of energy related issues which has at times forced producers to declare force majeure. The European Union, has a ban in place on coal imports from Russia which becomes fully effective from the 2nd week in August. As a consequence a number of plants are expected to switch from anthracite to coke. In addition, the availability of coal/coke/anthracite, on top of likely continued high prices, will maintain pressure on the region.

In addition to energy related operational issues the industry has also been plagued by plant problems and not just in Europe. Two US producers have had to declare force majeure while there have also been plant issues in Argentina and Botswana. In addition, the largest soda ash plant in Iran has recently suffered from a fatal accident.

PRICES

Chinese export prices fell considerably in 2020, this put pressure on other exporters to lower prices especially when annual 2021 contracts come up for renewal. This year we see very different market dynamics with record high prices being recorded worldwide. Tracking China's export prices provides a good barometer of the trend in global pricing. In August 2020, in the midst of the COVID-19 pandemic, China's export price average \$161 per mt FOB while in May this year export prices from China averaged \$405 per mt FOB.

CAPACITY PLANS

In the second half of 2019, a number of capacity expansions were announced, as soda ash demand in the medium term was expected to steadily increase. Much of that extra capacity was planned for the US and scheduled over the 2021-2022 time period, with further expansions due to come on stream in 2025.

However, since then, as mentioned, the soda ash market saw a major impact from COVID19 with a drop in both demand and prices. In response, soda ash producers were also forced to rethink their future plans. The US producer Genesis Alkali idled its trona based plant, located in Granger Wyoming, in April 2020. Meanwhile, the expansions announced in late 2019 were pushed back. These included a 600,000 mt expansion by Solvay scheduled for the end of 2021, a 1.0 million mt expansion by Ciner (now Sisecam Wyoming) planned for 2023 and a 680,000 mt expansion by Genesis Alkali, planned for Q2 2022. These expansions were also due to be followed in 2025 by the opening of two new plants in the US by Ciner/Sisecam (now majority owned by Sisecam), each with a capacity of 2.5



million mt. Genesis is now the first set to bring on stream additional capacity, which is scheduled for early/mid next year and includes the restart of Granger. All other projects have been delayed to the 2024/2025 time period, or even later.

Soda ash capacity in China has been in decline since 2021. Nonetheless, there are ambitious expansion plans for China. These plans though are dominated by one single project, a huge natural soda ash plant in Inner Mongolia. Phase I of the Inner Mongolia project is set to have an annual capacity of around 5.0 million mt. This was to come on stream by mid this year but was delayed until July 2023. However, the exact scope of phase I of the project, including its timing and initial size are being widely debated, even locally in China. Meanwhile, there's little capacity scheduled to be added outside the US and China.

DEMAND DRIVERS

A prolonged Russia/Ukraine conflict, is likely to lower soda ash demand growth over the medium term as a result of slow down in global economic growth and demand destruction in the conflict region. However, with

the exception of the CIS region, any significant demand erosion has not been noticed yet. Glass plants across the world, including in West/Central Europe appear to be operating at full capacity with demand said to be robust. There is though concern about very high stocks of flat glass in China. Meanwhile, one demand category which may be less influenced by economic factors, and thus cushion the blow from slower economic growth, is the environmental category. These sectors of demand include lithium carbonate, solar glass, and sodium bicarbonate which were each immune to the negative impacts of the COVID-19 pandemic.

Solar glass has the potential to provide significant new demand for soda ash. In the wake of the war in Ukraine, the shift to green energy is no longer just about environmentalism, it is also now about energy security. This global trend will accelerate the use of solar power in the coming years and hence, it will create additional demand for solar glass. China is dominating the PV (photo voltaic) and solar glass space. Chinese solar glass capacities under planning would alone consume

something like an additional 20 million mt per year of new soda ash demand if approved. Such glass proposals do seem excessive, and much more than the PV industry appears to require, nonetheless, it indicates the opportunities and also the lack of transparency in terms of what this ultimate demand opportunity may be. India also has ambitious expansion plans for solar glass and thus soda ash.

Lithium carbonate, a key component in some batteries, is also supporting growth in soda ash demand, especially in South America. Sodium bicarbonate also has a growing environmental application, which is for flue gas desulphurisation.

CONCLUSION

It is clear that the soda ash market has seen extreme volatility in the recent past and that it faces both opportunities and also likely some challenges ahead as well.

To get further insight into the outlook for soda ash please join us at our forthcoming conference. Chemical Market Analytics by OPIS, a Dow Jones Company (formerly IHS Markit), is hosting its **annual World Soda Ash Conference on the 11th to the 13th of October**. This year's conference will be held in person in Sorrento, Italy, and will include speeches from some of the industry's leading companies, as well as experts from Chemical Market Analytics.

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