

A global overview of the soda ash market

Marguerite Morrin* discusses how recent global events have impacted the soda ash market.

The Covid-19 pandemic has been a major shock to the global system and defined by some as the most significant event in the 21st century. It has had often devastating consequences for our personal as well as professional lives. The soda ash industry has not been immune. Soda ash is a very basic chemical product with glass being the single biggest end use application, accounting for over half of total world demand.

Other important sectors of demand include soaps and detergents, sodium silicates and metals and mining. When large sections of many economies were temporarily closed, in a bid to tame the spread of Covid-19 across the world, this had a substantial negative impact on demand.

Despite some end use sectors faring better than others, overall demand fell by about 5.5%, year-on-year in 2020. This was followed by a strong recovery in 2021 to the extent that demand in 2021 exceeded pre-Covid levels. Our expectation for 2022 was that growth would continue. We were aware though that total world soda ash capacity was in decline with the total 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 to date have been even tighter than anticipated after yet another major world event occurred when Russia invaded Ukraine in February (Fig 1).

Russia in itself is not a significant player in the global soda ash market accounting for just 4.3% of world demand and Ukraine even less significant at just 0.4% of the world total. The CIS (Commonwealth of Independent States) region is in fact quite self-contained. And while Russia is a major soda ash exporter, with exports averaging 720,000 mt per year in the past three years, these volumes are mostly destined for countries within the region. However, in today's market when soda ash has been extremely tight, diminishing exports from Russia places extra pressure on markets like the India Subcontinent and Africa, which traditionally purchase regular spot volumes from Russia. We have very recently seen some renewed export activity from Russia, at fairly competitive prices, although to date the volumes have not been significant. However, while there has been some small impact from the Russia/Ukraine conflict on soda ash trade, the main influence of the war is on global energy prices and at times energy availability.

Trade

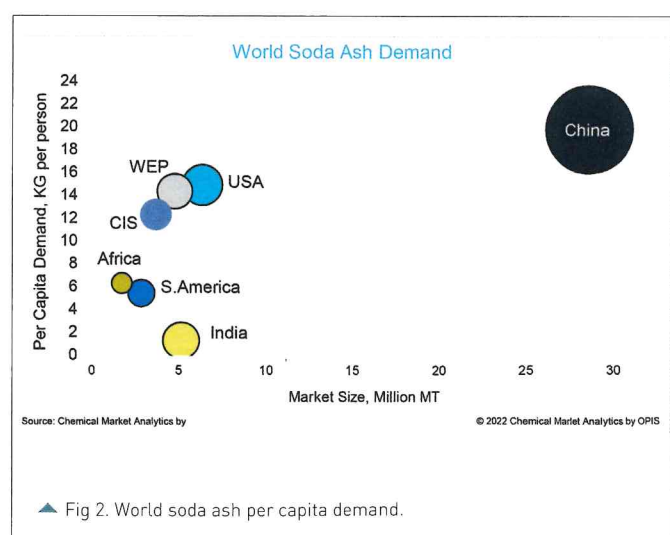
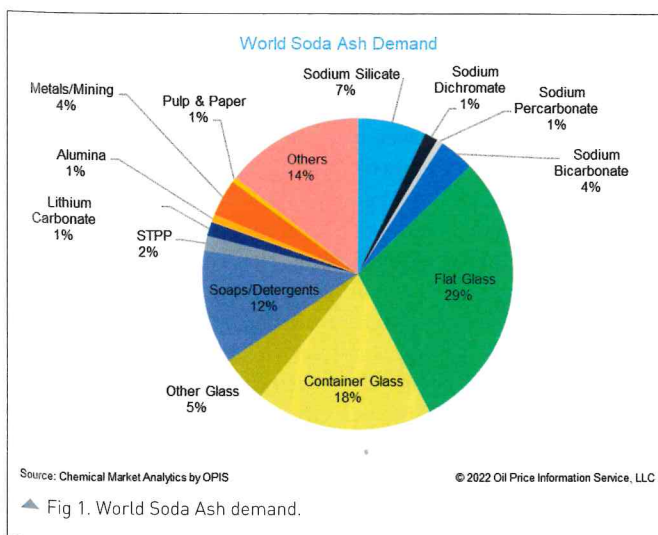
In the soda ash industry a lot of product is shipped from where its produced to a different destination to be consumed, in fact about a quarter of production is moved to another region to be consumed. As such trade developments are very important for the industry.

The US is the single biggest exporter in the world followed by Turkey in 2nd place. 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 mt in a particular year to under one million mt in another year, 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. To date there has been no known impact on trade via this trade route (Fig 2).

The trade patterns so far this year help explain the global market tightness. Logistical constraints, delayed vessel departures, port congestion, inland

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Soda Ash Exports, YTD

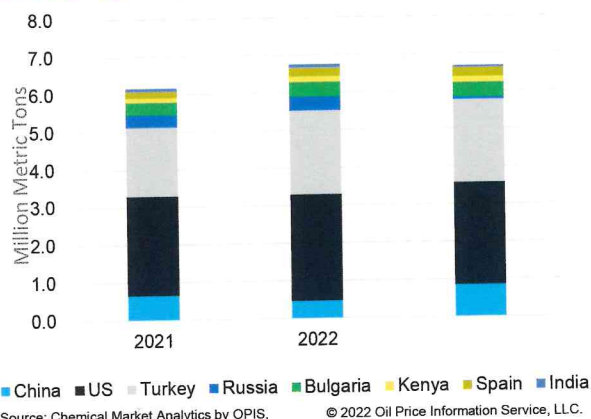


Fig 3. Soda ash exports, YTD.

Mainland China Export Destinations (YTD Jun)

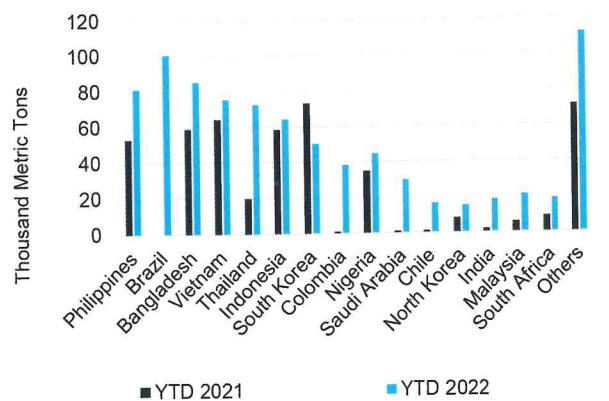


Fig 4. Mainland China export destinations, (YTD, June).

Soda Ash Fuel Sources

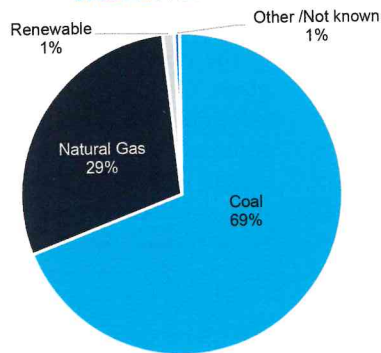


Fig 5. Soda ash fuel sources

trucking issues and also various soda ash operational issues have slowed the growth in trade. To date exports from key sources are up by just 4% or 257,000 mt, year-on-year, which is mainly due to increased availability from China (Fig 3). Exports from the US, to date are down by 4% or 113,000 mt, year-on-year, and exports from Turkey are down by 1%, 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 (Fig 4). China's exports to the region to date have totalled 196,000 mt, while in January-June last year the total from China to South America was just 12,000 mt. In fact, in the first half of this year Brazil was the single biggest export destination for China. A lack of spot availability in South America has encouraged this shift in exports from China.

Energy

The Russia/Ukraine conflict is having a major impact on energy prices, especially in Europe. Energy availability can also

be an issue. Soda ash plants typically use either coal or natural gas as energy sources with natural gas taking a bigger share than coal in West Europe (Fig 5).

In addition, for the synthetic Solvay soda ash technology, either anthracite and/or coke are raw materials for the production process.

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 became 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.

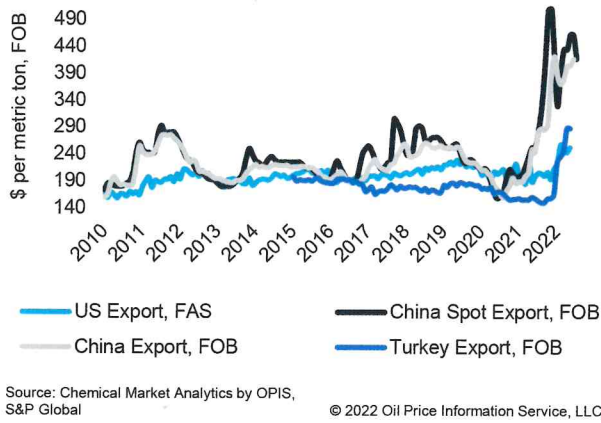
In addition to energy related operational issues the industry has also been plagued by plant problems. Two US producers have had to declare force majeure while there have also been plant issues in Argentina and Botswana. In addition, the largest soda ash plant in Iran had to temporarily shut recently following a fatal accident at the plant.

Prices

Tracking China's export prices provides a good barometer of the trend in global pricing. Chinese export prices fell considerably in 2020, in August 2020, in the midst of the COVID-19 pandemic, China's export price average \$161 per mt FOB. This weakness in China 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 globally. In June this year export prices from China averaged \$417 per mt FOB, the highest export price on record (Figs 6 and 7). We are though recently seeing some weakness in China, both in the domestic market and also export prices. Freight rates have also softened which supports lower spot prices on CFR basis. It's too early to understand if this recent softness in China is a temporary correction, or more of a structural change, and as such to understand the impact that this may have on other regions. At the same time though, producers in many parts of the world are dealing with historically high cash costs with little prospect that these costs will ease any time soon which will also underpin pricing going forward.

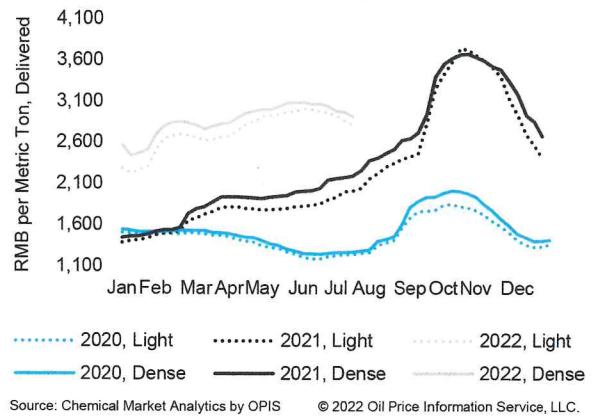
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Soda Ash Export Price Comparison



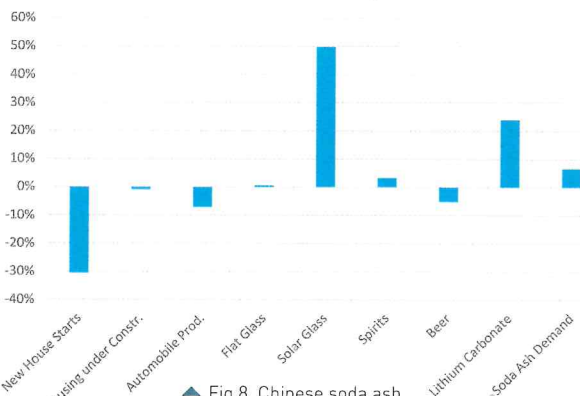
▲ Fig 6. Soda ash export price comparison.

Chinese Weekly Soda Ash Prices (including VAT)



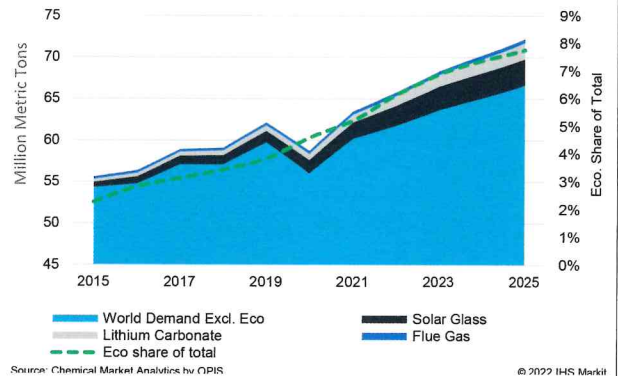
▲ Fig .7 Chinese weekly soda ash prices (including VAT).

China Soda Ash Demand Indicators, YTD May



▲ Fig 8. Chinese soda ash demand indicators, YTD May.

Demand from Environmentally Driven Sectors



▲ Fig 9. Demand from environmentally driven sectors.

Capacity plans

In recent decades China has dominated capacity expansions and since 2000 has built around 22 million mt of new capacity, which was primarily to meet its own rapidly growing domestic demand. However, the pace of expansions in China has slowed recently. This slowdown in expansions in China has been accompanied by renewed interest to build capacity in other parts of the world. 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.

This time 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 the soda ash market saw a major impact from Covid-19 with a drop in both demand and prices. In response, soda ash producers were also forced to rethink their future plans.

In April 2020, the US producer Genesis Alkali idled its trona based plant, located in Granger Wyoming. Meanwhile, the expansions announced in late 2019 were pushed back. These included an expansion by Solvay scheduled for the end of 2021, Genesis Alkali, planned for Q2 2022 and Ciner (now Siseam Wyoming) planned for 2023. These expansions were also due to be followed in 2025 by the opening of two large greenfield projects in the US by Ciner/Siseam (now majority owned by Siseam). Genesis is now the first US producer set to bring on stream additional capacity, which is scheduled for early/mid next year and includes the restart of its idled capacity in Granger as well as the addition of new capacity. 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. None-the-less, there are ambitious expansion plans for China. However, these plans 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, outside of the US and China, there are also projects underway in a few other regions, albeit on a smaller scale, including in Saudi Arabia, Turkey and India.

Demand drivers

A prolonged Russia/Ukraine conflict is likely to lower soda ash demand growth over the medium term, as a result of a slowdown 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 around 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. This sector of demand includes lithium carbonate, solar glass, and sodium bicarbonate which were each immune from the negative impacts of the Covid-19 pandemic.

Solar glass has the potential to provide 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 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 while Southeast Asia has become a bit of a hub for this type of glass.

Lithium carbonate, a key component in some batteries, is also supporting growth in soda ash demand, especially in South America but in China as well. Sodium bicarbonate also has a growing environmental application, which is for flue gas desulphurisation (**Figs 8 and 9**).

Summary

Soda ash demand recovered well as Covid-19 restrictions eased with demand to date being strong across most key regions. However, the situation in China, the biggest soda ash market in the world is mixed.

In addition, while demand in general in the rest of the world has been strong, some companies expect a challenging environment in the second half of the year and into 2023, due to inflation and macroeconomic uncertainty

From the supply side there is also uncertainty. Supply issues have been problematic to date with the potential for further disruptions, especially in Europe due to its reliance on Russian coal and natural gas.

In terms of prices, we have seen record high soda ash prices across the world and acute shortages, in some cases undermining demand.

Recently though there has been some softness in prices in China which could spill into other markets. Cash costs though in most parts of the world remain extremely high with no ease in sight.

As such, the outlook is mixed with clearly some clouds on the horizon.

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 October 11-13. The conference will be held in person in Sorrento, Italy, and include speeches from the industry's leading companies, as well as experts from Chemical Market Analytics. ■

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