Centre for WTO Studies

INDUSTRIAL SUPPLY CHAIN SERIES

Soda Ash Industry in Global Value Chains

Trade Dynamics, Production Landscape, and India's Strategic Role

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Table of Contents

1. Introduction and context[1]

Natural and synthetic soda ash have different production processes, but they are technically and commercially substitutable products competing for the same users.

Soda ash, chemically disodium carbonate (Na2CO3), is the 10th most consumed inorganic compound in the world[2]. It is a white, crystalline and water-soluble inorganic chemical. It is sold mainly as light soda ash and dense soda ash. Light soda ash has lower bulk density and dissolves quickly. It is commonly used in detergents, sodium silicate, sodium bicarbonate and chemical processes. Dense soda ash is preferred in glass manufacturing because it can be stored, transported and used more efficiently in continuous production.

Soda ash is produced through natural and synthetic routes. Synthetic production uses salt brine, limestone, ammonia, water and energy. The Solvay process converts salt and limestone into soda ash, while recovering and reusing most of the ammonia. Natural production mines trona, nahcolite or carbonate-rich brines and processes the mineral into market-ready soda ash. The manufacturing routes are different, but both routes supply the same disodium carbonate to downstream users.

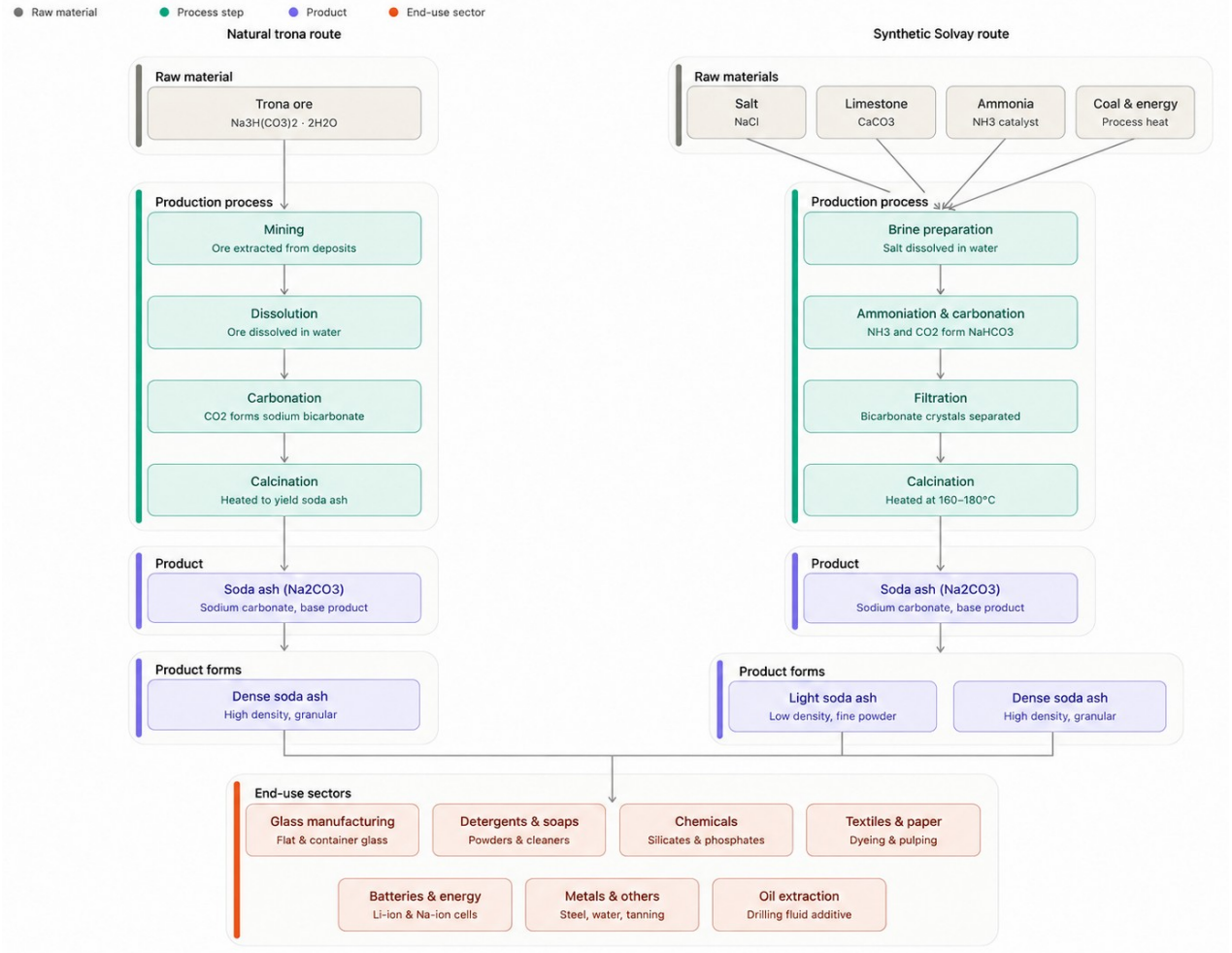

Figure 1: Soda ash value chain from raw materials to downstream sectors

[1] The authors sincerely acknowledge *Dr. Pritam Banerjee*, Head of the Centre for WTO Studies, for his guidance, encouragement, and continuous support throughout this research initiative.

[2] EPD International. Sodium Carbonate (Soda Ash), EPD-IES-0010667:001. International EPD System.

Both natural and synthetic soda ash have the same physical and technical characteristics, are technically and commercially substitutable, perform the same function, have the same tariff classification and do not differ in essential composition or end use.

1.1 End-use and strategic sectors

Soda ash serves both mass-consumption sectors and emerging strategic sectors.

Soda ash spans across mineral, chemical, energy and manufacturing value chains. Chemical Market Analytics by OPIS[3] estimated world soda ash demand at 678 lakh tonnes in 2023[4].

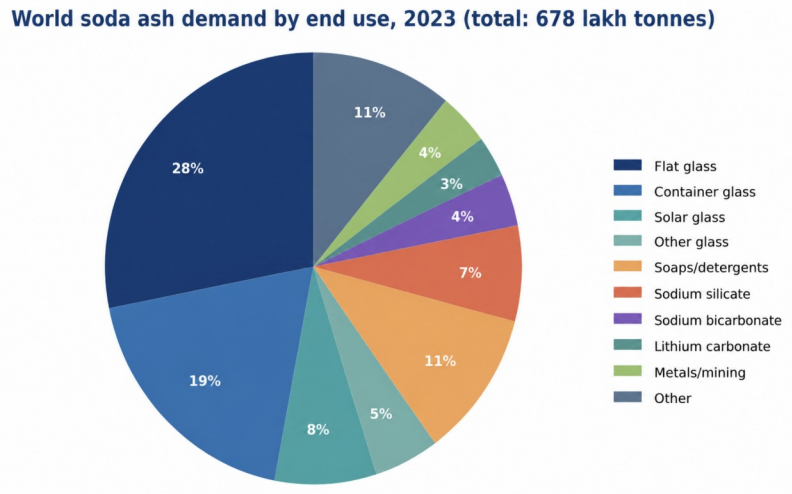

Figure 2: Downstream consumption profile of soda ash

Source: Chemical Market Analytics Report by OPIS, 2023.

(a) **Glass** is the largest end-use sector for soda ash (Figure 2). Soda ash provides sodium oxide in the glass-making process. Sodium oxide helps reduce the temperature needed to melt silica and allows glass to be produced more efficiently. This flat glass is used in buildings and automobiles. OPIS estimates that construction accounts for about 80 per cent of flat glass demand. Automotive glass accounts for about 18 per cent. This makes soda ash relevant for housing, urban infrastructure, vehicle manufacturing and energy-efficient building materials. Container glass connects soda ash to packaging for beverages, food, pharmaceuticals and consumer goods.

(b) **Soaps and detergents** form the primary consumer-facing segment. Soda ash improves cleaning performance by reducing the effect of hard water. It is also used in the production of detergent inputs such as sodium silicate, zeolites and sodium percarbonate.

(c) **Sodium silicate** is produced by reacting soda ash with silica. It is used in detergents, paper, construction chemicals, foundry binders, textiles, water treatment and silica-based chemicals. Its main role is to act as an industrial binder, adhesive and cleaning aid.

(d) **Sodium bicarbonate** is produced by reacting soda ash with carbon dioxide and water. It is used to regulate acidity, release carbon dioxide and neutralise unwanted acids. In animal feed, it supports digestion and feed quality. In food, it is used as a raising agent in bakery (baking soda) and processed products. In flue-gas treatment, it helps neutralise acidic gases from industrial emissions. In pharmaceuticals, personal care and hemodialysis, it is used where controlled pH balance is required.

[3]Oil Price Information Service (OPIS), a Dow Jones company, is a major global price reporting agency and data provider for the oil, natural gas, and energy industries.

[4] Chemical Market Analytics by OPIS, Commercial Impact of Soda Ash Technologies, World Soda Ash Conference 2023

(e) **Soda ash is also used in oil and gas drilling** as a water-conditioning agent in drilling mud. It helps remove calcium hardness from water, controls alkalinity and improves the performance of bentonite and polymer additives. This keeps the drilling mud stable and pumpable during drilling operations.

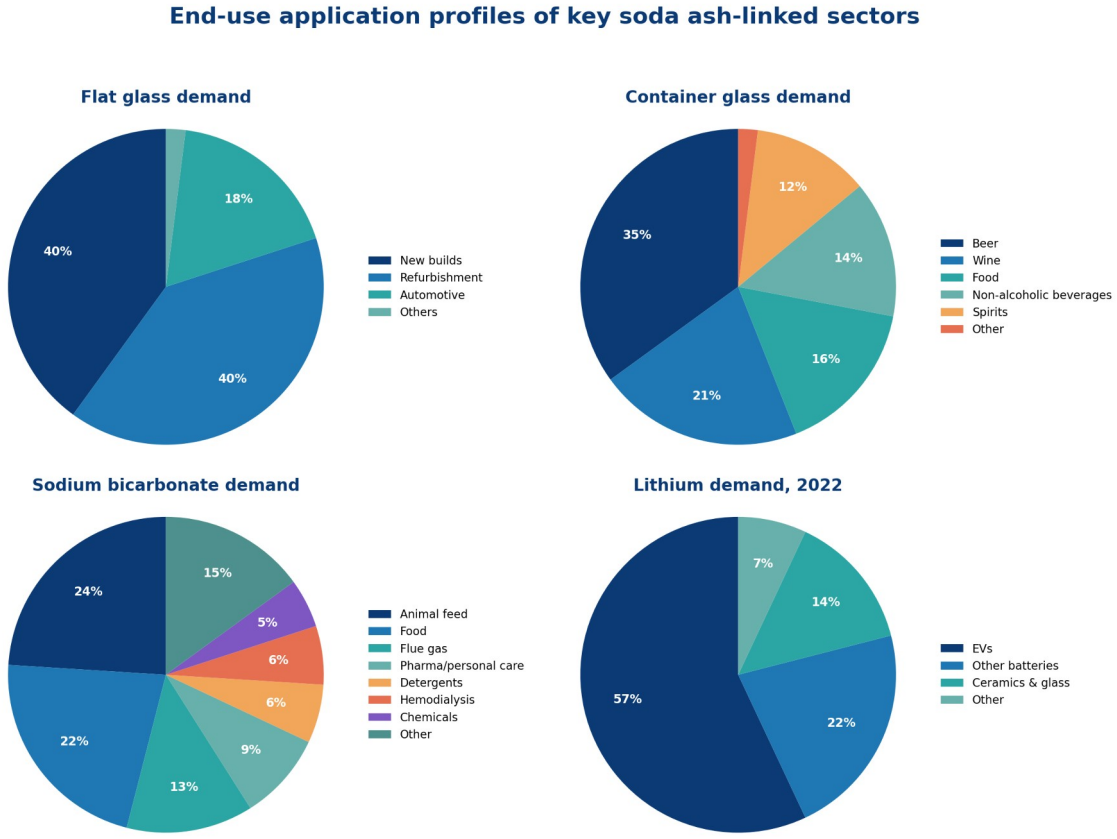

Figure 3: Application profile of key soda ash-linked sectors

Source: Chemical Market Analytics Report by OPIS, 2023

(f) **Solar glass** is another source of demand for soda ash. OPIS notes that solar power deployment has grown faster than earlier forecasts, with installed photovoltaic capacity doubling approximately every three years[5]. This increases soda ash demand through the glass sector. Solar glass has the clearest growth link to renewable-energy manufacturing, while flat glass and container glass continue to anchor construction, transport and packaging demand.

(g) **Energy-transition applications** are creating new demand for soda ash. Lithium-rich brines are treated with soda ash to produce lithium carbonate. Lithium carbonate is then used in battery materials, especially lithium iron phosphate batteries. This connects soda ash with battery storage, electric vehicles and clean-energy manufacturing.

Soda ash has distributed uses across both large industrial customers and smaller downstream users.

[5]Chemical Market Analytics by OPIS, Global Soda Ash Outlook The Soda Ash Market Paradox, October 10th 2024

2. Global trade patterns in soda ash

2.1 Global export and import trends

Global soda ash trade is concentrated in a few exporting countries.

The United States, Türkiye, China, Bulgaria and Bosnia & Herzegovina were the five largest exporters of soda ash in FY 2024-25. Together, they accounted for approximately 88.2 per cent of the reported global export volume.

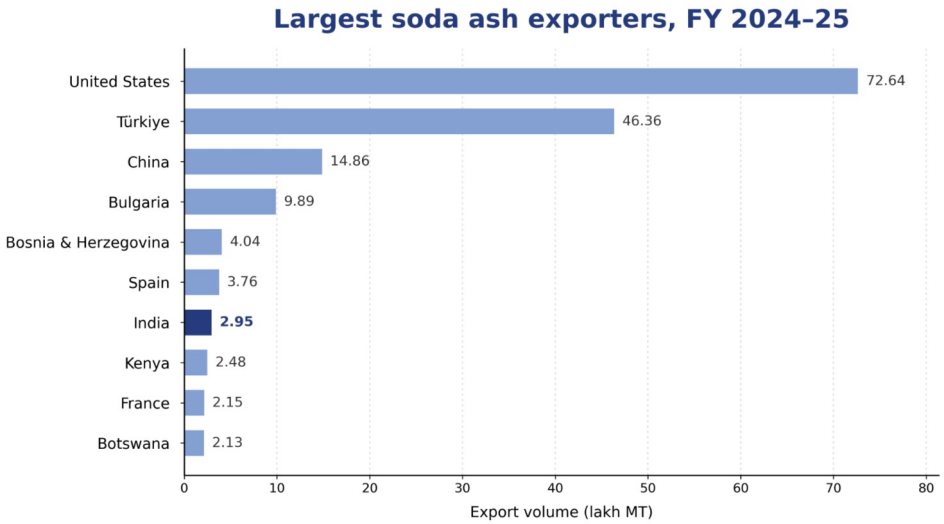

Figure 4: Top exporters of soda ash (FY 2024-25)

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

Imports were more dispersed than exports. According to ITC Trademap, in FY 2024-25, Brazil, Indonesia, India, Thailand and Chile were the five largest soda ash importing markets by volume.[6]. India's share of reported global soda ash imports by volume stood at approximately 7.1 per cent in FY 2024-25, compared with 5.9 per cent in FY 2020-21[7].

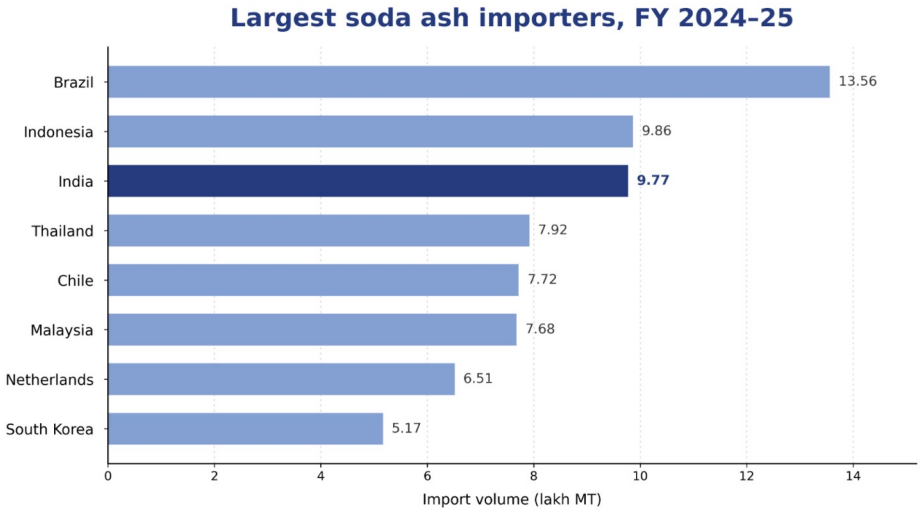

Figure 5: Top importers of soda ash (FY 2024-25)

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

[6] International Trade Centre, Trade Map, Disodium carbonate (HS 283620)
[7] International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

2.2 Global capacity and demand

United States, Türkiye and China together accounted for about 80 per cent of global production in 2025[8]. Therefore, a relatively small number of producers can influence the direction of international trade.

China ranks high because it has a very large chemical manufacturing base and has added capacity in recent years for both natural and synthetic soda ash production. In 2024, China's total soda ash production capacity is approximately 427 lakh MT[9]. Between 2023 to 2025, China increased its natural soda ash production by 78 lakhs MT with further planned expansion of 22 lakhs MT scheduled in 2026[10].

The United States and Turkey have large trona-based natural soda ash operations with low production costs and export-oriented business models. The United States production capacity is about 140 lakhs MT[11] with a further 50 lakhs MT under development[12]. Türkiye has an existing capacity of approximately 50 lakhs MT, with subsequent expansion plans ranging from 5 lakhs MT to 7 lakhs MT at Kazan Soda[13], alongside a 1.75 lakhs MT expansion at Şişecam's Mersin facility[14].

Capacity additions have exceeded average domestic demand growth in several major producing markets (figure 6). This widening supply-demand gap is leading to producers to pushing their incremental output in large importing markets.

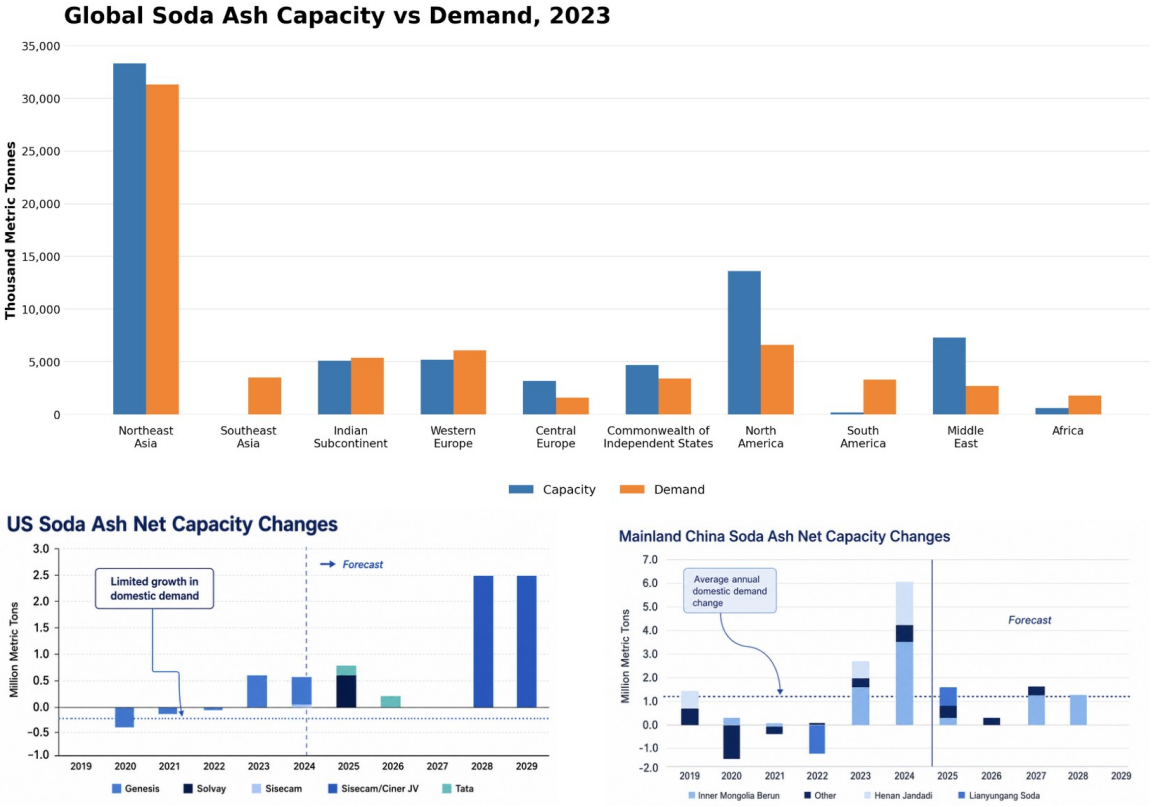

Figure 6: Capacity growth has been faster than the demand growth in several large markets

Source: Global Soda Ash Outlook: The Soda Ash Market Paradox, Chemical Market Analytics by OPIS, 2024

[8]U.S. Geological Survey. (2026). Soda ash. In Mineral commodity summaries 2026. https://pubs.usgs.gov/periodicals/mcs2026/mcs2026-soda-ash.pdf

[9]Tianfeng Securities Research Institute. (2024, May 30). Soda ash: Structural changes across both supply and demand [Industry research report], p. 17

[10]Page 60, OPIS, Global Ash Monthly Market report, May 2026

[11]U.S. Geological Survey. (2025). Soda ash. In Mineral commodity summaries 2025. U.S. Department of the Interior.https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-soda-ash-ver.1.0.pdf

[12]Şişecam. (2024, December 27). Şişecam's U.S. move to bring global leadership [Press release]. https://www.sisecam.com/en/press-releases/sisecams-us-move-to-bring-global-leadership

[13]WE Soda. (2024, February). Corporate update presentation for bondholders (p.14,27). https://wesoda.com/media/2dbfaeb4/corporate-update-presentation-for-bond-holders-february-2024.pdf

[14]Türkiye Şişe ve Cam Fabrikaları A.Ş. (2024, January 15). Mersin soda ash plant capacity increase. https://www.sisecam.com/en/s-investor-relations/MaterialDisclosures/15.01.2024 per cent20Mersin per cent20Soda per cent20Ash per cent20Plant per cent20Capacity per cent20Increase.pdf

3. India's strategic position in global soda ash value chain

The preceding section highlighted that global soda ash supply is concentrated in the United States, Türkiye and China, where major capacity additions are generating exportable surplus. Against this backdrop, India occupies a position of strategic significance. It has a mature domestic manufacturing base and export capability, yet it is increasingly becoming a destination for global surplus.

India’s installed capacity increased from 42.48 lakh MT in FY2022-23 to 44.21 lakh MT in FY2024-25, while domestic demand reached 44.17 lakh MT[15]. The domestic industry therefore retained the capacity to meet aggregate national requirements.

India also has an established and expanding production base. Tata Chemicals, GHCL and Nirma are among the major producers. Tata Chemicals and GHCL have announced substantial capacity additions. Tata Chemicals has completed a 2.30 lakh MT expansion and plans a further 3.50 lakh MT addition by Q3 FY2028[16], while GHCL is developing a 5 lakh MT greenfield soda ash facility in Kutch[17]. RSPL Group’s SOKA currently has a soda ash capacity of 5 lakh MT per annum and has secured environmental clearance to expand total capacity to 10 lakh MT per annum. It plans to increase annual capacity to 7.5 lakh MT within two years[18]. These investments provide headroom for growth in flat glass, solar glass, detergents, sodium bicarbonate and other downstream applications.

India's competitive position extends beyond the domestic market. In FY 2024-25, India exported approximately 2.95 lakh MT of soda ash and ranked as the world's seventh-largest exporter[19]. Bangladesh, Indonesia, Nepal, Sri Lanka and the Philippines were its principal export destinations, together accounting for 80.4 per cent of exports.

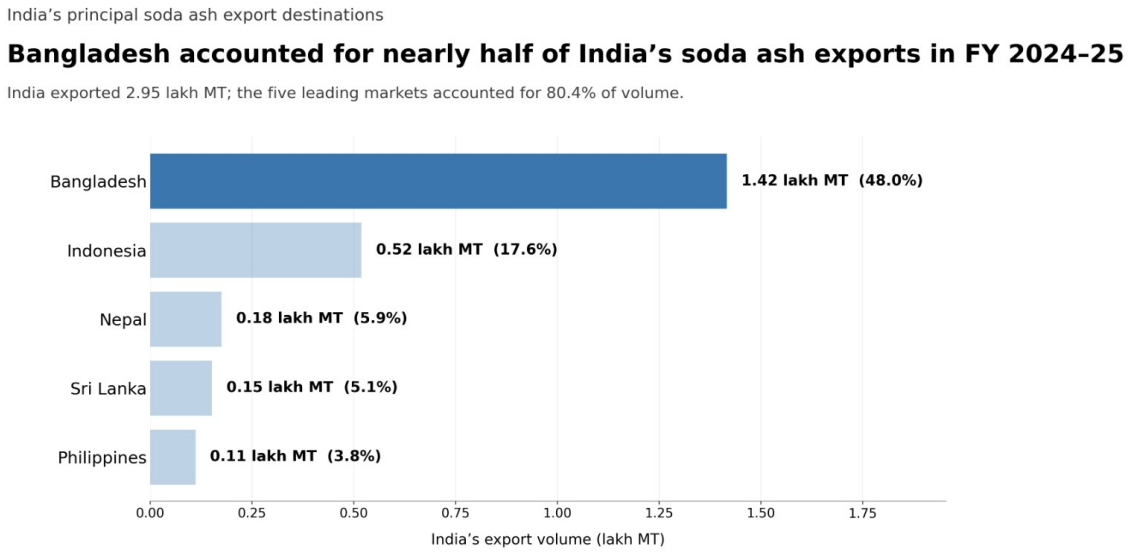

Figure 7: Soda ash exports from India (FY 2024-25)

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

However, in FY 2024-25, India imported 10.24 lakh MT during the same period and ranked as the third-largest reported importing market by volume[20]. Import volume was approximately 3.5 times export volume, resulting in a net import gap of about 7.29 lakh MT.

[15] Alkali Manufacturers Association of India (AMAI) Annual Industry Review

[16] Tata Chemicals Limited. (2026, May 4). Investors communication: Quarter and year ended 31 March 2026 [Investor presentation], p.4. https://www.tatachemicals.com/tata/sites/default/files/2026-05/se-intimation_signed.pdf

[17] GHCL Limited. (2024, August 1). Business update: Q1 FY25 [Investor presentation], p. 10. https://ghcl.co.in/wp-content/uploads/2024/08/GHCL_Intimation_Investors_Presentation_Business_Update_Q1FY25-1.pdf

[18] ETManufacturing. (2026, February 6). RSPL Group’s SOKA unit secures environmental clearance to double soda ash output. https://manufacturing.economictimes.indiatimes.com/news/industry/rspl-groups-soka-unit-secures-environmental-clearance-to-double-soda-ash-output/127985400\

[19] International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

[20] DGCI&S, Ministry of Commerce

India's share of world soda ash imports by volume increased from 5.9 per cent in FY 2020-21 to 8.0 per cent in FY 2023-24 and moderating to 7.1 per cent in FY 2024-25[21]. The direction of change nevertheless shows India's growing weight in global import demand.

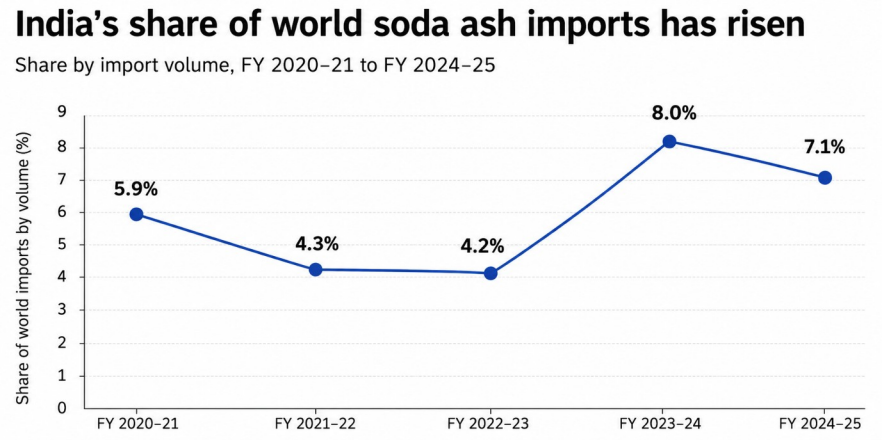

Figure 8: Year-on-year change in India's share in world Imports of Soda Ash

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

Import exposure was also highly concentrated. Türkiye, United States, Iran/UAE and Russia together supplied 87.6 per cent of India's soda ash imports.

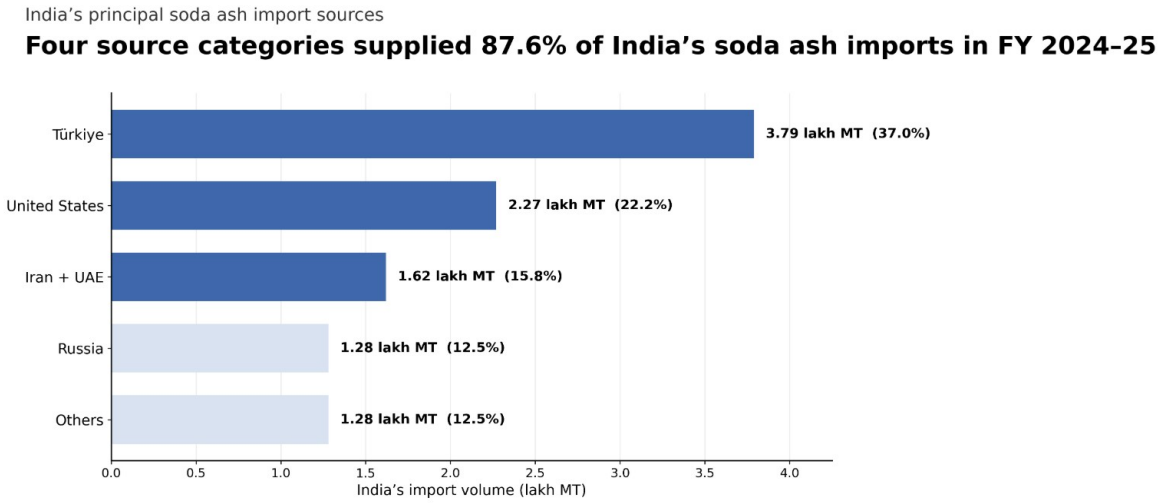

Figure 9: Soda ash imports to India from source countries (2024)

Source: DGCI&S, Ministry of Commerce

The country therefore has the capacity and industrial base to maintain a resilient domestic soda ash supply chain, however its exposure to concentrated, low-cost natural soda ash global supply has increased. The following section examines how this exposure translated into a sharp import surge, growing source concentration and sustained price pressure on domestic production.

[21] International Trade Centre, Trade Map, Disodium carbonate (HS 283620).

4. Supply chain risk and challenges

4.1 Import surge

Soda ash imports into India rose sharply after 2022-23. Total imports increased by 80 per cent from 5.77 lakh MT in 2022-23 to 10.41 lakh MT in 2023-24 [22]. The one-year increase of 4.64 lakh MT was larger than India's total demand growth during the same year by more than three times. Imports eased marginally to 10.24 lakh MT in FY 2024-25, a decline of 1.6 per cent from the peak year. This marginal reduction did not return imports to the earlier range. FY 2024-25 imports were still 4.47 lakh MT, or 77.3 per cent, above FY 2022-23 and 3.04 lakh MT, or 42.3 per cent, above FY 2020-21.

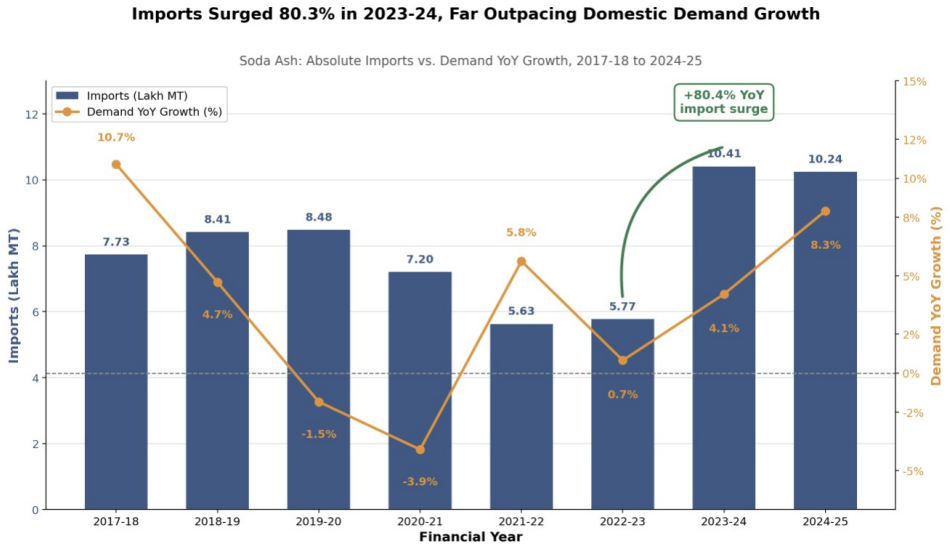

Figure 10: Imports and domestic demand trends in India (FY 2018-2025)

Source: DGCI&S, Ministry of Commerce and AMAI(Alkali Manufacturers Association of India) Database

Turkey, the United States and Russia were the principal contributors to the FY2023-24 increase (figure 11). Together, they accounted for 68.3 per cent of total imports in FY2023-24.

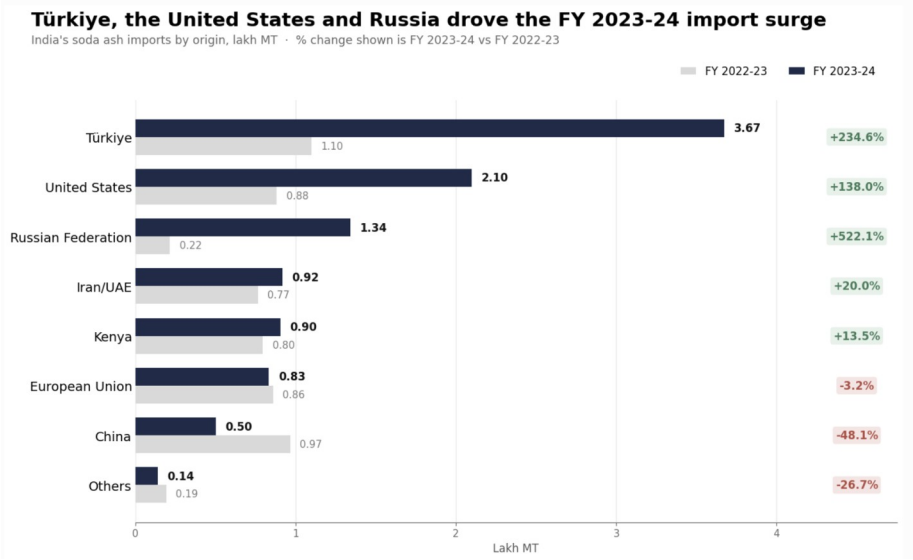

Figure 11: Country contribution to the increase in imports between FY 2022-23 and FY 2023-24

Source: DGCI&S, Ministry of Commerce

[22] DGCI&S, Ministry of Commerce

4.1.1 Surge in imports in relative terms

The increase in imports was significant when measured against both Indian production and consumption. Imports represented 15.8 per cent of domestic production in FY2022-23. This ratio increased to 30.3 per cent in FY2023-24, an increase of 14.5 percentage points. In relative terms, imports as a share of production increased by 91.8 per cent within one year. The ratio remained elevated at 27.9 per cent in FY2024-25.

A similar trend is visible when imports are compared with Indian consumption. Imports accounted for 14.5 per cent of consumption in FY2022-23 and increased to 25.2 per cent in FY2023-24. This represented an increase of 10.7 percentage points, or 73.9 per cent over the preceding year. The share remained at 23.2 per cent in FY2024-25, which was 59.7 per cent above the pre-surge level.

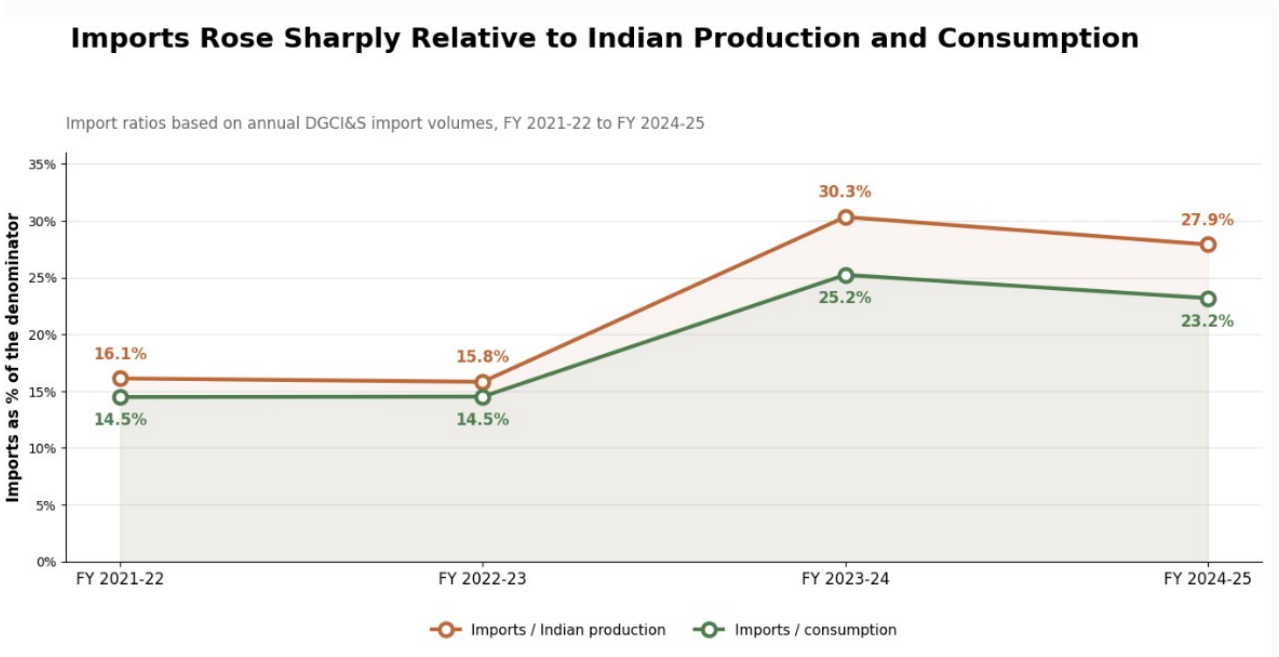

Figure 12: Imports in relation to Indian production and consumption (demand)

Source: DGCI&S, Ministry of Commerce

The increase in imports was substantially higher than the growth in Indian demand. Consumption increased from 39.79 lakh MT in FY2022-23 to 41.27 lakh MT in FY2023-24, an increase of 1.47 lakh MT or 3.7 per cent. During the same period, imports increased from 5.77 lakh MT to 10.41 lakh MT, an increase of 4.64 lakh MT or 80.3 per cent. The additional import volume therefore exceeded the increase in consumption by approximately 3.16 lakh MT.

Demand growth explains only a limited part of the import increase. A substantial volume entered the Indian market over and above the incremental requirement created by consumption growth. This increased import competition in the market and displaced the sales of domestic producers.

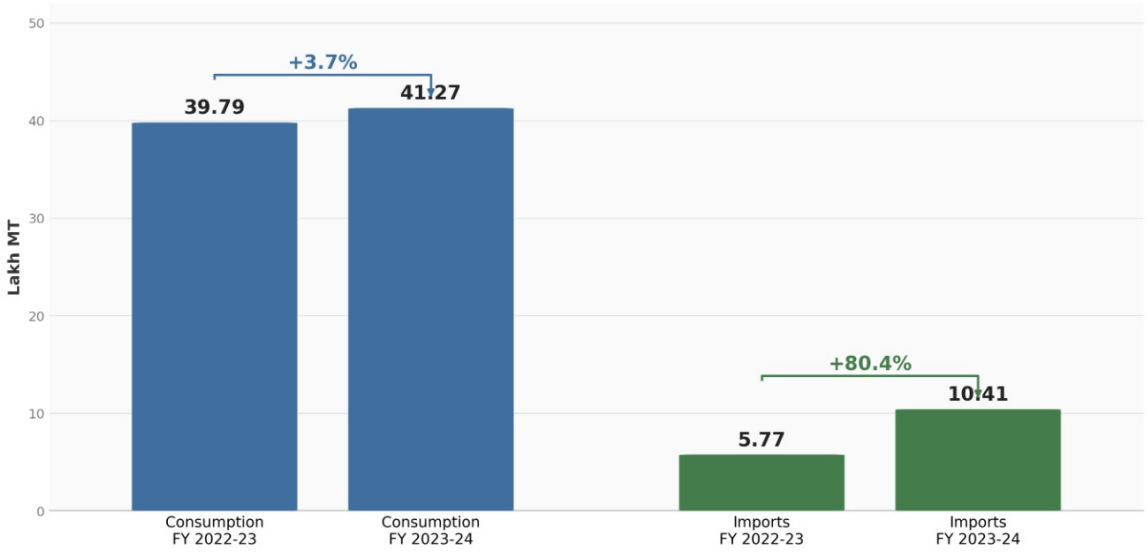

Figure 13: Domestic consumption vs Imports Growth (FY 2022-23 to FY 2023024)

Source: DGCI&S, Ministry of Commerce

The surge also occurred despite the availability of sufficient installed capacity in India. Domestic installed capacity stood at 42.48 lakh MT in FY2022-23 against consumption of 39.79 lakh MT. Capacity remained at 42.48 lakh MT in FY2023-24 against consumption of 41.27 lakh MT. In FY2024-25, capacity increased to 44.21 lakh MT, broadly matching consumption of 44.17 lakh MT.

The import increase therefore cannot be attributed to a structural shortage of domestic capacity. Indian producers had sufficient aggregate capacity to meet domestic consumption during the period in which imports increased sharply. The evidence indicates that the surge was driven by increased penetration of imports into an adequately supplied market, rather than by unmet demand.

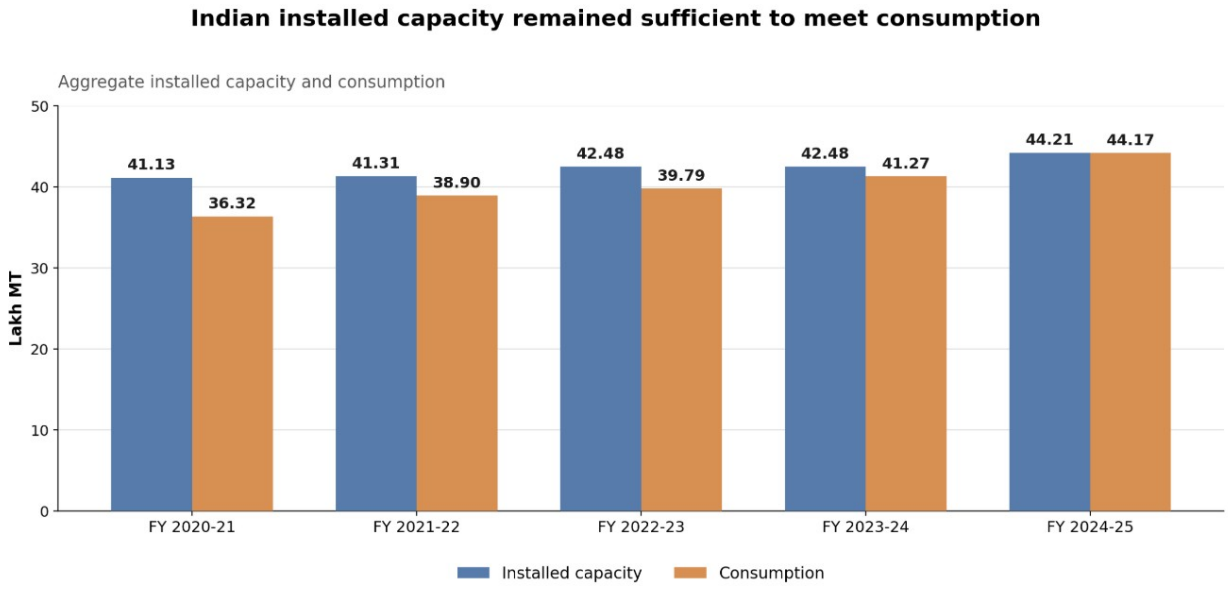

Figure 14: Indian installed capacity compared with demand (consumption)

Source: Alkali Manufacturers Association of India (AMAI) Annual Industry Review

4.1.2 Impact of landed price on imports

In FY 2022-23, India imported 5.77 lakh MT of soda ash at a landed price of ₹36,620 per MT. In FY 2023-24, import volume increased by 80.3 per cent to 10.41 lakh MT. During the same year, the landed price fell by 28.5 per cent to ₹26,199 per MT. The price decline continued in FY 2024-25. The landed price fell by a further 20.1 per cent to ₹20,933 per MT. Import volume moderated by 1.6 per cent from the FY 2023-24 peak, but remained high at 10.24 lakh MT.

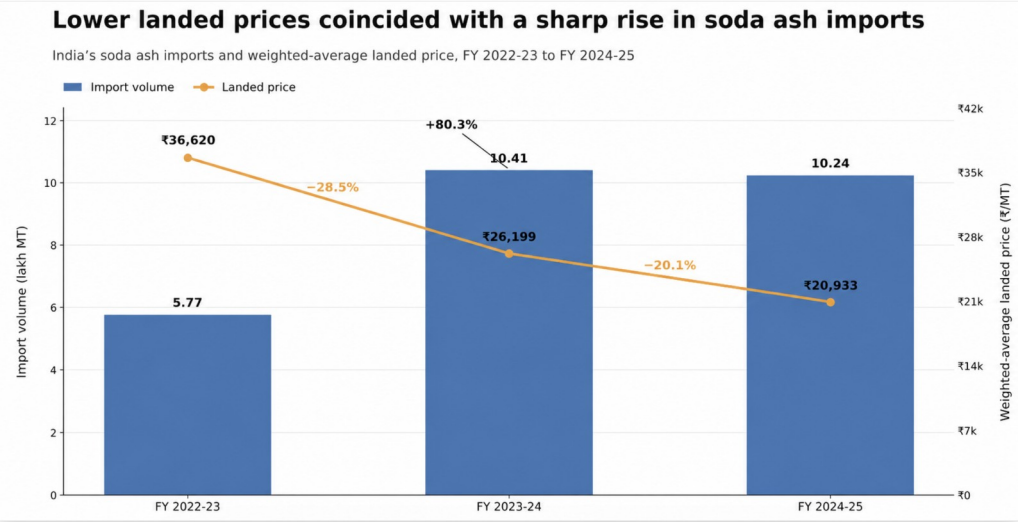

Figure 15: India's soda ash imports and landed price (FY 2023-2025)

Source: DGCI&S, Ministry of Commerce

The same inverse movement is visible for the principal suppliers that drove the increase in imports of soda ash. Between FY 2022-23 and FY 2024-25, imports from Türkiye increased by 245.6 per cent while its landed price fell by 40.1 per cent. Imports from the United States increased by 157.3 per cent while its landed price fell by 41.0 per cent. Imports from the Russian Federation increased by 494.5 per cent while its landed price fell by 49.3 per cent.

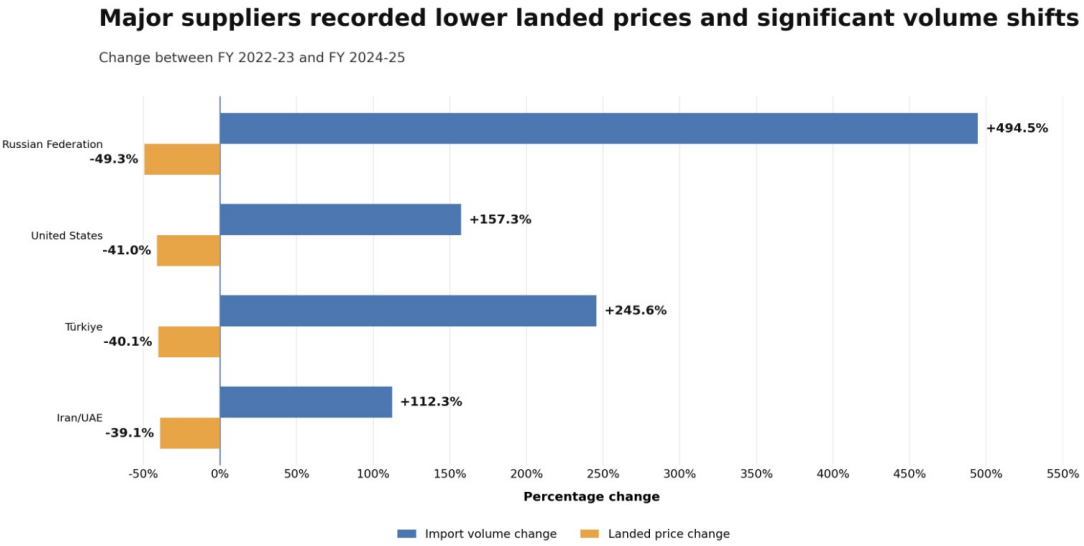

Figure 16: Change in India's soda ash import volumes and landed prices across major supplier countries, FY 2022-23 to FY 2024-25

Source: DGCI&S, Ministry of Commerce

Domestic producers therefore faced two pressures at the same time, (a) a substantially larger quantity of imported soda ash entered the market, and (b) the average landed price of those imports moved downward.

4.1.3 Unforeseen Developments leading to the surge in imports

The import surge in soda ash followed a sequence of global developments that was not reasonably reflected in India's earlier tariff concessions (figure 17).

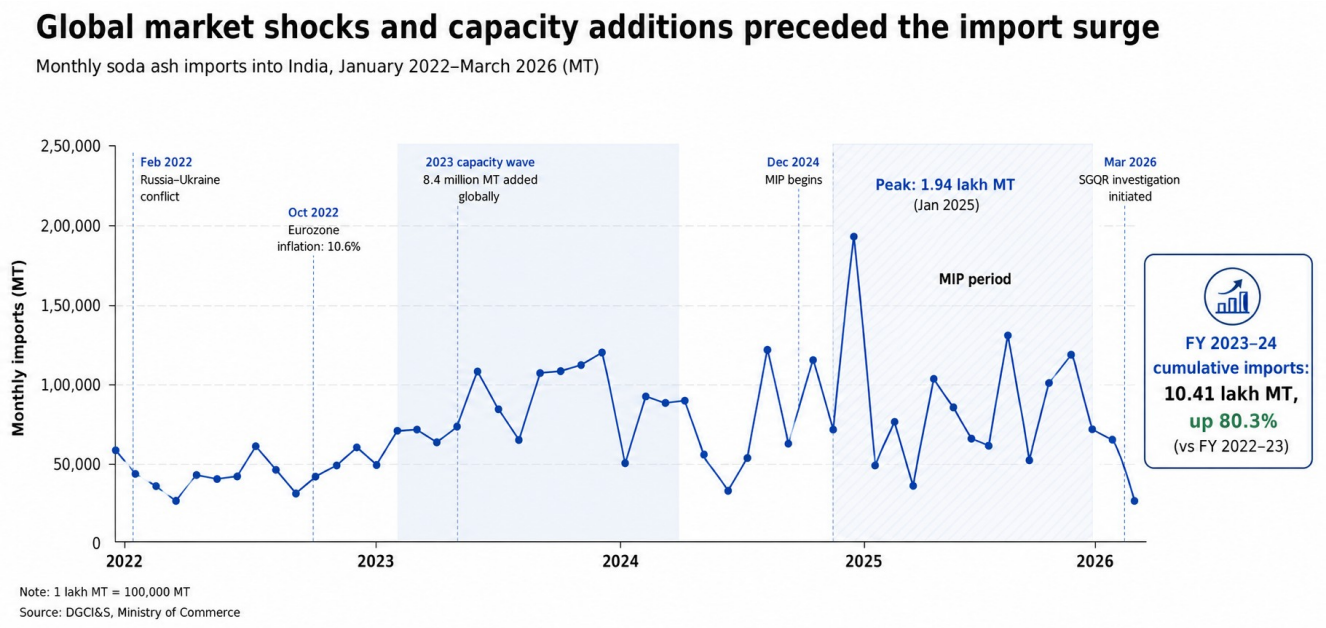

Figure 17: Timeline of global developments and monthly soda ash imports into India

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

(a) European disruption redirected Turkish and Russian volumes to India

The Russia-Ukraine conflict affected the European soda ash market through trade disruption, higher freight and insurance costs, energy-price increases and weaker downstream demand. Europe had historically been an important market for both Turkish and Russian suppliers. The weakening of this market reduced the volume that could be absorbed through established trade channels.

Chemical Market Analytics had initially projected stronger soda ash demand in Europe for 2023 and 2024. Actual demand was lower than expected and remained weak after 2023. The demand outlook for 2025 and 2026 was also revised downward. The May 2024 report projected European demand at 61.26 lakh MT in 2025. The 2026 report reduced this estimate to 58.06 lakh MT and projected demand of 58.89 lakh MT for 2026.

Year	Projected demand as per Market report 2023 in (lakh MT)	Actual demand as per market report 2024 in (lakh MT)
2023	63.94	**60.22**
2024	60.33	**57.97**

Figure 18: Projected and actual demand of soda ash in EU

Source: The Global Soda Ash - Monthly Market Report - Chemical Market Analytics (Market Report)

The country-market data shows the corresponding diversion (figure 19). Between 2022 and 2023, Türkiye's soda ash exports to the European Union declined from 18.68 lakh MT to 16.11 lakh MT, a reduction of 2.57 lakh MT. During the same period, its exports to India increased from 1.20 lakh MT to 2.72 lakh MT, an increase of 1.52 lakh MT. Russian exports to the European Union declined by approximately 52,823 MT, while its exports to India

increased by approximately 95,265 MT. The simultaneous reduction in supplies to the European Union and increase in supplies to India is consistent with a redirection of trade volumes towards the Indian market.

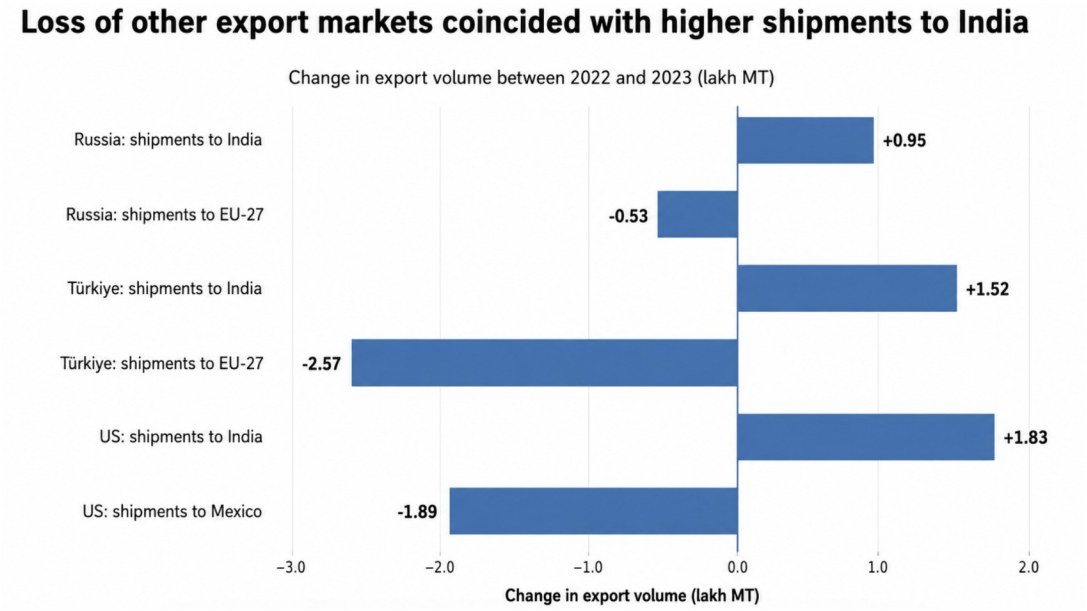

Figure 19: Change in exports from Russia, EU and US to Europe, India and Mexico between 2022 and 2023

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

(b) Türkiye faced domestic slowdown while capacity remained high

Europe has been the traditional export market of Turkiye. As European demand weakened, Turkish exports to the EU fell from 20.29 lakh MT in 2022 to 16.19 lakh MT in 2023, a decline of about 4.1 lakh MT. Over the same period Turkey's exports to India rose from 1.14 lakh MT to 3.47 lakh MT, and reached 3.79 lakh MT in 2024.

Three further Turkish developments compounded the redirection. Turkey's economy slowed in 2023, with industrial production contracting by 0.4 per cent month-on-month in July and by a further 0.8 per cent in August[23]. Annual consumer-price inflation reached 61.5 per cent in September 2023[24]. The Turkish lira also lost approximately 37 per cent of its value against the US dollar during the year[25], improving export incentives.

Despite weak demand, Turkish producers expanded capacity, ranging from 5 lakh MT to 7 lakh MT at Kazan Soda[26], alongside a 1.75 lakh MT expansion at Şişecam's Mersin facility[27]. Therefore, Turkish producers had significant surplus that needed to be directed towards markets with growing demand for subject goods.

(c) United States capacity expansion coincided with weaker demand in Mexico

The United States presents a similar country-specific pattern. It has a large natural soda ash industry and about 140 lakhs MT of installed capacity of soda ash[28]. Genesis Alkali restarted its original Granger facility in Januarry 2023 and increased production towards its annual capacity of approximately 4.54 lakh MT. The company subsequently achieved first production from the Granger Optimization Project in the fourth quarter of 2023. This

[23]Daily Sabah. (2023, October 10). Industrial production in Türkiye up 3.1 per cent annually in August. https://www.dailysabah.com/business/economy/industrial-production-in-turkiye-up-31-anually-in-august ; Daily Sabah. (2023, September 11). Türkiye's industrial production jumps by 7.4 per cent in July. https://www.dailysabah.com/business/economy/turkiyes-industrial-production-jumps-by-74-in-july

[24]Turkish Statistical Institute. (2023, October 3). Consumer price index, September 2023 [Press release]. https://veriportali.tuik.gov.tr/Bulten/Index?dil=2&p=Consumer-Price-Index-September-2023-49659

[25]Reuters. (2025, August 23). Turkey exits FX-protected deposit scheme. https://www.reuters.com/world/middle-east/turkey-exits-fx-protected-deposit-scheme-2025-08-23/

[26]WE Soda. (2024, February). Corporate update presentation for bondholders (p.14,27). https://wesoda.com/media/2dbfaeb4/corporate-update-presentation-for-bond-holders-february-2024.pdf

[27]Türkiye Şişe ve Cam Fabrikaları A.Ş. (2024, January 15). Mersin soda ash plant capacity increase. https://www.sisecam.com/en/s-investor-relations/MaterialDisclosures/15.01.2024 per cent20Mersin per cent20Soda per cent20Ash per cent20Plant per cent20Capacity per cent20Increase.pdf

[28]U.S. Geological Survey. (2025). Soda ash. In Mineral commodity summaries 2025. U.S. Department of the Interior.https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-soda-ash-ver.1.0.pdf

project added an expected ~6.80 lakh MT of annual capacity[29]. Further large-scale capacity additions are under development in the United States. Şişecam's Pacific Soda project in Wyoming is designed to produce 50 lakhs MT of natural soda ash annually upon completion[30].

At the same time, demand weakened in Mexico, an important destination for United States exports. Between 2022 and 2023, US soda ash exports to Mexico declined from 15.86 lakh MT to 13.97 lakh MT, a reduction of approximately 1.89 lakh MT. Over the same period, US exports to India increased from 0.42 lakh MT to 2.25 lakh MT, an increase of approximately 1.83 lakh MT.

Mexico is the world's largest beer exporter[31]. Beer bottles require container glass and therefore, Mexico is a major market for container glass, thereby making Mexico a large market for soda ash which is needed to manufacture container glass. However, weaker demand in its alcohol beverage and container-glass industries reduced Mexico's import requirement, prompting US producers to seek alternative markets such as India (figure 19). The increase in shipments to India closely matched the reduction in shipments to Mexico, which is consistent with a redirection of US export volumes towards the Indian market.

(d) China created a global capacity and price shock, followed by a later increase in direct imports

China's role requires a distinction between direct import diversion and global price pressure. The Inner Mongolia Berun Yingen project began commissioning in June 2023. Phase I was designed to add 50 lakh MT of annual natural soda ash capacity, while a further 28 lakh MT was planned by around 2026, taking the project's total planned capacity to 78 lakh MT[32]. The scale of this addition was larger than India's entire annual demand.

China's soda ash capacity is about 427 lakh MT[33], nearly ten times India's 44 lakh MT capacity. Even a small diversion of Chinese production to India can therefore have a significant impact on the Indian market.

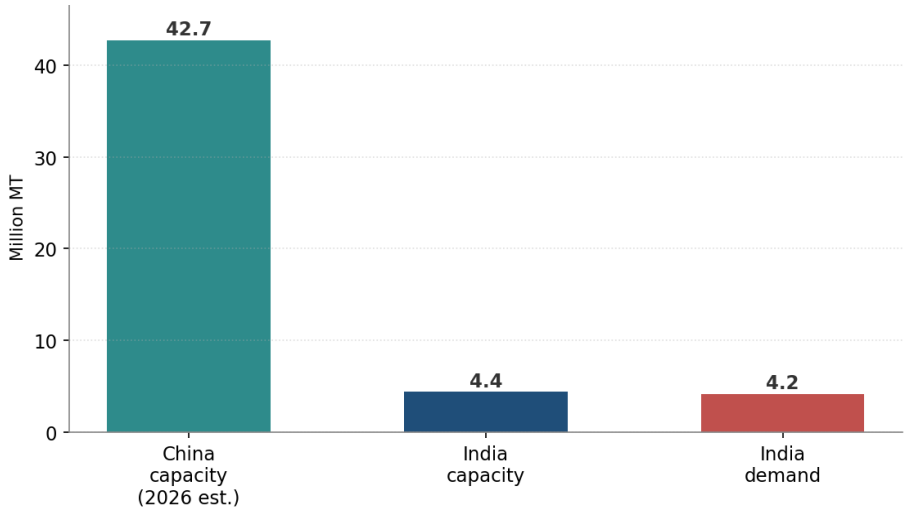

Figure 20: Scale of Chinese capacity against India's capacity and demand

Source: Tianfeng Securities Research Institute and AMAI Annual Industry Review

The first effect of Chinese capacity was therefore indirect, it widened the low-cost end of the global supply curve and placed downward pressure on international prices. Direct imports from China rose to 0.56 lakh MT in the last

[29]Genesis Energy, L.P. (2024). Annual report for the year ended December 31, 2023 (pp. 61). https://www.genesisenergy.com/sites/default/files/2024-02/10-K per cent202023.pdf

[30]Şişecam's U.S. move to bring global leadership [Press release]. https://www.sisecam.com/en/press-releases/sisecams-us-move-to-bring-global-leadership

[31] Secretaría de Economía. (n.d.). Industria de la cerveza en México. Gobierno de México.

[32]Morrin, M., Copur, H., & Bain, R. (2023, June 1). Soda ash world economic outlook. Chemical Market Analytics by OPIS. https://chemicalmarketanalytics.com/insights/soda-ash-world-economic-outlook/

[33]Tianfeng Securities Research Institute. (2024, May 30). Soda ash: Structural changes across both supply and demand [Industry research report], p. 17

quarter of FY 2025-26, more than eight times the 0.07 lakh MT recorded in the corresponding quarter of FY 2024-25, representing an increase of approximately 713 per cent[34].

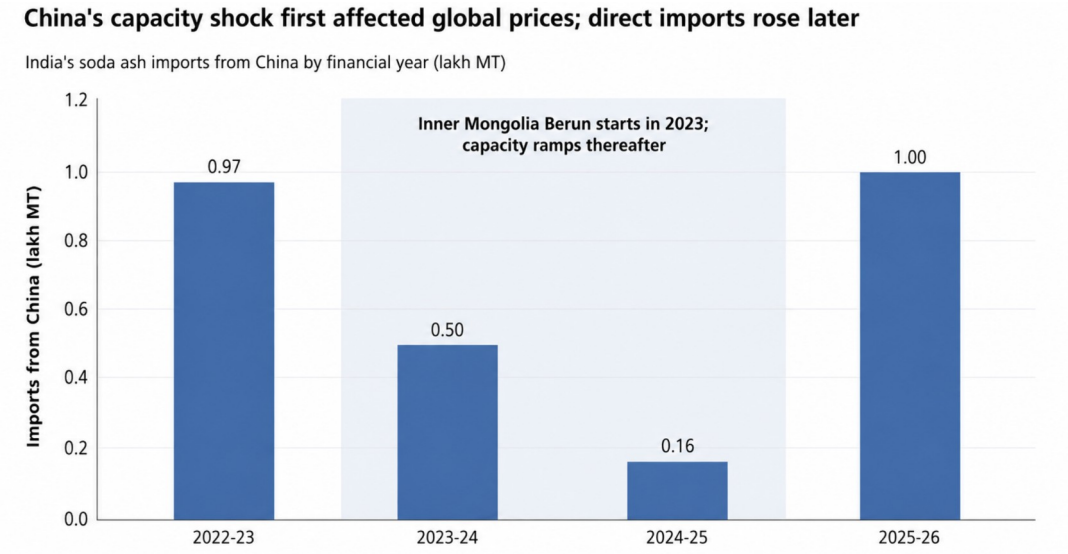

Figure 21: India's imports from China before and after the 2023 capacity expansion

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

(e) By 2023, global producers faced more available supply and weaker demand in established markets.

Soda ash demand reduced by about 4 per cent in Europe, 7 per cent in Latin America and 10 per cent in the United States, while India recorded positive growth of about 1 per cent[35].

Figure 22: Change in Global demand of soda ash (2022-2023)

Source: Final Findings, Case No. AD (OI)-29/2024, DGTR, Ministry of Commerce & Industry

Indian imports rose immediately after these developments converged (figure17). Imports increased from 5.77 lakh MT in FY 2022-23 to 10.41 lakh MT in FY 2023-24, an increase of 80.3 per cent. They remained high at 10.24 lakh MT in FY 2024-25[36].

[34] Computation based on data from International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

[35]Directorate General of Trade Remedies. (2025, September 29). Final findings: Anti-dumping investigation concerning imports of "Soda Ash" originating in or exported from Turkey, Russia, USA and Iran (Case No. AD (OI)-29/2024; F. No. 6/31/2024-DGTR). Department of Commerce, Ministry of Commerce and Industry, Government of India. https://dgtr.gov.in/sites/default/files/2025-09/FF_NCV_Soda per cent20Ash_29.09.25.pdf

[36]DGCI&S, Ministry of Commerce

4.2 Injury to the Domestic Industry

There is a causal relationship between increased imports and the deterioration of the domestic industry.

Global excess supply, weakened demand in major export markets and lower export prices redirected substantial volumes of soda ash to India. These imports entered at prices below domestic selling prices and captured demand that could otherwise have been served by Indian producers. Consequently, domestic market share, sales, production and capacity utilization declined despite continued growth in consumption. Import-led price pressure also caused selling prices to fall more rapidly than costs, resulting in sustained erosion of margins, profitability and returns. Increased imports were therefore the principal cause of injury.

4.2.1 Demand and volume of imports

Demand for soda ash in India, has grown steadily over the years. Imports, however, expanded much faster than total demand in FY2023-24 and remained elevated in FY2024-25. The import surge therefore cannot be explained by overall demand growth alone.

In FY2023-24, demand increased by 3.7 per cent over the previous year. In the same year, imports of soda ash increased by 80.3 per cent, i.e., imports grew nearly 22 times faster than demand. In FY2024-25, demand grew a further 7.0 per cent to reach 44.17 lakh MT, while imports remained elevated at 10.24 lakh MT, i.e., 77.3 per cent above the pre-surge FY2022-23 level. Imports have therefore remained substantially above their historical, pre-surge base despite the moderation from the surge-year peak.

Table 1: Demand and Imports of Soda Ash (Index, FY2020-21 = 100)

Financial Year	Demand (MT)	Demand Index	Imports (MT)	Imports Index	YoY Change in Imports
2020-21	36,31,686	100.0	7,19,731	100.0	—
2021-22	38,90,346	107.1	5,63,140	78.2	- 21.8 per cent
2022-23	39,79,449	109.6	5,77,480	80.2	+ 2.5 per cent
2023-24	41,26,835	113.6	10,41,138	144.7	+ 80.3 per cent
2024-25	44,17,482	121.6	10,24,036	142.3	- 1.6 per cent

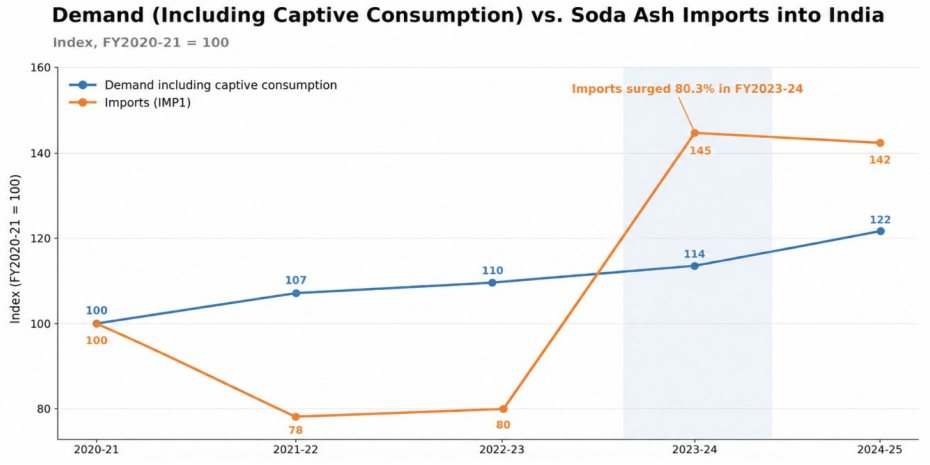

Figure 23: Soda ash demand and imports growth in India

Source: DGCI&S, Ministry of Commerce and AMAI database

4.2.2 Impact of imports on domestic market share

The market share of the domestic industry declined sharply, with the corresponding gain accruing entirely to imports. The domestic industry accounted for 85.5 per cent of Indian consumption in FY 2022-23. Its share fell to 74.8 per cent in FY 2023-24, a decline of 10.7 percentage points.

The share of imports increased from 14.5 per cent to 25.2 per cent. It remained elevated at 23.2 per cent in FY 2024-25. The moderation from the FY 2023-24 peak did not restore the earlier market structure. Imports continued to account for nearly one-fourth of demand, compared with about one-seventh before the surge.

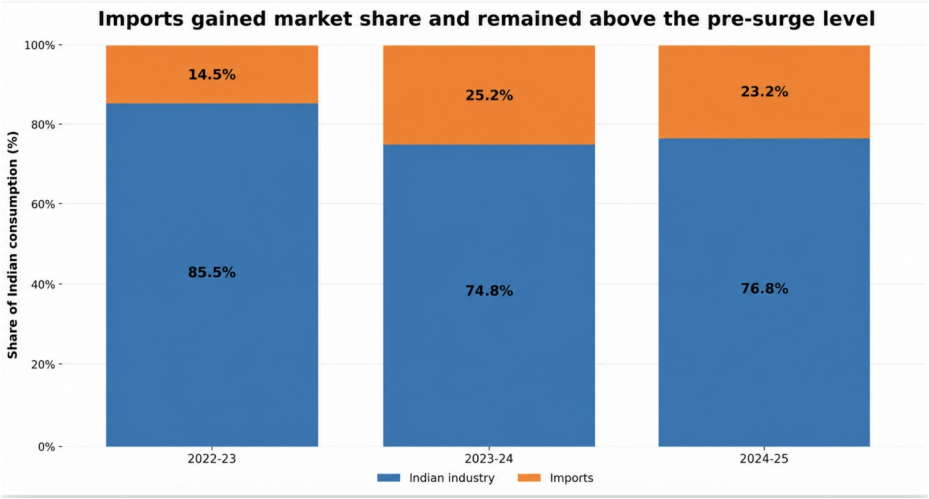

Figure 24: Market share of the Indian industry and imports

Source: DGCI&S, Ministry of Commerce and AMAI

4.2.3 Price suppression

(a) Sustained decline in landed prices of imports

The weighted-average landed price of soda ash imports increased from ₹17,267 per MT in FY2020-21 to ₹36,620 per MT in FY2022-23 amid the global escalation in energy costs. This trend subsequently reversed. The landed price declined by 28.5 per cent to ₹26,199 per MT in FY2023-24 and by a further 20.1 per cent to ₹20,933 per MT in FY2024-25. Overall, the weighted-average landed price fell by 42.8 per cent from its FY2022-23 peak.

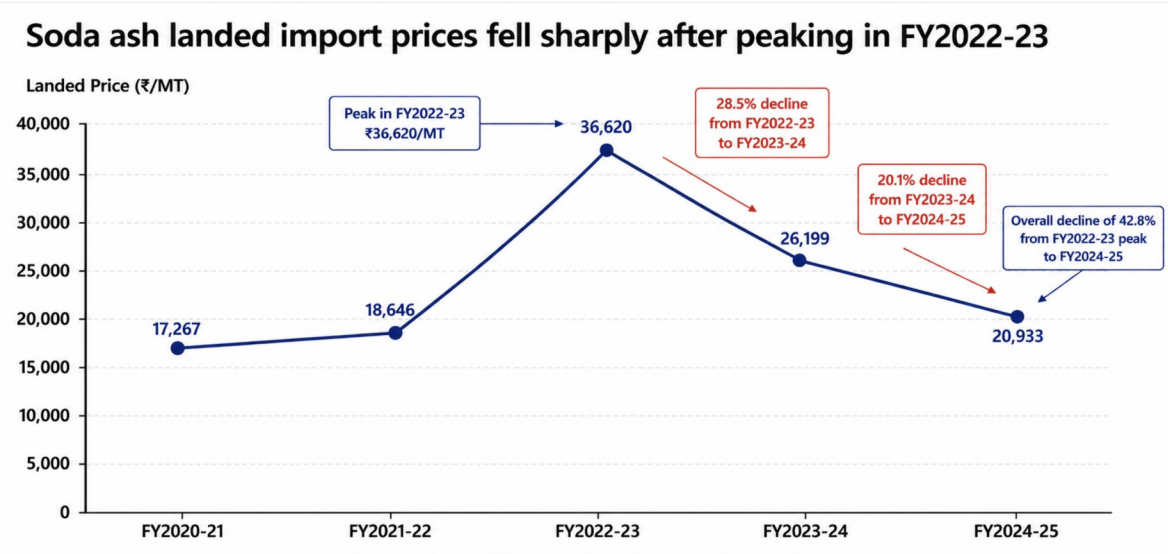

Figure 25: Trends in Landed Prices of Soda Ash Imports in India (2018-March 2026)

Source: DGCI&S, Ministry of Commerce

The decline was broad-based across major suppliers. Between FY2022-23 and FY2024-25, landed prices from the United States declined by 41.0 per cent, while prices from Turkey and Russia fell by 40.1 per cent and 49.3 per cent, respectively.

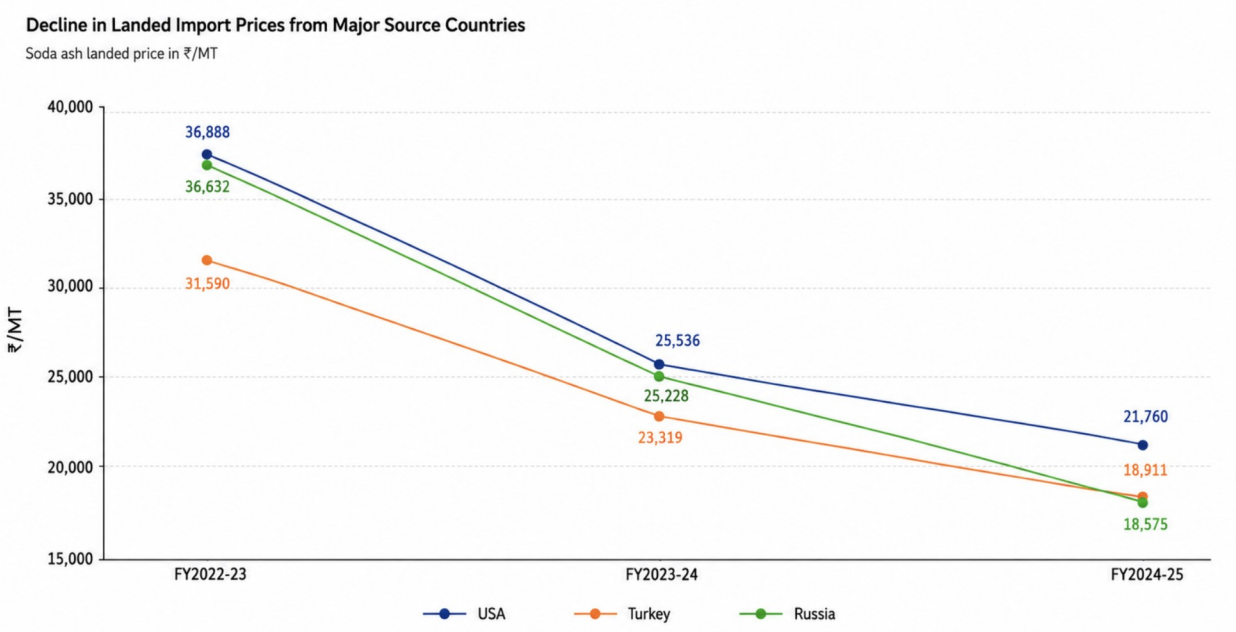

Figure 26: Declining landed imports from major source country

Source: DGCI&S, Ministry of Commerce

The sustained reduction in import prices increased the availability of low-priced soda ash in the Indian market. It also lowered the price at which imported material competed with domestic production. Domestic producers consequently faced growing pressure to align their selling prices with declining import prices, despite changes in their own production costs.

(b) Prices to India vs. Rest of the World

A comparison of export prices from Türkiye, the United States and China shows that Indian buyers frequently received soda ash at prices below those charged by the same exporters to the rest of the world (ROW) (figure 27). In the 2025, Turkey's export price to India was US$151 per MT against US$204 per MT for other markets, a discount of 26 per cent. The United States supplied India at US$179 per MT against US$219 per MT, a discount of 18 per cent. China supplied India at US$162 per MT against US$178 per MT, a discount of 9 per cent. These discounts intensified price pressure in the Indian market.

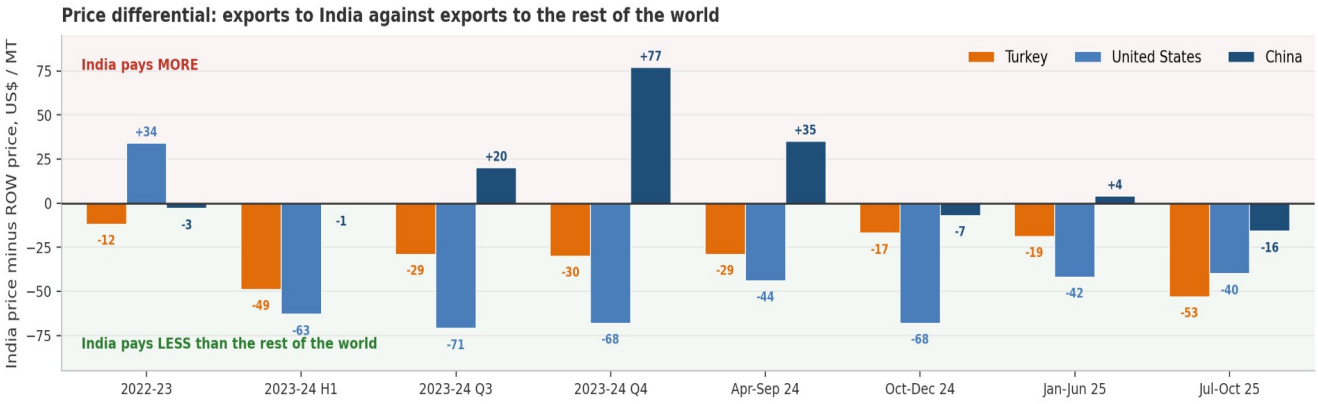

Figure 27: India CIF price versus Rest of the World price for Turkey, USA and China.

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

(c) Imposition of Minimum Import Prices

The government intervened in December 2024 to impose a Minimum Import Price (MIP) of Rs. 20.108 per MT to stabilise import prices[37]. During calendar year 2025, the weighted-average CIF price remained relatively stable at approximately ₹20,638 per MT[38]. After applying the 8.25 per cent landing factor[39], this corresponded to an average landed price of approximately ₹22,341 per MT.

Following the expiry of the MIP in December 2025, the weighted-average CIF price during January-March 2026 declined to approximately ₹19,040 per MT.

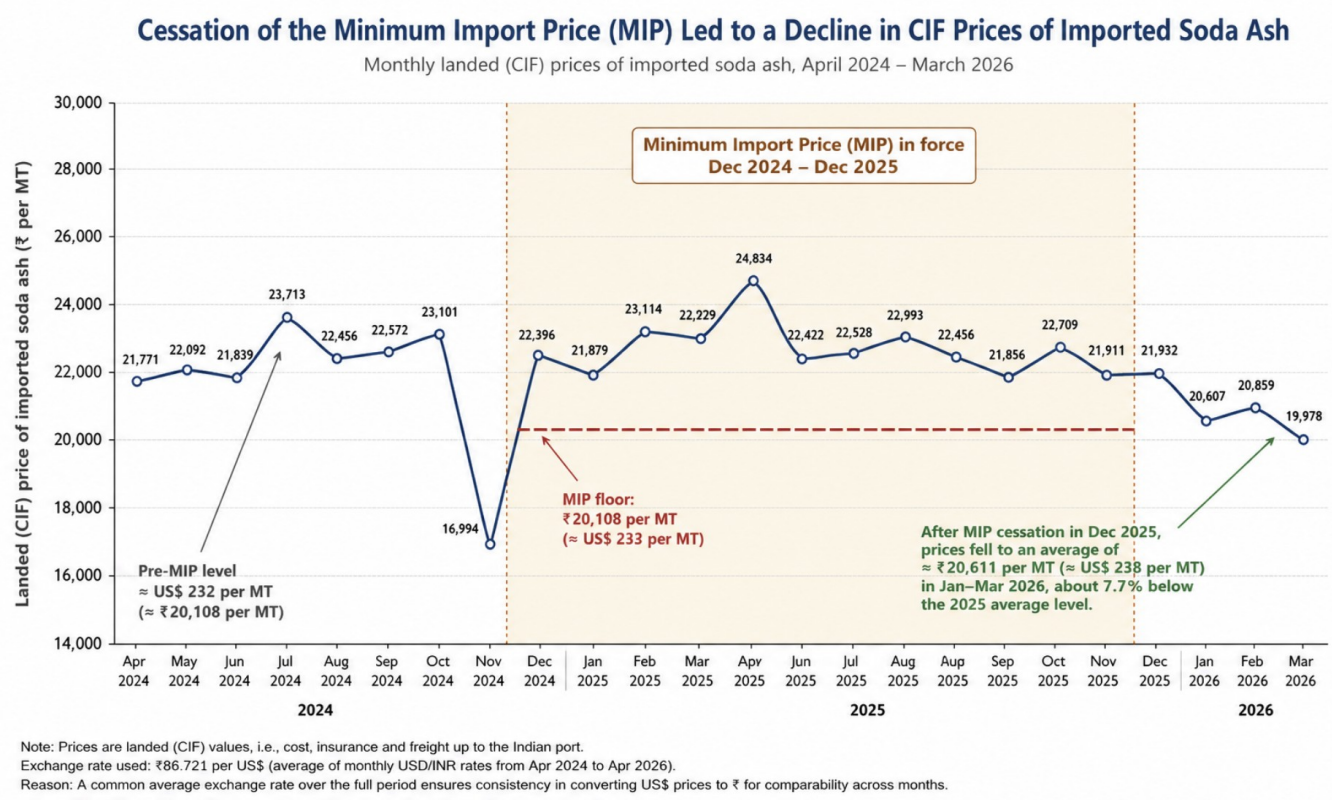

Figure 28: Monthly CIF price of soda ash imports, April 2024-March 2026

Source: International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

4.2.4 Capacity Utilisation

Capacity utilisation must be read together with demand, imports and the capital intensity of soda ash production. In FY 2022-23, demand including captive consumption was sufficient to require 93.7 per cent utilisation of installed domestic capacity, while actual utilisation was 85.8 per cent. In FY 2023-24, required utilisation increased to 97.2 per cent, but actual utilisation fell to 80.6 per cent.

[37]Directorate General of Foreign Trade. (2024, December 30). Notification No. 46/2024–25: Imposition of minimum import price (MIP) on import of soda ash covered under Chapter 28 of ITC (HS) 2022, Schedule I (Import Policy). Ministry of Commerce & Industry, Government of India. https://content.dgft.gov.in/Website/dgftprod/4fe345d5-c47a-4bca-beaa-d4cb9e87764e/Noti%2046%20-%20Eng.pdf

[38] Computed based on data from International Trade Centre, Trade Map, Disodium carbonate (HS 283620)

[39]Landed price has been estimated by adding Basic Customs Duty of 7.5 per cent and Social Welfare Surcharge equivalent to 0.75 per cent of CIF value. The resulting landed-price factor is 1.0825. IGST has been excluded from the calculation.

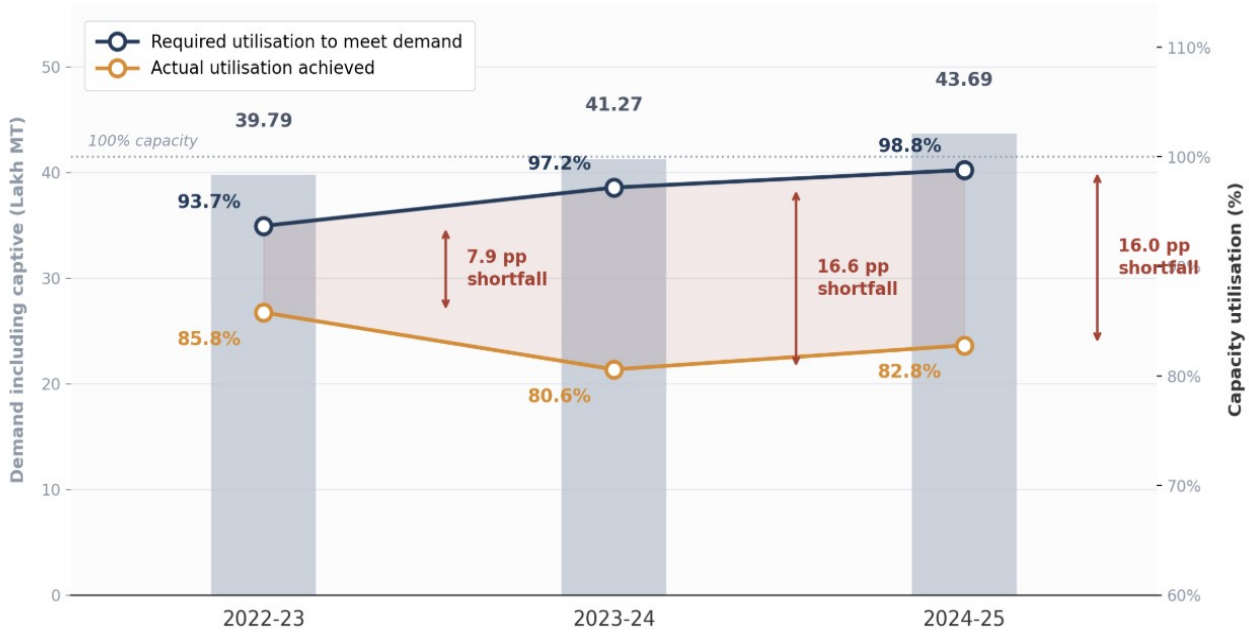

Figure 29: Demand including captive against required and actual capacity utilisation, 2022-23 to 2024-25

Source: AMAI Annual Industry Review

In FY 2024-25, demand was sufficient to absorb almost the entire installed capacity, while actual utilisation recovered only to 82.8 per cent. The gap between demand-supported and actual utilisation therefore widened from 7.9 percentage points in FY 2022-23 to 16.6 points in FY 2023-24 and 17.1 points in FY 2024-25.

The widening gap shows that domestic capacity remained underused despite rising consumption. The shortfall cannot be attributed to weak demand or insufficient installed capacity. A growing share of the market was served through imports, reducing production that could otherwise have been undertaken by Indian plants.

The industry-wide average must be viewed in the context of differences across individual producers. During the injury period, one producer operated at nearly 99 per cent capacity utilisation, while others recorded utilisation of around 86 per cent. The aggregate figure therefore masks company-level variation and cannot, by itself, establish that the domestic industry was operating at commercially efficient levels or had not suffered injury.

Given the capital-intensive nature and high fixed-cost base of soda ash production, even a one percentage-point decline in capacity utilisation can have a significant adverse impact on profitability.

4.2.5 Threat to future investments

Soda ash capacity is a highly capital intensive industry. The estimated cost of setting up new greenfield capacity is approximately ₹85,000 per MT[40]. In anti-dumping investigations, the DGTR assesses injury by examining whether the domestic industry earns a reasonable return on the capital employed in production[41]. A 22 per cent Return on Capital Employed (ROCE) is generally used as the benchmark for this assessment. On the estimated investment cost, this translates into a return of nearly ₹18,700 per MT. The industry's profitability has remained below this level, including during its strongest operating periods.

New plants and capacity-expansion projects need long lead times, raw-material arrangements, energy systems, environment clearances and customer confidence. This means investors need a stable view of future market realizations before they commit capital.

[40]CRISIL. (2019, November 4). RSPL Limited. https://www.axistrustee.in/pdf/RSPL per cent20LIMITED per cent20-(CRISIL) per cent204th per cent20November per cent202019.pdf

[41]Gupta, K., & Rajani, N. (2024, June 20). Valuation of captive inputs for determination of non-injurious price. Mondaq. https://www.mondaq.com/india/international-trade-investment/1481316/valuation-of-captive-inputs-for-determination-of-non-injurious-price

Such investments depend on the industry's ability to generate stable returns and build internal funds for expansion. However, the profit-to-cost ratio declined sharply from 45.3 per cent in FY2022-23 to 24.5 per cent in FY2023-24 and 20.6 per cent in FY2024-25. This represents a decline of 24.7 percentage points, or about 55 per cent, in two years.

The decline is significant for an industry considering capacity additions of over 20 lakh MT[42] [43] [44] [45]. Lower profitability reduces internal accruals and weakens the commercial basis for committing fresh capital. If imports remain elevated and continue to suppress domestic prices, proposed investments may be deferred, reduced or withdrawn. This would constrain future domestic capacity and increase India's dependence on imported soda ash.

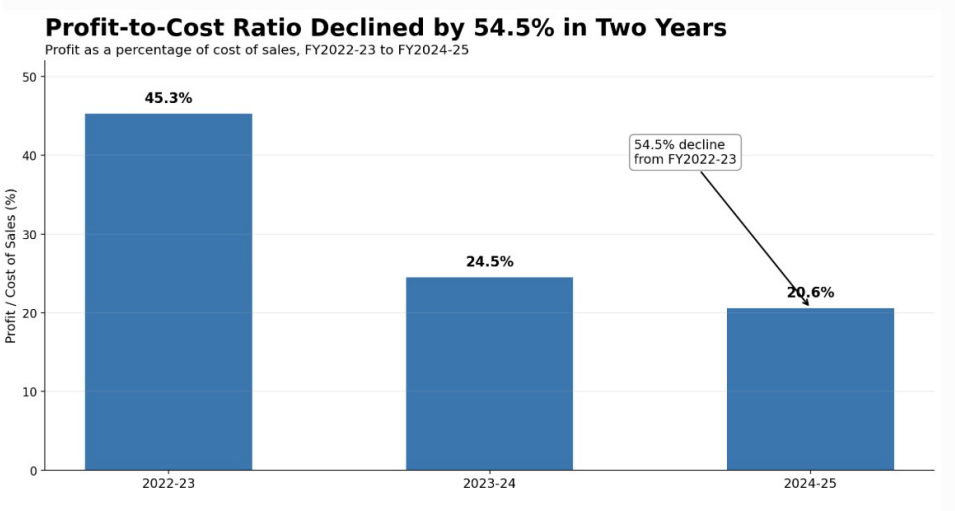

Figure 30: Figure 26: Profit-to-cost ratio of the domestic soda ash industry (FY 2023-2025)

Source: AMAI Annual Industry Review

4.3 Structural cost advantage of natural soda ash

Natural and synthetic soda ash compete as products, but they do not have the same cost structure. A synthetic Solvay plant purchases or produces salt brine, limestone and ammonia, consumes fuel and electricity, and manages solid and liquid residues. Energy is required for limestone calcination, steam, carbonation and drying. The route can be efficient at scale, but it remains sensitive to coal, gas, power and raw-material costs.

A natural soda ash operation starts with a mineral that already contains sodium carbonate. Mining, solution extraction, calcination and finishing are still required, but fewer chemical conversion stages are needed. The resulting cost advantage can be substantial. The exact difference changes with energy prices, mine quality, freight and plant efficiency. The important point is structural: a natural producer can lower export prices while remaining profitable at a level that places pressure on a synthetic producer.

[42] Ministry of Environment, Forest and Climate Change, Government of India. (2017). Expansion in soda ash from 2,800 TPD to 4,300 TPD, caustic soda from 750 TPD to 1,000 TPD, and captive power plant from 197.18 MW to 350 MW at the existing facility of Nirma Limited, Kalatalav, Gujarat [Form 1, Proposal No. IA/GJ/IND2/71426/2017]. https://environmentclearance.nic.in/auth/FORM_A_PDF.aspx?cat_id=IA%2FGJ%2FIND2%2F71426%2F2017

[43] GHCL Limited. (2025). Business update: Q3 FY25 investor presentation. https://ghcl.co.in/wp-content/uploads/2025/01/GHCL_Intimation_Investors_Presentation_Business_Update_Q3FY25.pdf

[44] Tata Chemicals Limited. (2026, May). Investor deck: Q4 FY26. https://www.tatachemicals.com/tata/sites/default/files/2026-05/investor-deck-q4fy26.pdf

[45] ETManufacturing. (2026, February 6). RSPL Group's SOKA unit secures environmental clearance to double soda ash output. https://manufacturing.economictimes.indiatimes.com/news/industry/rspl-groups-soka-unit-secures-environmental-clearance-to-double-soda-ash-output/127985400\

4.4 Geopolitical risks

India's soda ash imports are concentrated in a small number of countries. In FY 2024-25, four countries accounted for 87.6 per cent of total imports of 10.24 lakh MT. Turkey supplied 37.0 per cent, the United States 22.2 per cent, Iran and the United Arab Emirates together 15.9 per cent, and Russia 12.5 per cent[46].

This concentration creates significant supply-chain exposure. Shipments from Türkiye and the Black Sea region are vulnerable to disruption in the Suez Canal and Red Sea. Supplies from the Gulf are exposed to the security of the Strait of Hormuz. UNCTAD has documented that Red Sea disruptions increase shipping distances, freight costs, insurance premiums and transit times. The 2026 disruption in the Strait of Hormuz also showed the limited availability of alternative routes. Such disruptions can affect imported soda ash, domestic energy supplies and imported raw materials at the same time[47].

Geopolitical risks add to this exposure. India’s trade relations with Türkiye have weakened following its support for Pakistan, and sourcing of certain Turkish-origin goods is being redirected. Supplies from Iran, the United Arab Emirates and Russia are also exposed to sanctions, payment restrictions and maritime-security risks. Any disruption at a major source would affect downstream industries directly.

The larger risk is the erosion of domestic capacity before a disruption occurs. India’s experience with Penicillin-G illustrates this sequence. Domestic production closed between 2003 and 2011 after manufacturers could not compete with subsidised Chinese imports [48]. India subsequently became entirely dependent on imports of its Penicillin-G and 6-APA requirements [49]. This dependence became evident when Chinese production was disrupted during the pandemic. A similar pattern emerged in edible oils. India was largely self-sufficient in the early 1990s. Following tariff reductions, import dependence rose to nearly 60 per cent[50]. Indonesia’s export restrictions in 2022 then caused an immediate domestic price shock[51].

In both cases, domestic capability was lost before the external disruption occurred. Maintaining adequate domestic soda ash capacity is therefore necessary to ensure supply continuity and reduce exposure to concentrated import sources and vulnerable trade routes.

[46]DGCI&S, Ministry of Commerce

[47]UNCTAD, Navigating Troubled Waters: Impact to Global Trade of Disruption of Shipping Routes in the Red Sea, Black Sea and Panama Canal, February 2024; International Energy Agency, Strait of Hormuz factsheet and 2026 market updates.

[48]Joseph, R. K., & Kumar, R. A. (2021, December). Reducing import dependence on APIs in the Indian pharmaceutical sector: An analysis of early experience of the PLI Phase-I scheme (Working Paper No. 239). Institute for Studies in Industrial Development. https://isid.org.in/pdf/WP239.pdf

[49]Press Information Bureau. (2021, January 22). Approval accorded under PLI Scheme for promotion of domestic manufacturing of critical key starting materials (KSMs), drug intermediates and APIs. Ministry of Chemicals and Fertilizers, Government of India. https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1691185

[50]Patel, N., Choudhary, H., & Goswami, S. (2024). Pathways and strategy for accelerating growth in edible oil towards the goal of Atmanirbharta. NITI Aayog. https://www.niti.gov.in/sites/default/files/2024-08/Pathways_and_Strategy_for_Accelerating_Growth_in_Edible_Oil_towards_Goal_of_Atmanirbharta_August%2028_Final_compressed.pdf

[51]Jadhav, R. (2022, April 25). Indonesia’s palm oil export ban leaves global buyers with no plan B. Reuters. https://www.reuters.com/business/indonesias-palm-oil-export-ban-leaves-global-buyers-with-no-plan-b-2022-04-25/

5. Global responses to capacity erosion due to import surge

Global safeguard practice allows authorities to examine the full injury period, give more weightage to the most recent period, and still recognise a surge that began earlier if the elevated import level continues.

The safeguard investigation into soda ash examines the injury period from 2020-2021 to September 2025, across which import trends and injury parameters are assessed to establish the present condition of the domestic industry. Within this lies the surge period. It identifies the point at which the abnormal increase in imports first occurred and whether that elevated level continued. For soda ash, the surge began in 2023-24, when imports increased by 80 per cent from 5.77 lakh MT to 10.41 lakh MT[52].

International safeguard investigations have consistently recognised that an import surge may begin before the most recent period and remain legally relevant where the elevated level continues[53] [54] [55]. A marginal decline from the peak also does not weaken the finding of increased imports where volumes remain substantially above historical levels. The following cases illustrate this approach.

EU Steel Safeguard, 2019

The European Commission used 2013-2017 as the period considered and July 2017-June 2018 as the most recent period. Imports increased from 183.29 lakh tonnes in 2013 to 300.94 lakh tonnes in 2017 and 313.14 lakh tonnes in the MRP. The Commission also recorded that imports increased by 45 per cent between 2013 and 2015 and by 71 per cent between 2013 and the MRP.

The EU treated the increase as recent because the earlier surge continued into the MRP. In the case of soda ash well imports first surged in 2023-24 and remained high in 2024-25 and Jan-Sep 2025.

EU Ferro-Alloys Safeguard, 2025

The Commission used 2019-2024 as the period concerned and July 2024-June 2025 as the MRP. Imports were 1,142,942 tonnes in 2019, 1,018,257 tonnes in 2020, 1,414,728 tonnes in 2023, 1,331,588 tonnes in 2024 and 1,296,347 tonnes in the MRP. Imports declined by 8.4 per cent from the 2023 peak to the MRP, but they were still 13.4 per cent above 2019 and 27.3 per cent above 2020. Imports relative to Union production rose from a ratio of 1.85 in 2019 to 4.18 in the MRP, an increase of 126 per cent. Imports relative to consumption rose from 0.62 in 2019 to 0.76 in the MRP, an increase of 22.6 per cent.

A decline from the peak did not defeat the safeguard case because imports remained materially above earlier levels. Soda ash imports also declined marginally from 10.41 lakh MT in 2023-24 to 10.24 lakh MT in 2024-25, but increased again to 10.47 lakh MT in the MRP.

[52] DGCI&S, Ministry of Commerce

[53] European Commission. (2019). Commission Implementing Regulation (EU) 2019/159 of 31 January 2019 imposing definitive safeguard measures against imports of certain steel products. Official Journal of the European Union, L 31, 27–74.

[54] European Commission. (2025, November 18). Commission Implementing Regulation (EU) 2025/2351 imposing a definitive safeguard measure with regard to imports of certain ferro-alloying elements. Official Journal of the European Union, L 2025/2351.

[55] World Trade Organization. (2002, February 15). United States Definitive safeguard measures on imports of circular welded carbon quality line pipe from Korea: Report of the Appellate Body (WT/DS202/AB/R)

US Line Pipe Safeguard

The United States examined 1994-1998 with interim 1999 data. Imports rose from about 222,000 tons in 1997 to about 331,000 tons in 1998, an increase of about 49.1 per cent. Imports in interim 1999 were slightly lower than interim 1998, but exceeded the full-year levels of 1995 and 1996 in just six months. The import-to-production ratio rose from more than 17.2 per cent in 1996 to more than 23.2 per cent in 1997, more than 42.0 per cent in 1998 and more than 43.5 per cent in interim 1999.

The case supports use of comparable annual and interim-period data. It also shows that a small decline in the latest interim period does not negate increased imports where the latest level remains historically high.

6. Policy implications and way forward

6.1 Implementation of a Safeguard Quantitative Restriction Quota on soda ash imports

Soda ash imports in India increased from 5.77 lakh MT in 2022-23 to 10.41 lakh MT in 2023-24, and remained elevated at 10.24 lakh MT in 2024-25 and 10.47 lakh MT on an annualised basis in Jan-Sep 2025. This occurred even though India has domestic capacity broadly aligned with demand. The import increase coincided with lower landed prices, excess global capacity, a structural cost advantage for natural soda ash, pressure on domestic realisations, underused domestic capacity, weaker investment signals, foreign exchange outflow and higher exposure to concentrated import origins. The issue is therefore wider than a price dispute.

A calibrated safeguard quantitative restriction quota could respond to this chain without disrupting the domestic industry. The indicative quota of 7,33,525 MT is derived from a representative pre-surge import base of 6,20,117 MT and a demand-growth buffer of 1,13,408 MT. If proposed restrictions are imposed, there would not be any adverse impact on consumer industries. Proposed quota is higher than import volumes prevailing from 2020-21 to 2022-23 i.e. before sudden and sharp increase in imports from 2023-24 and also considers the rate in increase in demand. It could therefore create volume discipline while leaving import space for users that rely on specific grades, contract continuity, natural-route sourcing or supplier diversification.

Table 6: Calculation of the proposed first-year quota

Component	Quantity (MT)	Method
Average imports in three years prior to the surge period (2020-21 to 2022-23)	620,117	Representative three-year pre-surge base
Demand-growth allowance	113,408	Buffer for expanding Indian consumption and import-dependent users
Indicative first-year quota	733,525	Pre-surge base plus growth allowance

Source: C-DEP calculation based on data from DGCI&S, Ministry of Commerce and AMAI Annual Industry Review

6.2 Designing the measure to protect downstream users

Soda ash is an important raw material for several downstream industries, including glass, detergents, silicates, sodium bicarbonate and other chemicals. Certain users may continue to require imported soda ash because of grade consistency, impurity profile, carbon footprint, delivery reliability or plant-specific technical parameters. The safeguard measure should therefore preserve access to essential imports while addressing the injury caused by elevated import volumes.

AMAI data indicates that the estimated cost impact remains limited even in the two downstream segments most sensitive to soda ash prices.

In detergents, assuming soda ash consumption of 0.25 kg per kg of finished product, the estimated impact is ₹1.34 per kg, equivalent to 1.67 per cent of the MRP.

In glass, assuming soda ash consumption of 0.16 kg per kg of finished product, the estimated impact is ₹0.86 per kg, equivalent to 2.52 per cent of the finished product price.

The policy assessment must also recognise that downstream industry has received support from the government in the form of anti-dumping duties, including on clear float glass, textured tempered glass, toughened glass, sheet glass and glassware (Refer to Annexure I). There are no imports of detergents in the country and therefore the industry is anyways is not threatened by imports. The viability of the domestic soda ash industry merits comparable consideration, particularly given its importance to the continuity of downstream production.

An assurance-based tariff-rate quota would provide a balanced structure. Imports within the quota could continue to enter at the bound tariff rate, while an additional duty would apply to volumes exceeding the quota. The European Commission adopted a comparable approach in its ferro-alloys safeguard. This structure would preserve access for users requiring imported material while limiting the quota rent that could arise under an absolute quantitative ceiling.

6.3 Building resilience beyond the trade remedy

India's domestic production capacity is heavily concentrated in Gujarat, resulting in higher freight costs and longer lead times for users in southern and central India. Policy support should therefore extend beyond the SGQR quota framework to include coastal shipping, rail connectivity, and inland logistics. The industry also relies on imported limestone and on shipping routes passing through the Bab el-Mandeb Strait and the Strait of Hormuz[56]. This exposure underscores the need to map critical upstream dependencies, diversify supply sources and routes, and maintain strategic buffers of essential inputs.

India's synthetic production route is also more energy- and carbon-intensive than the natural route that accounts for most new global capacity. The period of trade relief could therefore be used strategically to address these structural disadvantages. This can include securing long-term supplies of salt, limestone, ammonia, and energy, while supporting energy-efficiency improvements and process decarbonisation. Such measures would help ensure that the over 20 lakhs MT of announced domestic capacity expansion is implemented rather than delayed or abandoned.

[56] GHCL Limited. (2022, October 31). Outcome of the 200th board meeting of the company [Stock exchange disclosure].

Annexure I

ADD on downstream products

Product	Country	DGTR No.	Duty recommended
Clear Float Glass	Pakistan, Saudi Arabia, UAE	Original Investigation (OI)- F.No.14/25/2012-DGAD dated 10.10.2014 Sunset Review (SSR) – F. No.7/3/2019-DGAD dated 07.11.2019	OI- Saudi Arabia – 165.07 USD/MT, UAE – 111.15 USD/MT, Pakistan – 123.61 USD/MT SSR - Saudi Arabia – 165.07 USD/MT, UAE – 111.15 USD/MT, Pakistan – 123.61 USD/MT
imports of Textured Tempered Glass whether Coated or Uncoated	Malaysia	OI – F. No.6/45/2017-DGAD dated 17.01.2019 SSR- F. No. 07/11/2023-DGTR dated 25.11.2023	OI- 114.58 USD/MT SSR – No duty
Toughened glass for home appliances having thickness between 1.8 MM to 8 MM and area of 0.4 SqM or less	China	F. No.6/10/2022-DGTR dated 28.08.2023	243 USD/MT
Textured Tempered Glass whether Coated or Uncoated	China	OI- F. No. 14/03/2016-DGAD dated 20.06.2017 SSR- F. No. 07/10/2021-DGTR dated 13.05.2022	OI – 136.21 USD/MT SSR- 302.65 USD/MT
Clear Float Glass	Bangladesh, Thailand	F. No. 06/10/2021-DGTR dated 29.06.2022	Bangladesh and Thailand both 306.10 USD/MT
Clear Float Glass nominal thicknesses ranging from 4mm to 12mm (both inclusive)	Iran	OI – F.14/7/2015-DGAD dated 20.03.2017 SSR – F. 7/15/2021-DGTR dated 11.02.2022	OI – 55.59 USD/MT SSR - 54.36 USD/MT
Float Glass	China and Indonesia	OI – F. No. 14/19/2002-DGAD dated 22.08.2003 SSR – F. No. 15/1/2007- DGAD dated 2.12.2008 SSR 2 – F. No. 15/24/2013-DGAD dated 02.07.2015 SSR 3 F. No. 07/02/2020-DGTR dated 26.11.2020	OI – Indonesia 81.21 USD/MT, China 72.27 USD/MT SSR – Indonesia 81.21 USD/MT, China 133 USD/MT SSR 2 China 218 USD/MT SSR 3 China 218 USD/MT
Clear Float Glass	Malaysia	F. No. 6/15/2019-DGTR dated 20.08.2020	326 USD/MT
Sheet Glass	China	OI – F. No. 14/22/2013-DGAD dated 19.12.2014	OI – 63 USD/MT SSR –

		SSR – F.No.7/10/2019-DGTR dated 21.02.2020	63 USD/MT
Glassware	China and Indonesia	F.No.14/45/2016-DGAD dated 05.03.2018	China 955.27 USD/MT, Indonesia 955.27 USD/MT

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ABOUT THE CENTRE

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