

## SODA ASH

*By Stephen Harriman  
Harriman Chemsult Ltd*

Natural soda ash production in 2001 saw very little growth. This was due principally to the modest growth in production in the US where soda ash production rose by less than 1% to 10.3 Mt. It was a year of oversupply in the US market and there were capacity changes in response. The year had started with increased capacity following expansions in 2000 and the commissioning of the America Soda plant. However, demand for soda ash failed to meet expectations and there were inevitably reduced operating rates. Producers opted to improve the cost side and FMC idled its soda ash plant at Granger; closure of the 1.18 Mt/y plant cut the company's capacity by 25%. However, this allowed the Westvaco unit to be run at 100% capacity. There were no other changes to capacity in 2001. On the ownership side, IMC Global continued its programme to divest its chemical activity and its Australian soda ash unit was sold to a venture capital company.

It was not a good year in terms of sales in the US domestic market in 2001. Apparent consumption recorded a marginal decline to 6.38 Mt. There was very little movement in terms of the end-use pattern, and sales to the glass sector dipped by around 100,000 t to 3.07 Mt. There were similar modest reductions in sales to the chemical and detergents sector, with consumption of 1.68 Mt and 697,000 t respectively. However, the high caustic soda prices, which opened 2001, encouraged higher offtake by the pulp sector and this increased by 30% to 150,000 t. However, most of this gain will have been lost in 2002.

One of the main changes in the market in 2001 was in exports. Excluding shipments to Canada, which rose by 199,000 t, because of the closure of the General Chemical synthetic plant at Amherstburg in April, exports fell by 9,000 t to 3.68 Mt. The main changes in

exports were higher shipments to Europe, which passed the 300,000 t level. On the down side, exports to South Korea fell by one third to 264,000 t and nearly two thirds to Venezuela to 66,000 t. Exports remained well below their peak of 4.19 Mt in 1997.

There has been some movement in production of natural soda ash in other markets. In Botswana and Kenya both producers recorded minor increases in production to 200,000 t and 230,000 t respectively.

In China, ChaGanNuo Chemical completed the expansion of its soda ash plant, which took it to 500,000 t/y from 200,000 t/year in October 2001. This made it the largest trona producer in China.

### World Soda Ash Production ('000 t)

	2000 <sup>r</sup>	2001 <sup>p</sup>
Western Europe	5,825	5,870
Eastern Europe	5,194	5,281
North America	10,600	10,385
South America	480	484
Africa/Mid East	1,263	1,281
Asia/Oceania	11,571	12,298
WORLD	34,933	35,599

<sup>r</sup> Revised

<sup>p</sup> Provisional

### Synthetic

West European soda supplies recovered slightly in 2001 after a series of technical problems that had reduced production in the second half of 2000. There were no major changes on the capacity side, though there were several minor changes that resulted in

increased capacity and lower production costs. For instance, Brunner Mond invested in a new combined heat and power unit, which replaced three older power units. The year was also one in which Brunner Mond was able to improve its financial position when it completed its loan restructuring and converted its debt into equity. The company also made a number of investments in its plant in the Netherlands. Investments in a new preheater installation resulted in an increase in capacity by 15,000 t. However, there was also the news that Akzo would close the adjacent chlor-alkali plant at Delfzijl. There were no increases in capacity by the other producers. However, Solvay raised capacity of sodium bicarbonate at its Spanish plant by 80,000 t to 120,000 t/y.

This is a rapidly growing market, with a surge in demand for desulphurisation and industrial cleaning and the trend towards the use of sodium percarbonate at the expense of sodium perborate. The alleged indiscretions of earlier management came back to haunt both ICI and Solvay. The EC finally applied fines of €10 million and €20 million on ICI and Solvay respectively, originally levied in the 1980s, but delayed due to appeals. Exports of soda ash were down slightly from 2000, due to the shortages and low inventory that occurred in late 2000. In response, imports of US soda ash increased as indicated above. In some cases it was due to local shortages, in others to freight considerations.

There was ongoing improvement in the markets in Eastern Europe. For instance, production in Russia increased by 6% to 2.32 Mt. The increase would have been larger but for the shortages of rail cars at the end of the year which constrained production at Sterlitamak. However, there was progress with the other producers, although there was reversal of production in the Ukraine, where output at the Crimean Soda Ash plant fell by nearly 10% to 524,000 t. Despite the drop in production, exports rose to nearly two thirds of output. Investments in the Bulgarian plant in 2000

also paid dividends with further increases in production in 2001. There was also progress with production in Romania and Poland.

The year was another strong one for the Chinese industry. Production hit record levels of over 8 Mt. This was due to the steady increase in Chinese soda ash capacity, with a number of expansions commissioned in 2001. These include the renovation of the Tianjin Complex in early 2000. Other investments in the year included a 200,000 t/y plant for Sinopec Nanjing Chemical Industrial Corp., a 40,000 t/y expansion at Fuzhou Yaolong Chemical Industry Group to 100,000 t/y and Tangshan Sanyou completed the renovation of its 600,000 t/y soda ash plant. There was an interesting additional development with the latter plant, and the US company, General Chemical Corp. announced a joint venture with the company in late 2000 in which it would provide technical and operational expertise. Domestic consumption in China hit 7.0 Mt in 2000, with exports at just over 1.1 Mt.

The main development in Japan was the closure in the first quarter of Asahi Glass' 350,000 t/y soda ash plant at Kitakyushu. The effect of this is evident in the production data, which saw a reduction from 670,000 t in 2000, to 459,000 t in 2001. The increase in imports largely compensated for the reduction, increasing to 490,000 t, but this was insufficient to prevent a reduction in apparent consumption from 1.06 Mt to 0.95 Mt.

There was increasing demand for soda ash in the Indian market and Nirma announced another expansion to its capacity in late 2001, when a 230,000 t/y expansion was proposed, that would increase the plant to 650,000 t/y. Completion is projected for late 2002. Indian soda ash production reached 2.04 Mt in 2001.

There were proposals for two projects in the Middle East announced in 2001. In the Gulf, GOIC examined a project for 100,000 t/y of soda ash. In Iran, NPC announced it was planning an 80,000 t/y soda ash plant to be located near the Shiraz petrochemical complex.

There was another strong year in the Brazilian soda ash market. Demand increased by 7.5% to 651,500 t. This was mainly the result of increased imports, which rose to 451,000 t, while domestic production rose only marginally.

### **Market Place**

There was relatively little movement in US soda prices in 2001. Producers had sought increases of up to US\$5/short ton. However, it appears that actual increases were closer to US\$3/st. In addition to the market-driven price movements, producers also introduced a US\$7/st surcharge to accommodate the escalation in gas prices. There were no changes of any consequence in exports prices,

with levels starting at US\$110/t and rising to the US\$140/t in less competitive markets.

The tighter market conditions in late 2000 provided producers with an opportunity to push through price increases for 2001 contracts. Rises of up to €15/t were proposed. However, the application of the increases was closer to €5/t, raising prices to between €140-150/t.

The weaker offtake in the US market increased the pressure on deep-sea markets. However, this was not sufficient to have any serious impact on prices. There was a slight rise at the upper end of the range, with average levels of between US\$135-150/t cif.