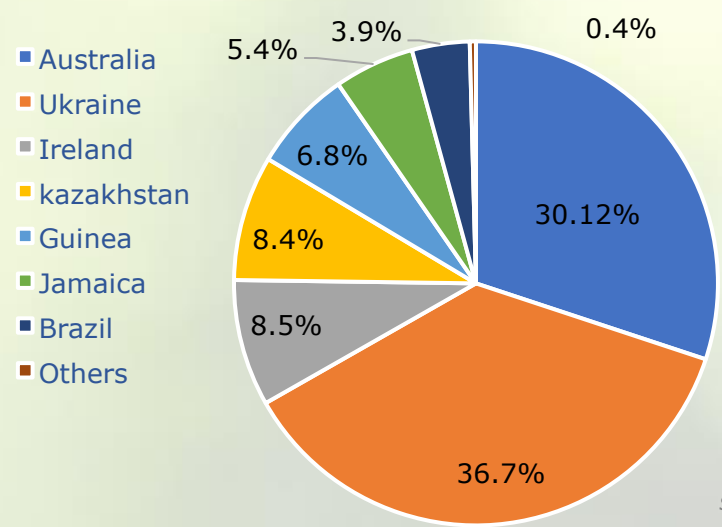




RUSSIA-UKRAINE WAR IMPACT ON THE JAPAN BASED BEVERAGE MANUFACTURER

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Russia Alumina Import in 2020



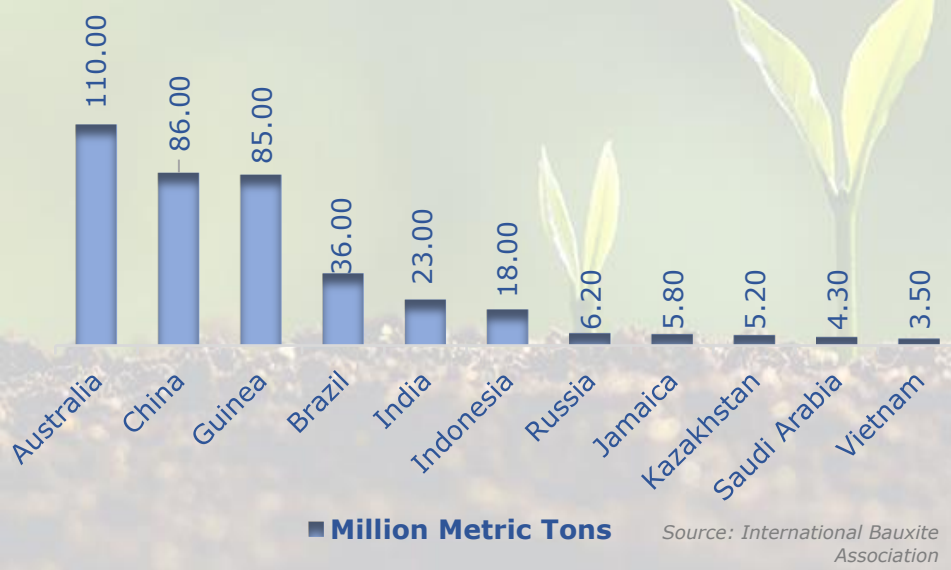
Source: UN Comtrade

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Import Restrictions Causing Raw Material Crisis

- Amid Russia’s invasion of Ukraine, Russia is facing trade restrictions from countries across the world including Japan.
- UC Rusal IPJSC, the largest aluminum producer outside China is engaged in mining and refining of bauxite into alumina and exports substantial portion of aluminum to Japan.
- Russia accounted for 19.85% of wrought aluminum import in Japan in 2021, of which UC Rusal IPJSC accounted for its majority exports.
- Owing to unavoidable logistical transport challenges on the Black Sea and surrounding area, on 1st March 2022, UC Rusal IPJSC shut down its Nikolaev alumina refinery based in Ukraine, which accounted for 21.7% company’s total alumina output.
- Aluminum is extracted from the bauxite ore. The bauxite is purified to produce aluminum oxide, a white powder from which aluminum is drawn out with the help of electrolysis.
- Australia is the largest bauxite producing countries and accounts for 30.12% of Russia’s import of bauxite.
- On 31st March 2022, Australian government announced ceasing all exports of alumina and aluminum ores, including bauxite, to limit Russia’s ability to produce aluminum.
- Export restrictions of Australia and unavailability of Nikolaev alumina refinery is expected to create a raw material deficit in the country.

Leading Bauxite Producing Countries In 2021



Source: International Bauxite Association

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Russia Export of Wrought Aluminum Globally, 2017-2020 (HS Code = 7601)

Year	Trade Value (USD Billion)	Trade Weight (Thousand Metric Tone)
2018	5.13	2964
2019	4.64	2738
2020	4.22	2693

Source: UN Comtrade

Average WTI Crude Oil Prices, 2012-2022



Note: Till June 23, 22

2

Increasing Premium on Aluminum

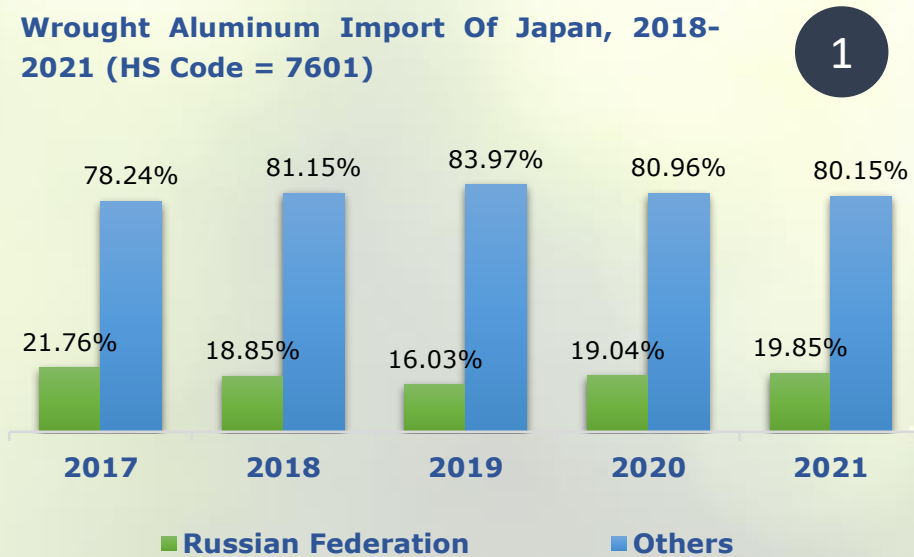
- On April 6, 2022, The United States of America imposed major sanctions against seven Russian oligarchs and 12 companies they own or control, stating the companies are profiting from the malign activities of which Russian state is engaged around the world.
- These restrictions impacted the Russian aluminum industry harshly, as the country is among the largest exporter of aluminum globally.
- Japan imports around 20% of its wrought aluminum from Russia. As, Russian aluminum industry is facing shortages in raw material sourcing and export restrictions, considerable aluminum market deficit is expected.
- The global aluminum market deficit is anticipated to increase the premium paid by the Japanese buyers to purchase aluminum. As on 07 March 2022, London Metal Exchange (LME) stated increase record high aluminum prices at USD4,000/tonne for the first time.
- Leading Russian banks have been banned from Swift transactions and country's foreign reserves have been sanctioned by the west, leading Russia on the verge of bankruptcy.
- Economic sanctions on Russia coupled with supply chain disruptions, will increase the aluminum market deficit, increasing the price of aluminum, consequently increasing the production cost of aluminum cans in Japan.



MEASURE TO MITIGATE THE POTENTIAL IMPACT

RUSSIA-UKRAINE WAR IMPACT ON THE JAPAN BASED BEVERAGE MANUFACTURER

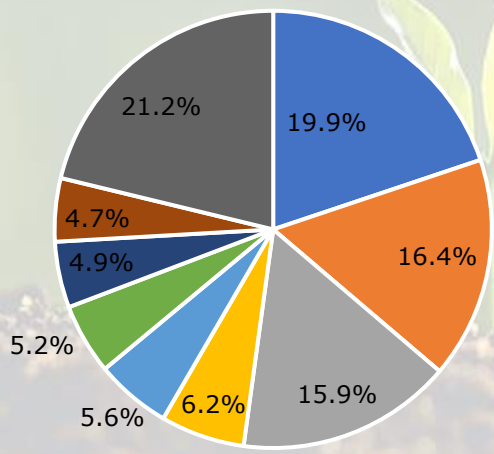
Wrought Aluminum Import Of Japan, 2018-2021 (HS Code = 7601)



Source: Uncom trade

Top Exporters of Wrought Aluminum in Japan, 2021 (HS Code = 7601)

- Russian Federation
- Australia
- United Arab Emirates
- New Zealand
- Brazil
- Saudi Arabia
- India
- China
- Others



Source: Uncom trade

Focus On Non-Russian Aluminum Exporters

- Russia accounts for majority of aluminum imports in Japan, however, around 80% of its wrought aluminum is imported from countries other than Russia.
- Australia, United Arab Emirates, China, New Zealand, India, Brazil, Saudi Arabia etc. are some of the other major exporters.
- Amid trade restrictions in Russia, the beverage manufacturer is suggested to import substantial amount of aluminum from other countries to reduce the trade deficit.
- China, is home to some of the largest aluminum manufacturing companies in the world such as Aluminum Corporation of China Limited, China Hongqiao Group, Shandong Xinfu Aluminum Co., Ltd.
- Distance between nearest shipping ports of Chinese aluminium manufacturing companies and the busiest port in Japan i.e. port of Nagoya is in the range of 1500-1700kms which is next to Russia. Also, owing to China’s vast global shipping network, the country incurs comparatively less logistics cost.
- According to China’s custom data, the country have exported 26,378 tons of aluminum ingots in February 2022, colossal growth of more than 500% from January.
- Other than China, next favorable countries are Australia and India which ranks 1 and 5 respectively in global bauxite production.

MEASURE TO MITIGATE THE POTENTIAL IMPACT

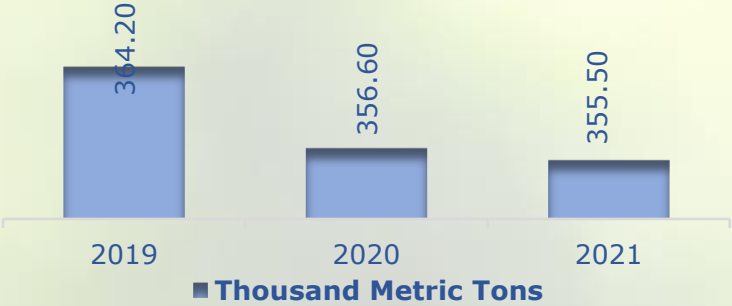
Leading Aluminum Producing Companies Outside Russia in 2021

Company	Country	Nearest Port to the Company	Distance From The Port of Nagoya (Km)
Aluminum Corporation of China Limited	China	Port of Tianjin	1,748
China Hongqiao Group	China	Port of Shanghai	1,697
Shandong Xinfu Aluminum Co., Ltd	China	Port of Qingdao	1,509
Rio Tinto Alc	Australia	Port of Weipa	6,031
Alcoa Corporation	U.S.	Port of Vancouver USA	8,009
Emirates Global Aluminium	UAE	Port of Abu Dhabi	11,703
Norsk Hydro	Norway	Port of Rorvik	7,942
Hindustan Aluminium Company (HINDALCO)	India	Jawaharlal Nehru Port Trust	6,319
Jindal Aluminium	India	Jawaharlal Nehru Port Trust	6,319
National Aluminium Company (NALCO)	India	Jawaharlal Nehru Port Trust	6,319

MEASURE TO MITIGATE THE POTENTIAL IMPACT

Production Of Aluminum Cans In Japan,2019-2021

2



Source: Japan Aluminium Association

Aluminum Recycling Companies In Japan

Company	Location
Yamaichi Metal Corp	Honjuku, Nagaizumi, Sunto District
Chiba Aluminum Recycle Center	Wong Chuk Hang Rd, Wong Chuk Hang
Showa Denko Group	Minato-ku, Tokyo
Chiho Environmental Group	Wang Lok St, Yuen Long Industrial Estate
UACJ Corporation	Chiyoda City, Tokyo

Source Recycled Aluminum Cans

- Sustainability practices adopted by various companies across Japan have strongly impacted the development of the circular economy.
- Beverage industry is rapidly adopting sustainable packaging solutions by utilizing recycled aluminum cans.
- According to the Japan Aluminium Association and the Council for PET (Polyethylene Terephthalate) Bottle Recycling, the recycling rate for aluminum cans stands at around 70% while the recycling rate for plastic bottles is 24.3%.
- Recycling aluminum uses 95% less energy than producing aluminum from raw materials. It also saves 97% of green house gas emissions produced in the primary production process.
- Aluminum is 100% recyclable, and recycling 1 tone of aluminum saves 9 tones of CO2 emissions and 4 tones of bauxite, therefore, recycled aluminum cans costs relatively cheaper, reducing the packaging cost for the beverage manufacturer.
- The country has strong support from the Aluminum Can Recycling Association (ACRA) and has nationwide recycling network showcasing strong projections for aluminum recycling.
- Showa Denko Group announced that they recycled 4.43 Million aluminum cans in FY2019, equivalent to about 67.8 tons of aluminum when converted at the rate of 15.3 grams of aluminum per can.



THANK YOU