

27th



**World Aluminium
Conference 2022**

18-19 May 2022 • London, UK

ALUMINA
LIMITED

Raw Materials: Bauxite & Alumina Issues

Guinea, China and alumina supply/demand outlook

Andrew Wood – Group Executive, Strategy & Business Development

Alumina Limited

19 May 2022

Disclaimer

Summary Information

This Presentation contains summary information about the current activities of Alumina Limited (ACN 004 820 419) (**Alumina**) and its subsidiaries as at the date of this Presentation. The information in this Presentation should not be considered to be comprehensive nor to comprise all the information that a reader may require in order to make an investment decision regarding Alumina securities. This Presentation should be read in conjunction with Alumina's other periodic and continuous disclosure announcements lodged with the ASX, which are available at www.asx.com.au.

No Offer, Recommendation or Advice

This Presentation is for information purposes only and is not a prospectus, product disclosure statement or other disclosure or offering document under Australian or any other law. It does not constitute an offer, invitation or recommendation to acquire Alumina securities in any jurisdiction and neither this Presentation nor anything contained in it will form the basis of any contract or commitment. The information contained in this Presentation is not financial product advice, or any other advice, and has been prepared without taking into account any reader's investment objectives, financial circumstances or particular needs.

Forward-Looking Statements

Neither Alumina nor any other person warrants or guarantees the future performance of Alumina or any return on any investment made in Alumina securities. This Presentation may contain certain forward-looking statements, including forward-looking statements within the meaning of the US Private Securities Litigation Reform Act of 1995. The words "anticipate", "aim", "believe", "expect", "project", "estimate", "forecast", "intend", "likely", "should", "could", "will", "may", "target", "plan" and other similar expressions (including indications of "objectives") are intended to identify forward-looking statements. Indications of, and guidance on, future financial position and performance and distributions, and statements regarding Alumina's future developments and the market outlook, are also forward-looking statements.

Any forward-looking statements contained in this document are not guarantees of future performance. Such forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Alumina and its directors, officers, employees and agents that may cause actual results to differ materially from those expressed or implied in such statements. Those risks, uncertainties and other factors include (without limitation): (a) material adverse changes in global economic conditions, alumina or aluminium industry conditions or the markets served by AWAC; (b) changes in production or development costs, production levels or sales agreements; (c) changes in laws, regulations or policies; (d) changes in alumina or aluminium prices or currency exchange rates; (e) Alumina Limited does not hold a majority interest in AWAC and decisions made by majority vote may not be in the best interests of Alumina Limited; and (f) the other risk factors summarised in Alumina's Annual Report 2021. Readers should not place undue reliance on forward-looking statements. Except as required by law, Alumina disclaims any responsibility to update or revise any forward-looking statements to reflect any new information or any change in the events, conditions or circumstances on which a statement is based or to which it relates.

Key Risks

Certain key risks that may affect Alumina, its financial and operating performance and the accuracy of any forward-looking statements contained in this Presentation include (without limitation): (a) material adverse changes in global economic conditions, alumina or aluminium industry conditions or the markets served by AWAC; (b) changes in production or development costs, production levels or sales agreements; (c) changes in laws, regulations or policies; (d) changes in alumina or aluminium prices or currency exchange rates; (e) Alumina Limited does not hold a majority interest in AWAC and decisions made by majority vote may not be in the best interests of Alumina Limited; and (f) the other risk factors summarised in Alumina's Annual Report 2021.

Past Performance

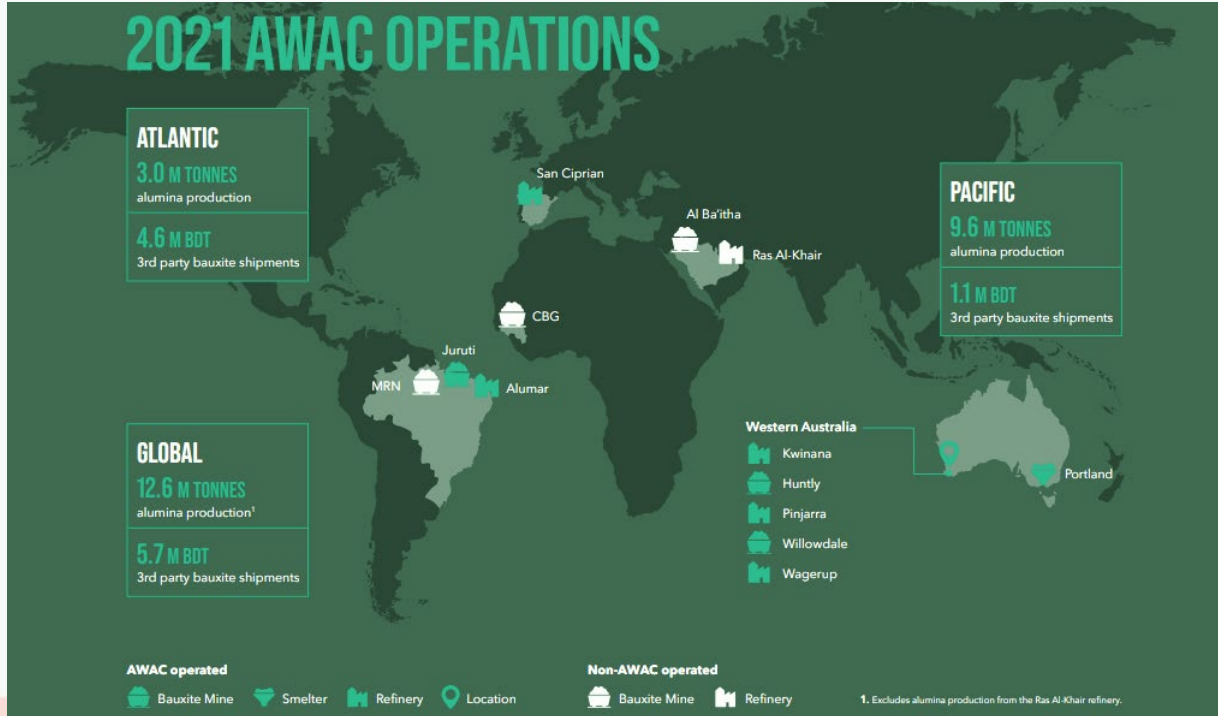
Past performance information contained in this Presentation is given for illustrative purposes only and should not be relied upon as (and is not) an indication of future performance.

No Liability

The information contained in this Presentation has been prepared in good faith and with due care but no representation or warranty, express or implied, is provided as to the currency, accuracy, reliability or completeness of that information.

To the maximum extent permitted by law, Alumina and its directors, officers, employees and agents, and any other person involved in the preparation of this Presentation, exclude and disclaim all liability for any expenses, losses or costs incurred by any person arising out of or in connection with the information contained in this Presentation being inaccurate or incomplete in any way for any reason, whether by negligence or otherwise.

AWAC Joint Venture (Alumina Limited 40% owner)

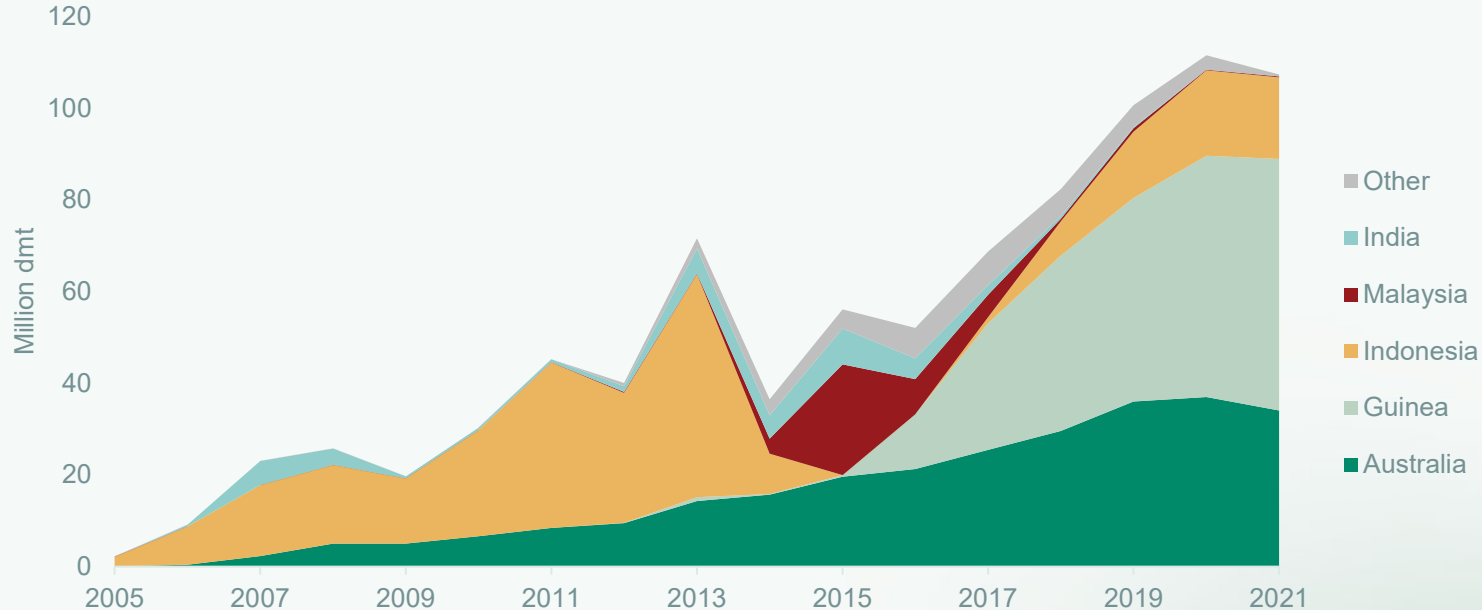


- Alumina Limited owns 40% of the AWAC joint venture, one of the world's largest bauxite & alumina producers
- Alcoa Corp owns the remaining 60% of the JV and is the manager
- JV produced 12.6 million tonnes of alumina and had 5.7 million tonnes 3rd party bauxite sales in 2021
- AWAC's Q1 2022 average alumina cash cost was \$288/t (first quartile on the global curve), excluding the minority interest in Ras Al Khair

Topics

- Chinese bauxite imports and how China's carbon policies could impact refining
- Guinea bauxite mines and what makes them successful
- Issues for the industry in Guinea under the new leadership, including the requirement for miners to build alumina refineries
- 5 to 10 year alumina supply demand balance

Chinese Bauxite Imports by Source – Overwhelmingly from Guinea, Australia and Indonesia



- Chinese bauxite imports have grown strongly and totalled 107 million tonnes in 2021
- Guinea accounted for 51% of total Chinese imports in 2021
- The proportion of low-temp bauxite imports reached around 80% of total imports in 2021

How China's Carbon Policy could Affect Its Refining Industry













Short-term Impact:

- Capacity being added in 2022 already under construction prior to China's carbon targets being announced
- Given the 45 million tpa capacity cap on primary aluminium (de facto alumina cap), any new alumina refining capacity would likely replace existing high cost capacity (at least to some extent)
- New alumina refining projects based on coal likely to be scaled-back, delayed or cancelled.
- Likely impact on existing refineries
 - Shift in energy sources
 - Conversion from HT to LT processing imported bauxite to reduce energy consumption
 - Upgrade technology - to increase alumina recovery rates

Long-term Impact:

- Domestic capacity relocating overseas
 - Higher capex, lower opex
 - Longer build time
 - Risk in operating in a different political and social environment
 - May impact demand for imported bauxite
- Where would be an ideal location to build?
 - Low-cost, high-grade bauxite, ideally nearby
 - Available or expandable clean energy
 - Manageable governance risk
 - Infrastructure availability
 - Proximity to smelting growth areas
- Higher cost of marginal alumina tonnes in China, likely to result in higher prices

Guinean Operating Mines by output (2021), Ownership and Vertical Integration – Total around 80 Million Tonnes

MINE	LOCATION	OWNER	INTEGRATION	2021 OUTPUT (million dry metric tonnes)
SMB-WAP	BOKÉ	SMB-WAP	95%	 28.4
CBG	BOKÉ	ALCOA, RIO TINTO, DADCO, GoG*	54%	 15.8
GAC	BOKÉ	EGA (GAC)	11%	 10.8
CHALCO	BOFFA	CHALCO	95%	 10.5
HENAN-CHINE	BOKÉ	HENAN-CHINE	100%	 4.4
DIAN DIAN	BOKÉ	UC RUSAL	100%	 3.0
CBK	KINDIA	UC RUSAL	100%	 2.4
SPIC	CAPE VERGA	SPIC	100%	 1.6
FRIGUIA	BOFFA	UC RUSAL	100%	 1.4
AGB2A	BOFFA	GIC, SD MINING	0%	 0.8
BEL AIR	CAPE VERGA	ALUFER	0%	 0.7
ASHAPURA	BOFFA	ASHAPURA	0%	 0.0-0.3 **
SBG	KINDIA	SBG	0%	0.0

* Government of Guinea
 ** Possibly AGB2A bauxite

INTEGRATED 59.5
(74%)

THIRD-PARTY 20.6
(26%)

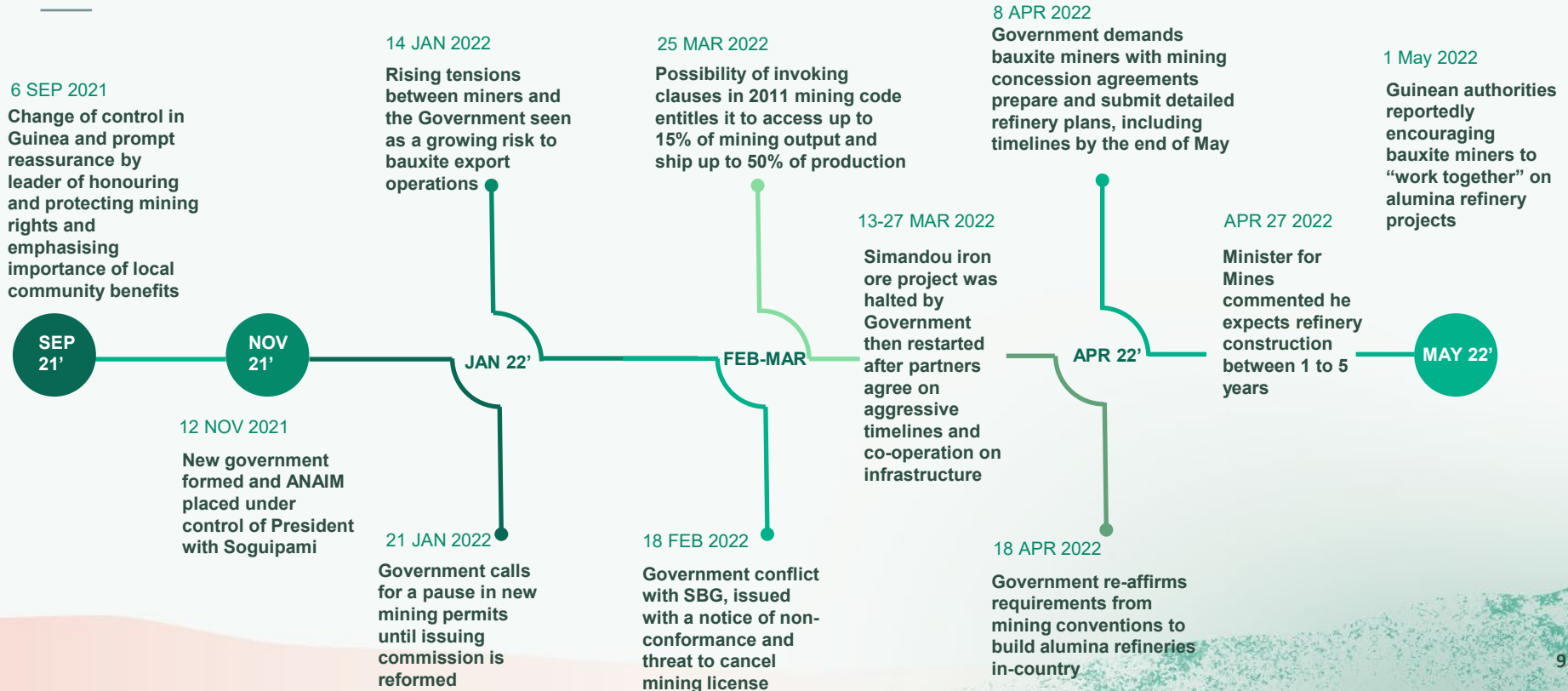
Successful Guinean Bauxite Projects – Ideal Factors *(in addition to Low Cost, Efficient Mining Methods)*

- Integrated or long-term offtake (ideally ≥ 5 million tpa), with excellent service and good customer relationships
- Rail or short haul road distances from mine to port
- Integrated or secure long-term port/infrastructure with barge/ocean-going vessel transshipping to Capesize
- Minimum 45% alumina, maximum 3% silica, standard grade bauxite
- Secure, long-term COA's (Contracts of Affreightment)
- Stringent ESG performance and engaging with and improving local communities

Exploitation licenses grant the Government up to 15% of project ownership

Concessions are negotiated separately and typically include the legal requirement to build a refinery

Major Events in Guinea Since September 2021 – Pressure on **ALUMINA** LIMITED



Known Alumina Refining Projects in Guinea (as of Q1 2022)

Specific obligations to build a refinery may differ between individual mining conventions

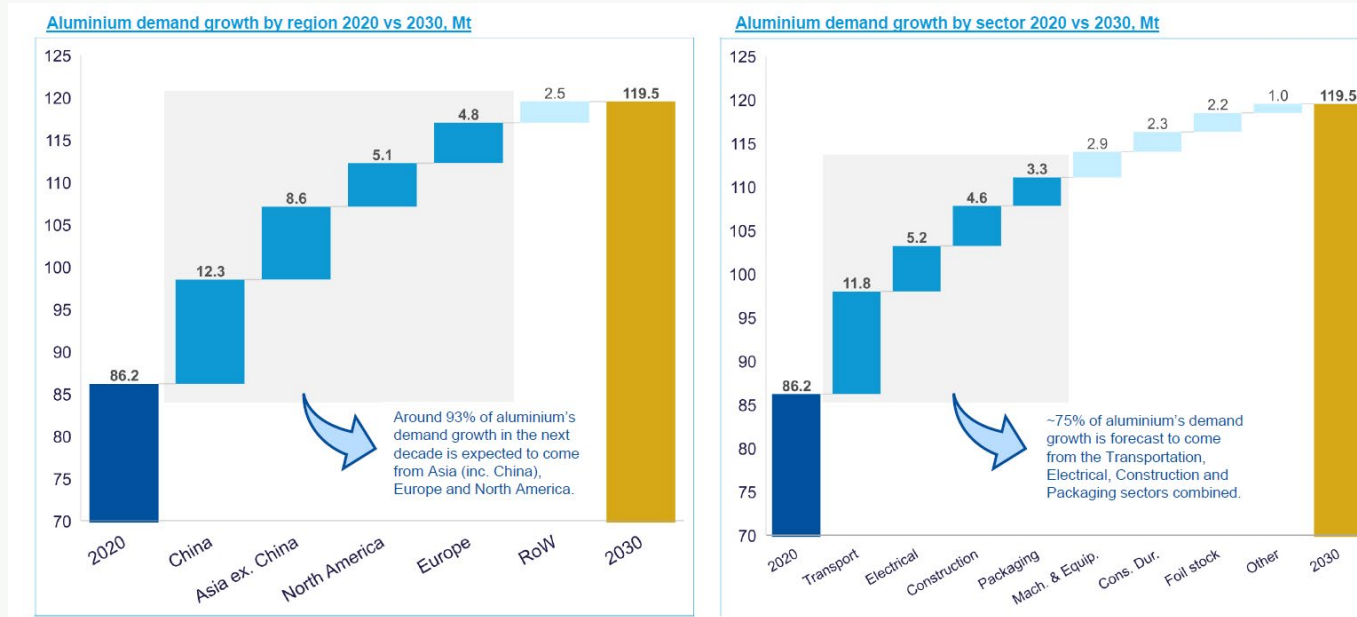
PROJECT	ESTIMATED CAPACITY (Million tpa)
WEIQIAO SMB (C)	1.0
CHALCO BOFFA (C)	[1.0]
CBG (C)	[1.7]
SPIC GUINEA (C)	[4.0]
GAC (C)	2.0
RUSAL (C)	1.2
TBEA (EP)	1.0
HENAN-CHINE (C)	1.0
SBG	1.6
TOTAL	14.5

ISSUES FOR REFINERY PROJECTS
<ul style="list-style-type: none"> • High construction costs in remote locations • Power, water, transport infrastructure lacking • Need to import energy, caustic soda – coal/oil imports available but may not meet Western refiners ESG needs • No gas or LNG import facilities available and in any event decarbonisation needs lower emissions than 100% gas and limited hydroelectricity not proximate to bauxite • Stable and transparent environment key for investors • Opportunity for Government and multiple projects to pool investment in hydroelectric expansions, LNG terminals, (low carbon) caustic plants to improve project economics • May be sensible to consolidate refinery projects

(C) Concession, (EP) Exploration Permit

33 million t extra aluminium consumption forecast 2020-2030 **ALUMINA** LIMITED

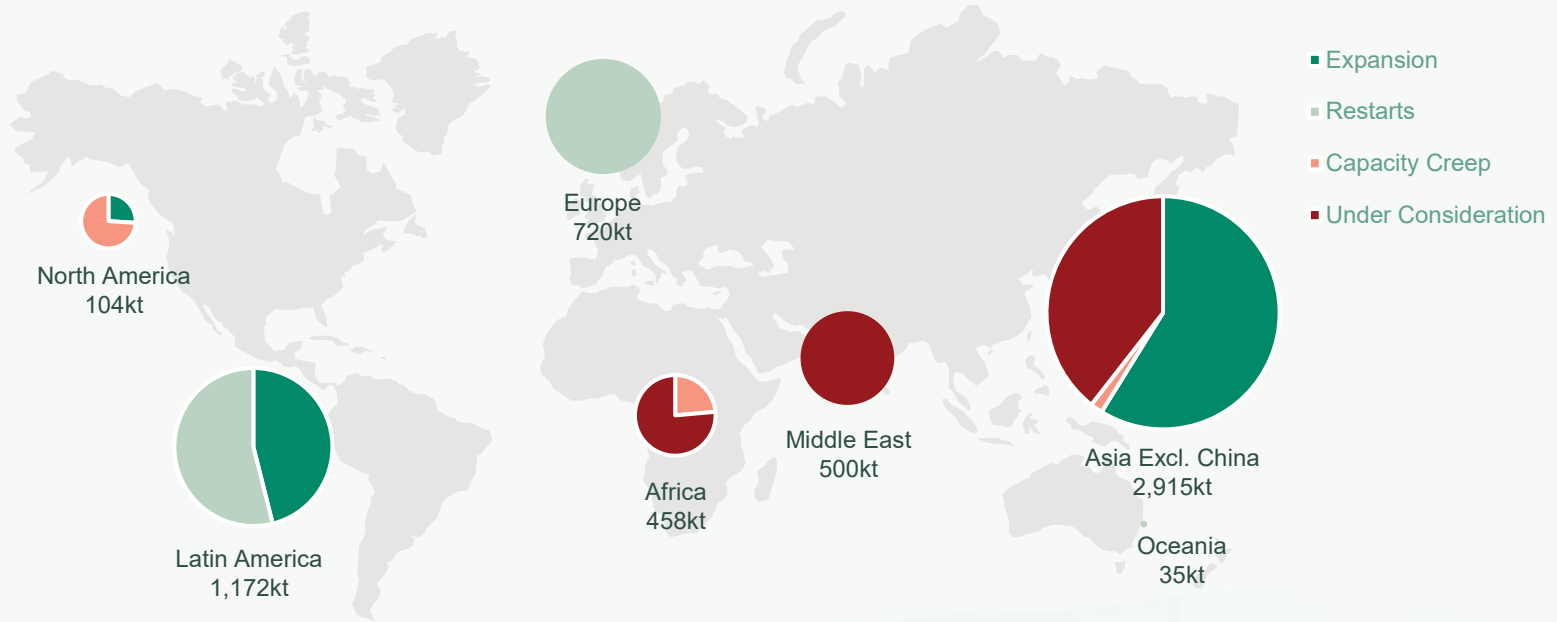
Recycled aluminium 28% share of 2020 consumption moving up to 37% in 2030



- The primary aluminium share of the forecast demand would likely require at least 25 million tonnes of extra alumina production globally by 2030

5 year primary aluminium production growth (outside China)

5.9 million tpa expected and potential increase over 2022-2027



- Approximately 11 million tpa of extra alumina production required to meet the increase
- Only 3 million tpa of additional alumina production committed outside China in next few years

Limited likely new alumina capacity outside China next 3-5 years (excluding Guinea)

Country	Company	Refinery	Capacity (M tpa)	Type	Likelihood?
India	Vedanta	Lanjigarh	3.0	Brownfield	1.5m tpa by end 2023 and another 1.5m tpa by end 2024
India	Penna/RAKIA	Anrak	1.5	Greenfield	Built in 2014, started in 2022
Malaysia	Bosai	Kuantan	2.0	Greenfield	Beyond 2027
UAE	EGA	Al Taweelah II	2.0	Brownfield	Beyond 2027
India	Nalco	Damanjodi	1.0	Brownfield	Possible
India	Hindalco	Rayagada	2.0	Greenfield	Possible
Greece	Mytilineos	Distomon	0.9	Brownfield	Possible
Jamaica	JISCO	Alpart	2.0	Brownfield/Greenfield	Possible
Egypt	Jinjiang	Unknown	1.0	Greenfield	Possible
UAE	East Hope	KIZAD	2.0	Greenfield	Possible
Indonesia	Inalum/Antam	Mempawah, WK	2.0	Greenfield	Possible
Laos	Slaco	Paksong	1.0	Greenfield	Unlikely
Indonesia	Jinjiang	West Kalimantan	1.0	Greenfield	Unlikely

- Lanjigarh is the only new capacity commitment beyond 2022 (Bintan II, Kendawangan II, Anrak and Utkal increases this year)
- Major impediments to new SGA capacity are return on capex and desire for low(er) carbon energy
- In China, ~8m tpa being added over 2022 (displacing some existing capacity) and able to swing volumes on cost/price fluctuations