



REGIONAL FOCUS

STST – SUA

LATIN AMERICA – review and outlook

LatAm offers support amid a year of uncertainty in 2021

Latin American sulphuric acid imports and tonne miles declined in 2020, but numbers were driven lower mostly by a normalisation in Chilean consumption, rather than weaker demand.

The outlook for 2021 is more upbeat with Chilean imports to return to the five-year average of 2.5mn t/yr and we believe levels will hold steady around 2.3-2.5mn t/yr in the medium term, especially considering firmer copper prices.

In the longer term, Chile is set to reduce its demand in line with the depletion of the acid-consuming oxide layer with steady production of smelter acid, provided no new investments are bought onstream.

The biggest changes to the Latin American sulphuric acid market this year and in the near term will come from Peru and Mexico as new oxide deposits commence production, and sulphur availability remains short.

In Peru, Marcobre's Mina Justa copper mine and leach operations are due to begin commercial production this year, with the first delivery of acid arriving in February, 2021 to San Juan de Marcona.

Sulphuric acid demand from Minta Justa is expected to reach 200,000t/yr in the first full year of operation before ramping up to average around 410,000t/yr.

This, along with new projects will reduce the volumes moving from Peru to Chile and increasing the reliance on acid from the Far East, and in turn lifting tonne mile demand.

Despite Brazil and Argentina's significant appetite for fertilizers, there is little in the way of game-changing capacity expanding investments on the horizon.

We expect demand to be stable to slightly firmer, with some uptick in Brazil, but the markets will remain the domain of European suppliers, barring significant volatility in either freight or FOB levels, in Asia.

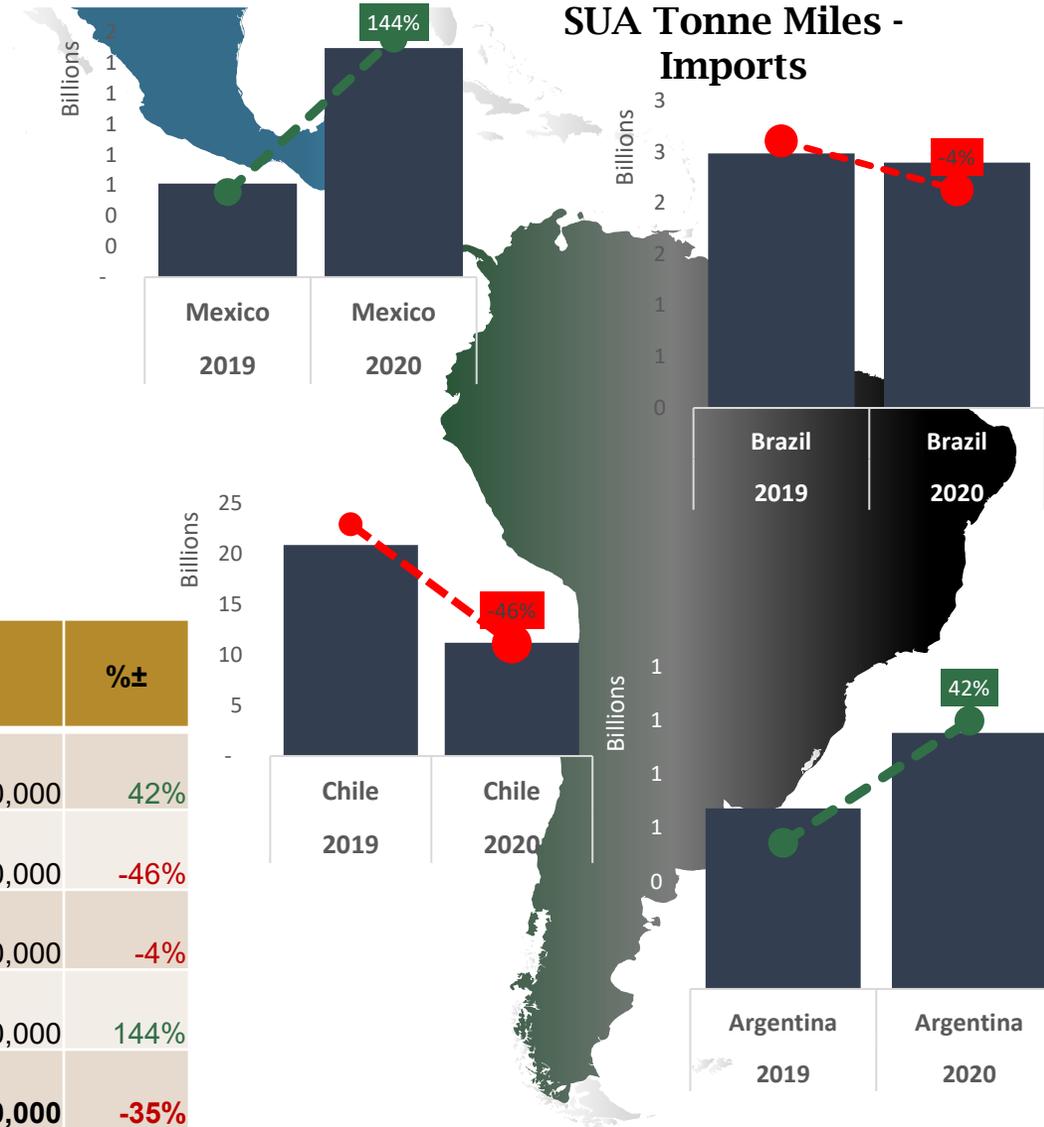
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**Limited
SUA
availability
& copper
demand
will lift
tonne
miles in
2021**
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Key market drivers in 2021 and beyond

- ▲ Chile will need to import more from Asia to replace Peruvian tonnes with higher tonnes miles until the currently developed Chilean oxide layers are depleted
- ▲ Peruvian trade flows to change as domestic projects come online in mid 2020s.
- ▲ Mexico imports determined by sulphur availability in the short-term but new oxide projects could bolster demand in the mid-term
- ▲ Brazil and Argentina stable to firmer with some projects in the mid-term

SUA Imports	2019 <i>*rounded 1000</i>	2020	%±
Argentina	110,000	126,000	15%
Chile	3,527,000	2,451,000	-31%
Brazil	474,000	468,000	-1%
Mexico	101,000	204,000	102%
Total	4,208,000	3,264,000	-22%

SUA Tonne Miles - Imports	2019 <i>*rounded mn</i>	2020	%±
Argentina	674,000,000	956,000,000	42%
Chile	20,893,000,000	11,221,000,000	-46%
Brazil	2,488,000,000	2,397,000,000	-4%
Mexico	613,000,000	1,498,000,000	144%
Total	24,800,000,000	16,071,000,000	-35%



Chile



- ▲ Mantos Copper extends life of Mantoverde's oxide deposit



- ▼ BHP's Cerro Colorado to close by 2023 decreasing acid demand
- ▼ Civil unrest followed by covid has limited capex and investments in existing and new mines
- ▼ Codelco's Las Ventanas closure timeframe undetermined



Freight forecast: FE-Chile demand offers support due to the replacement of Peruvian tonnes: high-\$50s/low-\$60s/t

Chile - Trade/volume update

Chile imported 2.4mn t in 2020, returning to a normal deficit despite workforce reductions of up to 30pc across many sites and smelters as the country undertook measure to curb the spread of covid.

But the sudden mine workforce reductions and curbs on the movement of workers resulted in volumes building in Mejillones, and traders were forced to divert vessels already on the water in April and May.

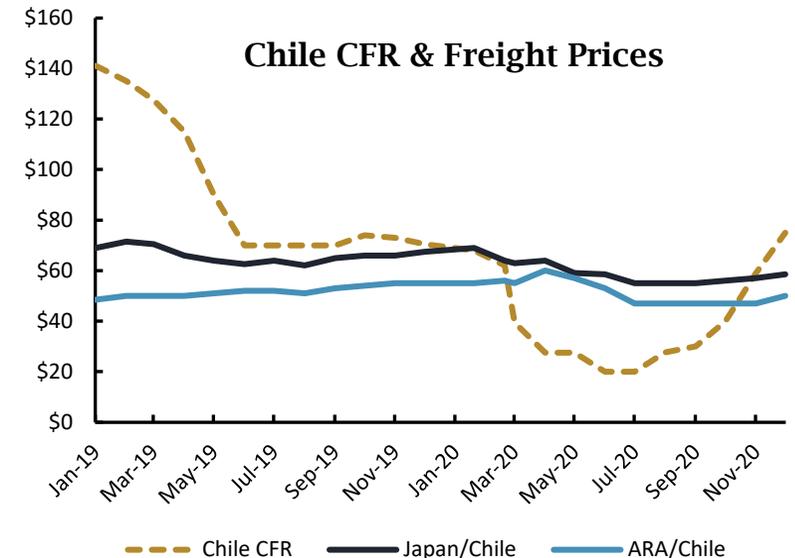
This in turn closed the arb from the Far East for much of 2020 as CFR sulphuric acid prices languished in the mid-\$20s/t CFR and cargoes were diverted to India and the US.

The decline of demand from 2019 to 2020 must be read in context of the large domestic maintenance campaign to bring smelters up to new environmental standards – which resulted in a larger import deficit in 2019 and poses a correction to normal levels rather than an indication for steady decline.

The tonne mile reduction of almost half - while import volume were 'only' down by one-third was indicative of Far East volumes taking the greatest hit for delivered volumes while Peruvian trade stayed steady and therefore had a significant impact on tonne mile demand.

Despite a difficult year the indicators remain positive for Chile in the short to medium term – as existing mines in Chile continue to operate until the late 2020s – and there remains potential for existing operations to announce new or increased project lifespans.

Tonne miles should also increase to Chile as Peruvian volumes stay in the domestic market as new oxide mines in the region come onstream, and Chile increases its reliance on Asian volumes to meet its deficit.



Chile – New projects pipeline limited, but long-haul demand to remain

While Chile has long been the darling of Latin America for corporate investment, few companies have committed capex to existing or new operations since civil unrest erupted in late 2019.

The recent surge in copper prices may have investors revising their numbers, but just one expansion project has been recently announced.

Mantos Copper secured \$846.6mn in financing to fund the development of Mantoverde’s sulphide development project, which will also increase the operation of its oxide deposit until 2041. The leach operations consume around 200,000t/yr of acid.

Upon completion Mantoverde will produce an average of 110,000t/yr of copper from 2023 to 2030.

The financing – announced in February - secured via debt and a 30pc equity issuance to Mitsubishi Materials Corporation (MMC) - will result in the construction of a copper concentrator and associated facilities to process the sulphide deposit.

The acid-consuming oxide deposit has been in operation producing cathode for 25 years.

According to Mantos Copper, the financing is the largest mining project completed since the onset of covid.

Two other previous announcements will have varying impacts on domestic balance. Codelco flagged in late 2019 its plans to close the Las Ventanas smelter with it struggling with environmental measures and profitability.

But the group fell silent on a proposed timeline for its closure in the wake of the civil unrest. The smelter can produce around 600,000t/yr of sulphuric acid.

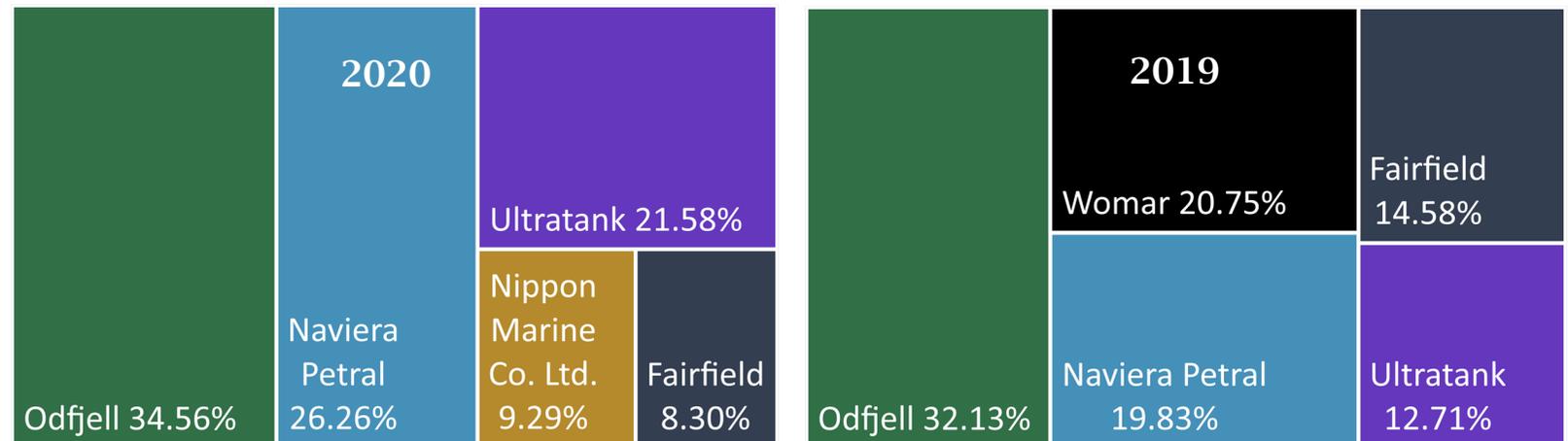
Codelco renewed a labor deal with the Ventanas division for three years from February 2021 – with any closure not likely before the expiry of agreement with the divisions’ unions.

Codelco said in its full year results released in late February it recorded an 8.6pc drop in direct cash costs to \$1.294/lb, attributed to lower input prices and a stronger peso.

Despite covid restrictions copper sales increased by 1.5pc year-on-year, with Ministro Hales, Andina, Chuquicamata and Salvador mines, making up for declines in other divisions.

Anglo-Australian miner BHP announced in July 2020 it would reduce operations at Cerro Colorado until the end of its environmental license in 2023, when it will close the SX-EW site, reducing acid consumption by more than 300,000t/yr at its full capacity.

Chile imports by carrier *inc cabotage & Peru deliveries*



Brazil



▲ Fertilizer capacity increase to lift demand

▲ Investments in tank facilities in the mid-term



▼ Political uncertainty and financing



Freight forecast: ARA-Brazil volatility to remain but bunker prices bring upward pressure: low/mid \$30s/t

Brazil - Trade/volume update

Brazil's overall imports were flat on the year, at 468,000t, with consumption holding well and with limited covid disruptions but tonne miles fell as regional supplies entered the market.

European volumes lost market share, down by 7pc on the year at 75pc of total receipts.

Regional volumes competed for outlets as cargoes were diverted from Chile as consumption dropped in the country as covid curbs limited the output of many acid consuming sites.

Freight tax advantages for Latin American product added to the attractive FOB prices on offer and Brazil took receipt of cargoes from Chile and Peru, as well as its regular Mexican volumes.

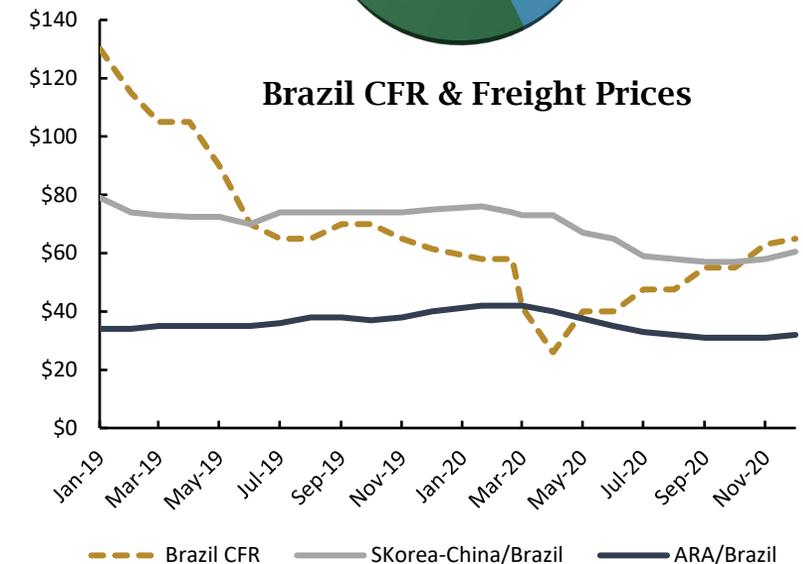
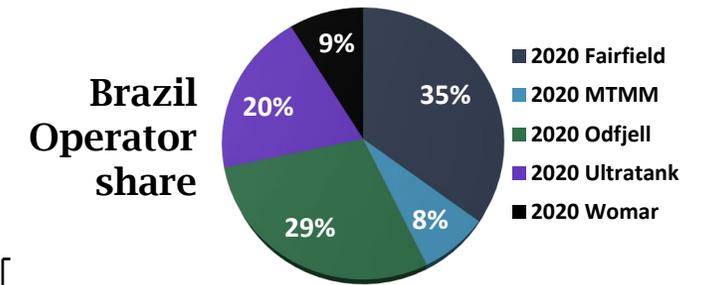
Freight rates from the Continent-Brazil weakened as 2020 progressed, with 1:1 basis done in the very high-\$30s/t early in the year, drifting to the low/mid-\$30s/t by year end, and 1:2 basis unable to lift above the mid-\$30s/t.

Fairfield was the predominant owner operating to Brazil in 2020 with 35pc of all shipments, reflecting Trammo's dominance in the market, but Ultratank increased its presence with the movement of regional tonnes.

The demand of tonnage in the next years will be determined by spot acid pricing.

Brazil and Argentina are mostly at the mercy of European prices, with the majority of business done on a spot basis.

Asian tonnes have become more prevalent in Argentina, but the arb is dependent on an imbalance of either very low Asian FOB prices coupled with low freight rates in the East, or severe tightness from Europe.



Brazil - Opportunities as upgrades and projects come to fruition

Positive signals are emerging from Brazil for increased sulphuric acid import demand, from both the fertilizer and chemicals sectors.

Timac Agro won an auction for the 7,932m² MAC10 terminal at the port of Maceio in Alagoas, state and will construct a sulphuric acid tank and adjoining facilities at the site.

Adjacent MAC13 terminal also went to tender last year, with it to handle sugar, and potentially molasses.

The region has existing chlor-alkali production in the Alagoas Chlorochemical Complex and is undergoing further investment with Braskem and Chemetry building demonstration plant to produce ethylene dichloride (EDC) and caustic soda by end 2022, alongside Braskem's existing chlorine and caustic soda unit located in Maceio.

Timac currently imports to Aratu, around 500km south of Maceio, and also Rio Grande further south again.

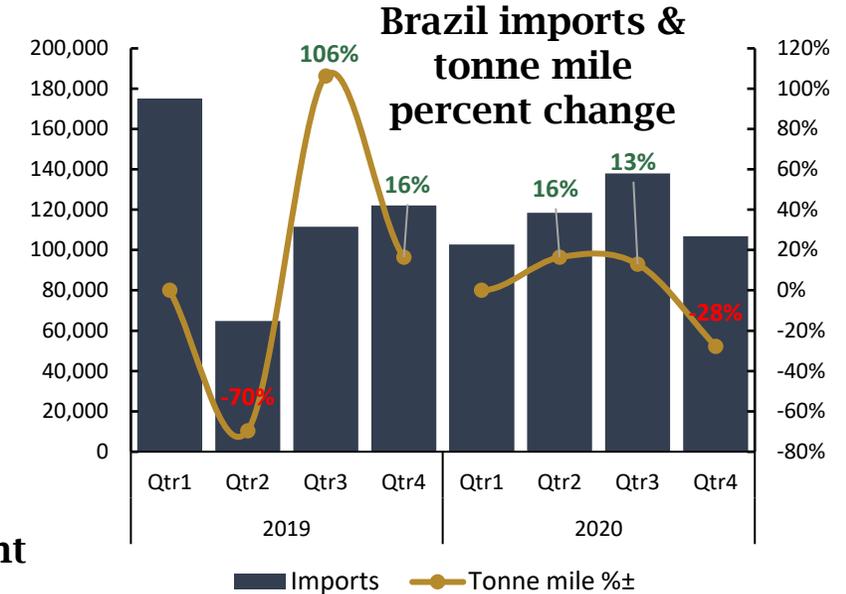
No specification on tank size or construction timeline were given. It produces phosphate fertilizers at the Maceio site.

Yara undertook expansions on its Rio Grande NPK plant which is expected to require greater volumes of

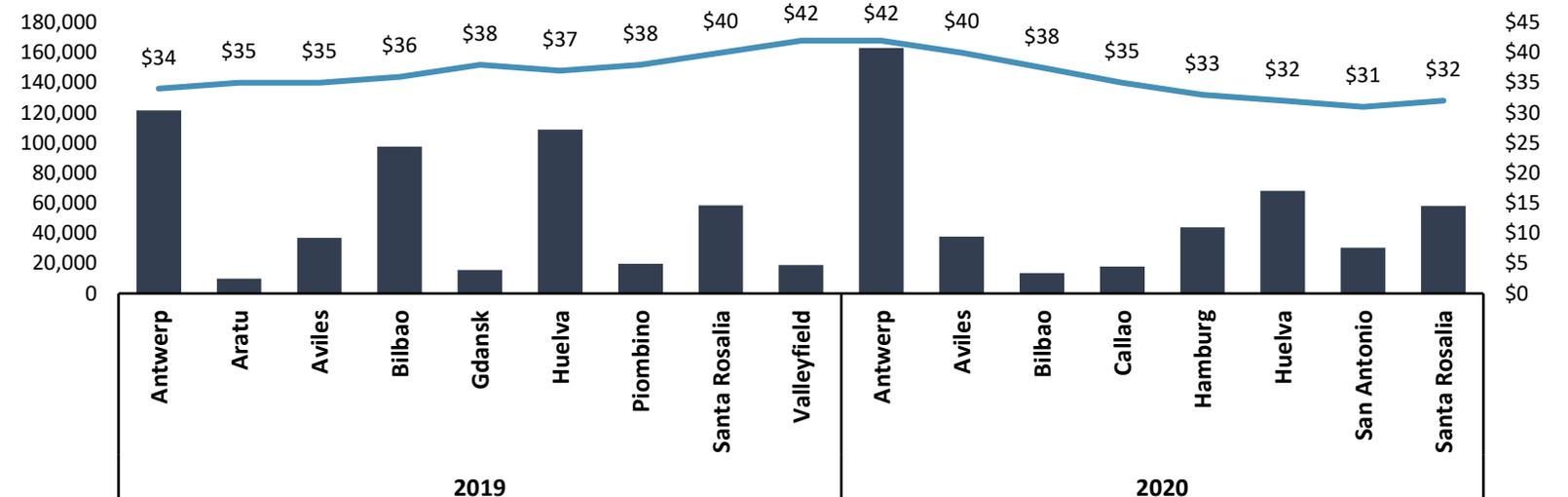
acid to the site, but there is yet to be a noticeable uptick in volumes to the buyer.

Unigel took a 10-year lease on Petrobras' Fafen (BA) nitrogen unit in Camacari state.

But the Fafen (SE) unit in Sergipe state, which until 2015 required regular acid imports via Barra dos Coqueiros for ammonium sulphate (AS) production remains mothballed owing to high domestic gas prices. Unigel remains a regular importer to Aratu.



Brazil load ports and ARA-Brazil 1:1 freight



Mexico



- ▲ Mexico tonne/miles increase as cabotage drops off
- ▲ Tightness in sulphur market drives imports
- ▲ US to import more phosphates from Mexican and regional markets
- ▲ Two new greenfield oxide deposits under consideration



- ▼ Political uncertainty and financing



Freight forecast: FE-Mex preferred by parcel carriers over destination FE-Chile for USG route – with discount over Chile freight increasing. Unlikely to lift further: mid-high \$40s/t

Mexico - Trade/volume update

Mexican imports doubled in 2020 to more than 200,000t, and with it, lifting tonne miles considerably.

Demand from Innophos at Coatzacoalcos - due to limited local sulphur availability - drew cargoes from the Continent and the Med, with 2021 fixtures lifting as far afield as Asia.

Ameropa booked MOL's Niesko Galaxy ex-Zhangjiagang for late December 2020 laycan in the mid/high-\$40s/t. The long-haul trade demonstrated the tightness in the SUA market in late 2020 and early this year.

Vessels with laycans during the fourth quarter loading in the Baltic and the Med for delivery to Coatzacoalcos were booked with Fairfield from the low to high-\$30s/t for 19,000t stems.

Overall arrivals to Lazaro Cardenas were flat on the year at 221,400t, (including cabotage volumes) but tonne miles improved as northeast Asia supplied more than half of the total.

Stolt and Fairfield were the largest carriers by volume for imports with Stolt active on the FE-Lazaro Cardenas route to bring ships back to the USG, while Fairfield took a mix of east and west coast voyages.

For exports Womar increased its share, in part due to the Chembulk placing its vessels into the Womar

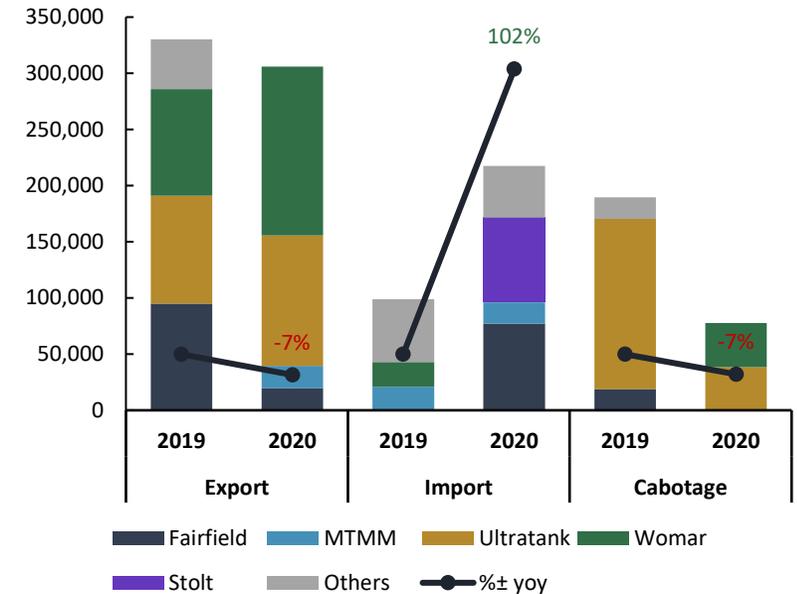
pool, but mostly due to the re-routing of volumes away from Chile.

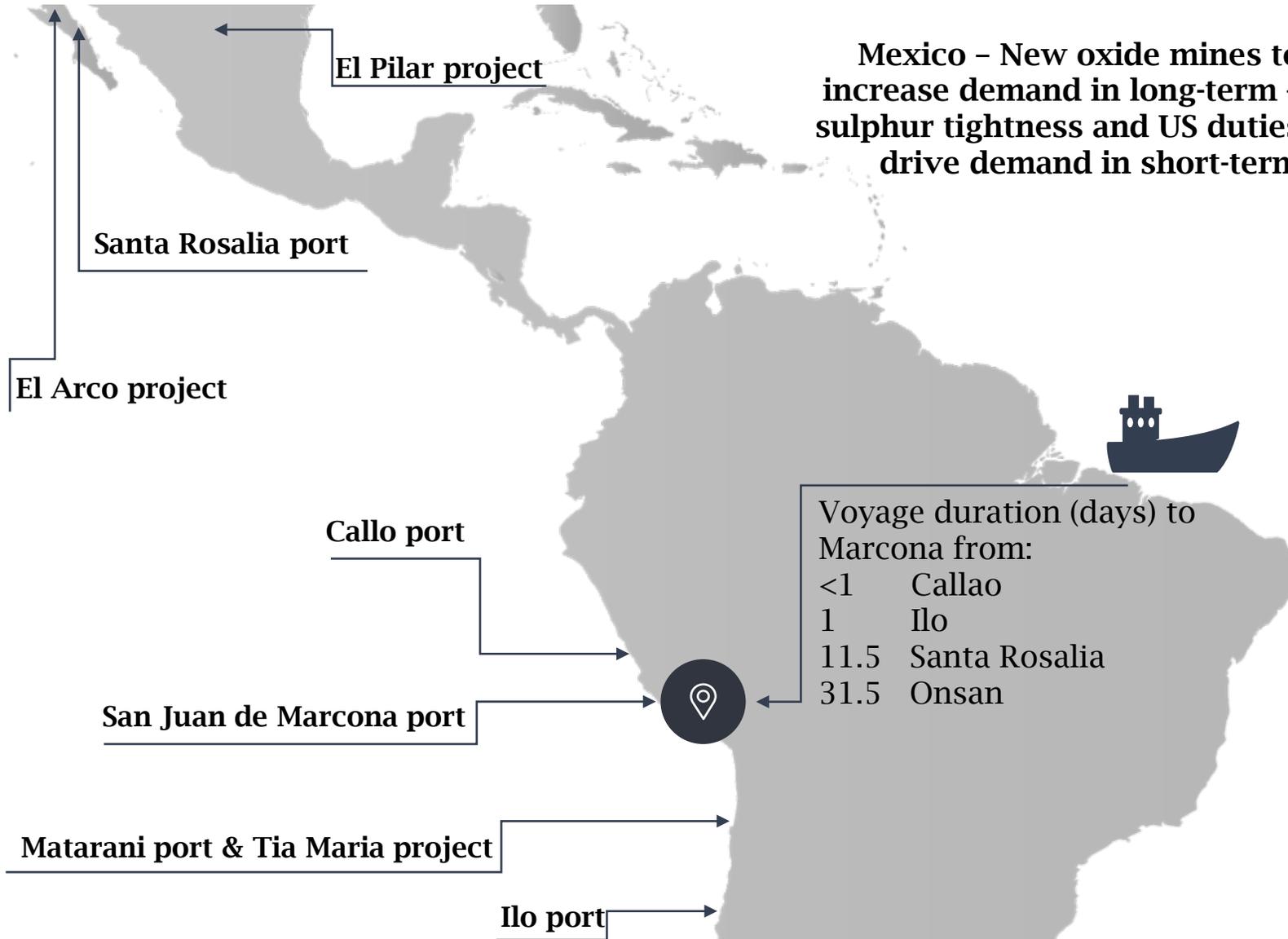
Tonnes from Santa Rosalia found a home in the US easily as tightness from both smelter outages and limited sulphur supply drove demand.

This meant Chile's share from Santa Rosalia fell to 78,000t, down from 220,000t as covid hit operating rates at Chilean mines. Overall Santa Rosalia exports were down by 13pc.

**Graph does not show railed exports - which are around 450,000-650,000t/yr to the US.*

Mexico seaborne trade balance 2019-2020





Tightness in domestic sulphur availability reopened trade to the Mexican east coast and with the fundamentals in sulphur unlikely to change this year, the route should remain active.

There is additional support from US trade policies and tariffs imposed on Moroccan and Russian phosphate producers, which will support high fertilizer production from Innophos and Fertinal.

In the medium to longer term, Southern Peru has two more acid consuming mines in the planning in Mexico, which will restrict exports of Mexican and Peruvian acid supply.

In Sonora state the El Pilar project is a greenfield site near its existing assets, which would have a planned output of 36,000t/yr for cathode using SX-EW with production starting in 2023.

The capacity pales however to El Arco in Baja California – which is a significant deposit, should it go ahead.

The project is still a long way off, with land acquisitions and environmental permits still to be obtained. But should it come to fruition, expectations are for 190,000t/yr copper, with a significant oxide component to the deposit.

The project includes plans for an open pit mine, concentrator and SX-EW operations.

Peru



- ▲ Minta Justa comes onstream in 2021
- ▲ Peru investing heavily in port infrastructure



- ▼ Political uncertainty and financing



Freight forecast: Peru-Chile contract rate low/mid teens locked in next three years

Peru - Trade/volume update

Seaborne trade of Peruvian material will shift towards domestic shipments in 2021 onwards as domestic copper projects come online.

Exports were up marginally in 2020 to 1.35mn t, with all but one cargo destined for Chile. The Celsius Malaga was fixed by Trammo in the mid-\$30s/t for Callao-Paranagua.

This year in 2021 Naviera Petral takes over the entire Southern Peru contract volume from Odfjell for a minimum of two years.

Previously Naviera Petral was only awarded for the for the domestic shipments and small share of exports to Chile.

The decision to appoint a Peruvian company with Peruvian flagged vessels will give Southern Peru the flexibility to shift more volume domestically if needed.

In addition, Naviera Petral was aggressive on the freight for Ilo–Mejillones runs, done in from the mid-high \$10s/t to low \$10s/t.

But it became apparent in January that Naviera Petral took the contract without sufficient tonnage and time-chartered in Bomar Lynx - which is still hovering prompt in the AG finally with a prospect to fix a cargo to Columbia.

As a result, the MTM Southport was fixed for 1+1 month at \$13,000 pdpr, which likely to be extended until the Bomar Lynx will reach South America.

Average prices \$/t

Product	2019	2020
SUA CFR Chile	\$92.17	\$41.35
SUA CFR Brazil	\$84.29	\$49.71
Bunkers Singapore LSMGO	\$595	\$390
Copper	\$6,021	\$6,463

LME 3-Month Copper Price Trend



Peru - New acid terminal at San Juan heralds change to regional flows

Marcobre’s Mina Justa copper mine and leach operations are due online this year, with its new acid import terminal at San Juan received its first sulphuric acid cargo in February.

Demand is expected to reach 200,000t/yr in the first full year of operation before ramping up to average around 410,000t/yr.

But the Mina Justa site is expected to have a reserve of only around 10-15 years – reaching a maximum of near 500,000t/yr demand and requiring around 4.6mn t of acid in total.

The mine site and facilities were 80-90pc complete in late 2020.

Its acid ratio is well above the norm and reflective of the difficulties in finding new oxide deposits.

Three acid tanks have been constructed at the terminal, with the MTM Penang making the first delivery last month.

The terminal should accommodate a 11.8m draft and up to 20,000 dwt and require at least 20 vessel calls per year.

The port is around a one days’ sailing from Ilo – located south of San Nicolas port and north of Ilo. Southern Peru is expected to initially supply around half of Mina Justa’s requirements, with the balance split with Nexa and Trammo.

The Mina Justa site also requires around 35,000t/year of diesel for on-site power generation. While exports of copper cathode, concentrate and iron ore will be handled at the terminal.

South Korea’s LS-Nikko is understood to have agreed to buy around 60,000t/yr of concentrate for nine years.

The peak years of consumption will coincide with current levels of Chilean acid demand, before an expected drop-off in the late 2020s as oxide reserves are depleted.

Should the long-awaited Tia Maria in Peru project overcome resistance from local communities it too will add around 400,000t/yr acid demand at full capacity.

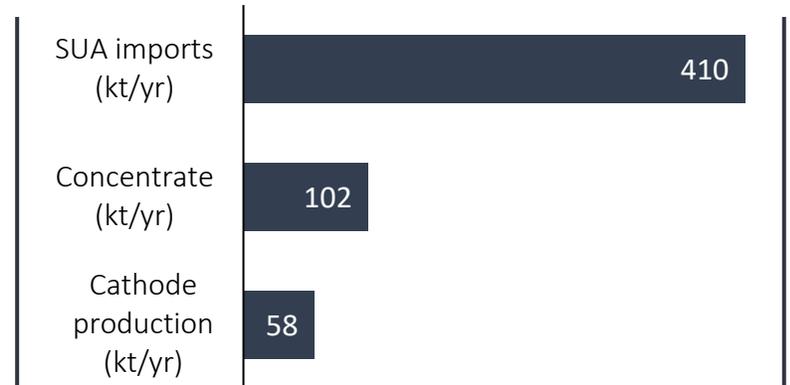
Engineering and design of the Tia Maria project is said to be mostly complete, but construction is not expected until 2022 and Southern Peru does not expect to initiate production until 2024 – a output of 120,000t/yr refined copper.

The addition of the Minta Justa demand would result in around 300,000t/yr of Southern Peru acid being delivered between the ports for San Juan and Moquegua for its existing Toquepala acid-consuming site.

The Peruvian government has allocated funding for modernization of port infrastructure, with nine of 11 projects due to be completed in 2021.

Matarani, Ilo and Callao were all recipients of the funding across various berths and terminals.

Mina Justa yearly production



Argentina



▲ Crop prices offer support for fertilizer demand



▼ SUA prices eroding margin for SSP production



Freight forecast: ARA-Arg always attractive options \$40s/t flat

Argentina - Trade/volume update

Imports increased in 2020 to 126,000t up 15pc on the year, with regional volumes taking a share, reflecting different trader positions.

Most volumes arrived from Belgium, but two stems were sourced from South Korea, while there was also a cargo apiece from Chile and Mexico.

This is a significant change from 2019, when 70,000t arrived from Spain, for a total of 110,000t.

The presence of Korean volumes in 2020 helped lift tonne miles by 42pc on the year.

Rates were mixed, but generally fixtures from within the region were competitive with levels achievable from Europe.

Argentina demand unchanged but stable

Little is expected to change in terms of import volumes for Argentina in the near to mid-term with steady consumption levels and significant projects on the horizon.

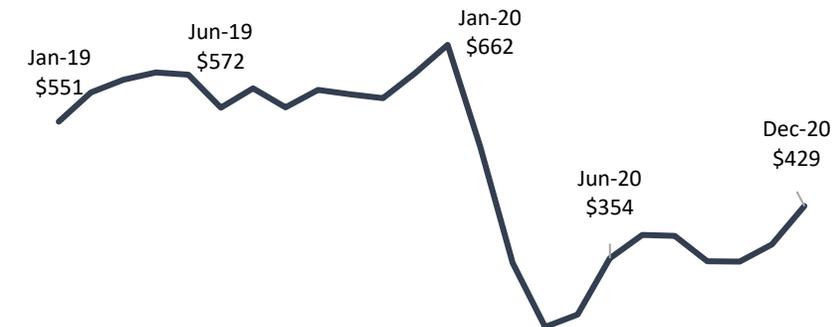
Profitability margins for SSP production came under pressure with high sulphuric acid prices and SSP priced around \$200/t CFR, but Bunge continued to import and did not switch to alternative – but also costly – local sulphur burned acid supply.

In Bunge’s fertilizer division, of which only Argentina has production assets, 2020 full year results released in February showed volumes were flat at 1.5mn t, but earnings lifted slightly on the year.

Strong demand from China for and poor cropping seasons lifted soybean prices to record highs in recent weeks.

While drought conditions in Argentina during the planting phase and growth phases reduced the 2020-2021 crop.

Bunkers Singapore LSMGO Price Trend



Average prices \$/t

Product	2019	2020
Soybeans \$/bu	\$858.91	\$913.33

LOCATION	VESSEL	VOL (KT)	RATE (\$/T)	LAYCAN	LOAD	DISCH	PRODUCT
W.SUEZ	SOUTHERN PUMA	20	17	1H JAN	QUINTERO AND/OR SAN ANTONIO	MEJILLONES	SUA
W.SUEZ	MTM PENANG	19	H 30S	MID JAN	SANTA ROSALIA	SAN JUAN DE MARCONA	SUA
E.SUEZ	CHEMSTAR STELLAR	20	60S	END JAN	PARADIP	ARATU	SUA
W.SUEZ	WOMAR	20	RNR	10-20 FEB	SANTA ROSALIA	MEJILLONES	SUA
W.SUEZ	WAWASAN TOPAZ	19	M-H 20S	13-16 FEB	SAFI	LAZARO CARDENAS	PHOS
E.SUEZ	KISO	30	TBN	END JAN/EARLY FEB	FAR EAST	MEJILLONES	SUA
E.SUEZ	JBU ONYX	19	COA	END FEB	ULSAN	MEJILLONES	SUA
W.SUEZ	ODFJELL TBN	19	L-M 30S	1H MARCH	ANTWERP	RIO GRANDE	SUA
E.SUEZ	NAVIG8 STELLAR	19	L 70S	2H MARCH	TOWNSVILLE	MEJILLONES	SUA



CHARTER HAUS AG

charter-haus.com

reports@charter-haus.com

» DOCK «
WITH US

Charter Haus AG
Haldenstrasse 1
6340 Baar
Phone:
+41 444 820 876

Charter Haus Pte. Ltd.
8 Eu Tong Sen Street
#13-87 - The Central
059818 Singapore
Phone:
+65 6240 0330

CONTACT US

Tankers:
liquid@charter-haus.com

Containers:
containers@charter-haus.com

Dry Cargo:
bulk@charter-haus.com

Gas/Ammonia:
gas@charter-haus.com

Sale & Purchase:
snp@charter-haus.com

Operations
liquidops@charter-haus.com
bulkops@charter-haus.com
gasops@charter-haus.com

Research
reports@charter-haus.com

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