



American Cement

Global Cement Presentation

30th March 2022



american cement



The ultimate “intelligence” provider in the global cement sector
cembrgroup.com

Markets included in the presentation

NORTH AMERICA

Canada
Mexico
USA

CENTRAL AMERICA

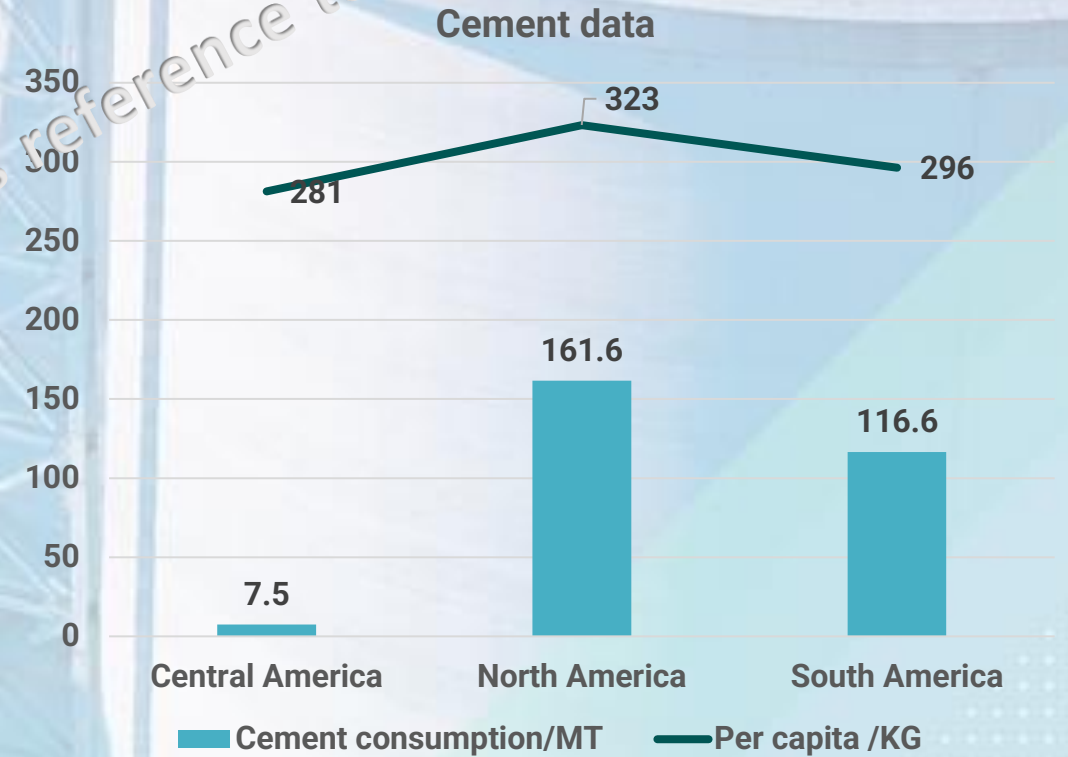
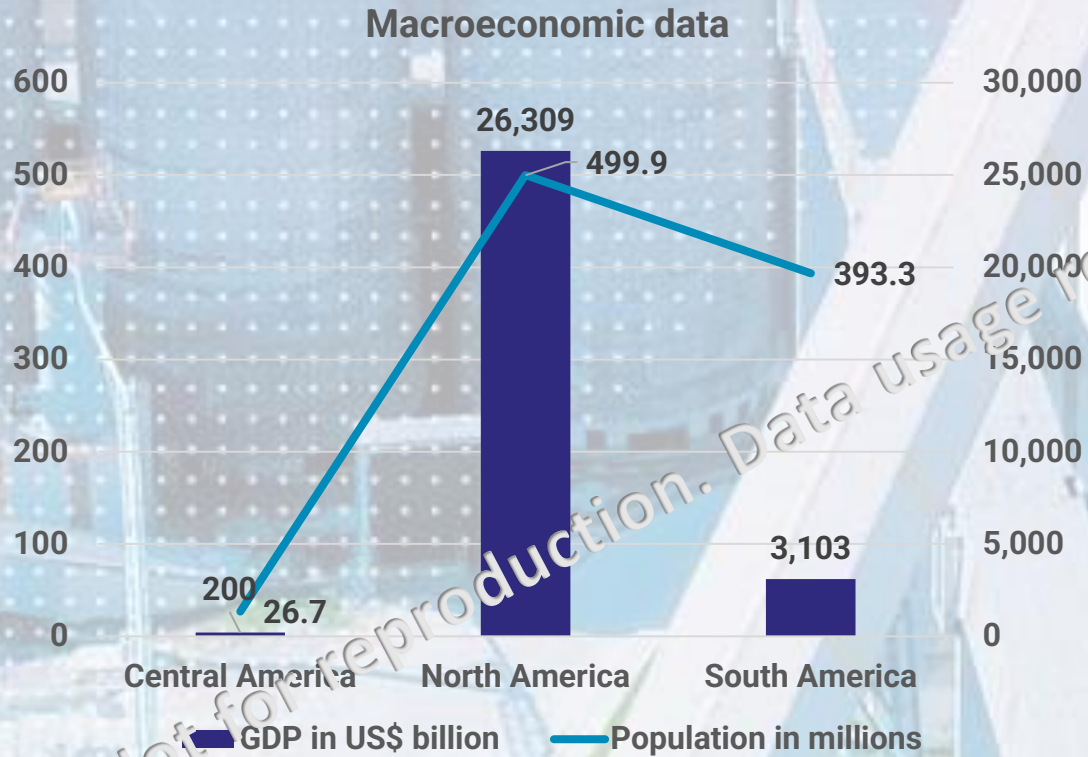
Costa Rica
Guatemala
Panama

SOUTH AMERICA

Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Peru



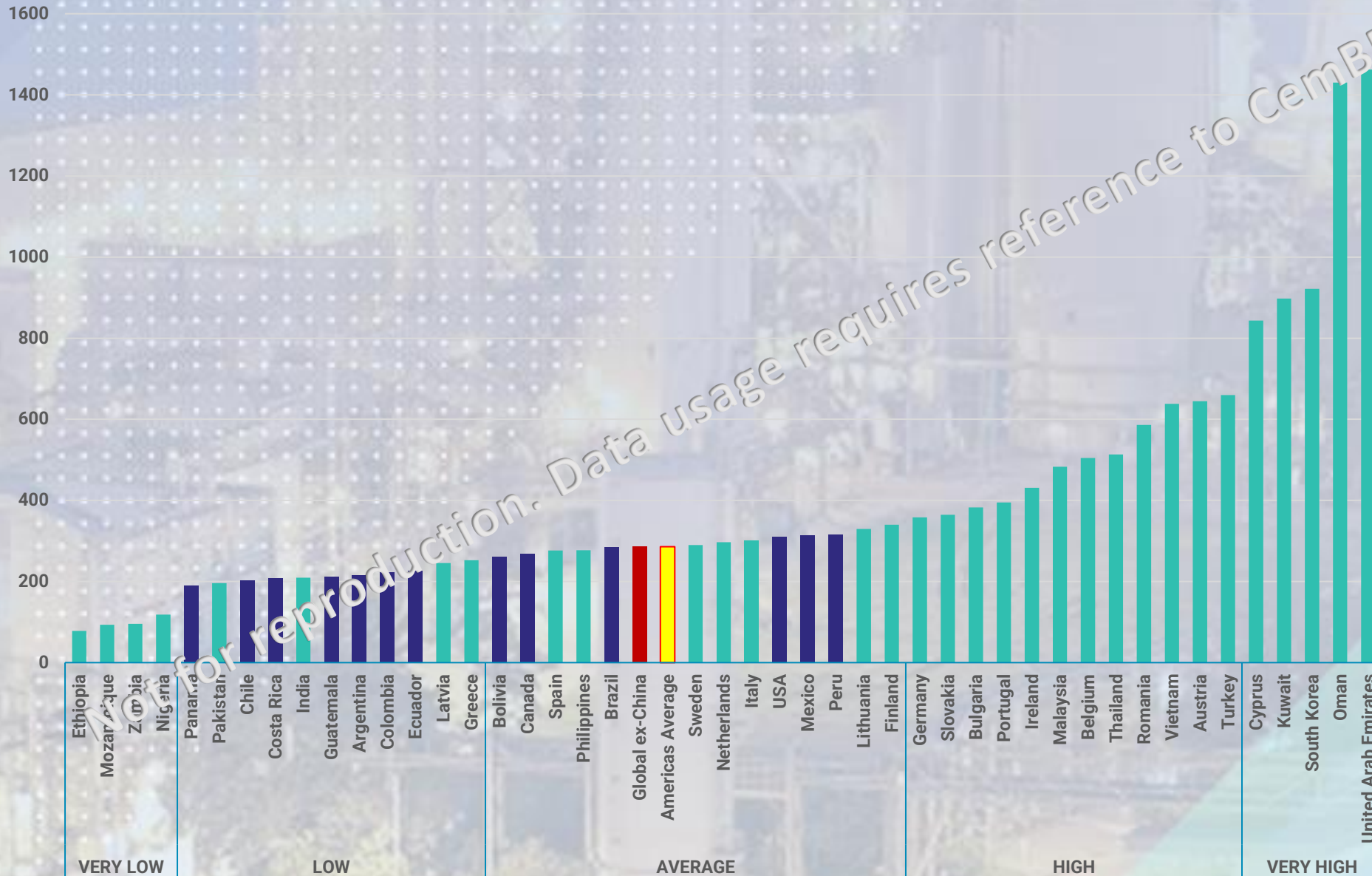
General macro and cement data – 2021E



Source:



Per capita comparisons – 2020



Average global per capita excluding China at around 286 Kg.
Average global with China at 575 Kg.

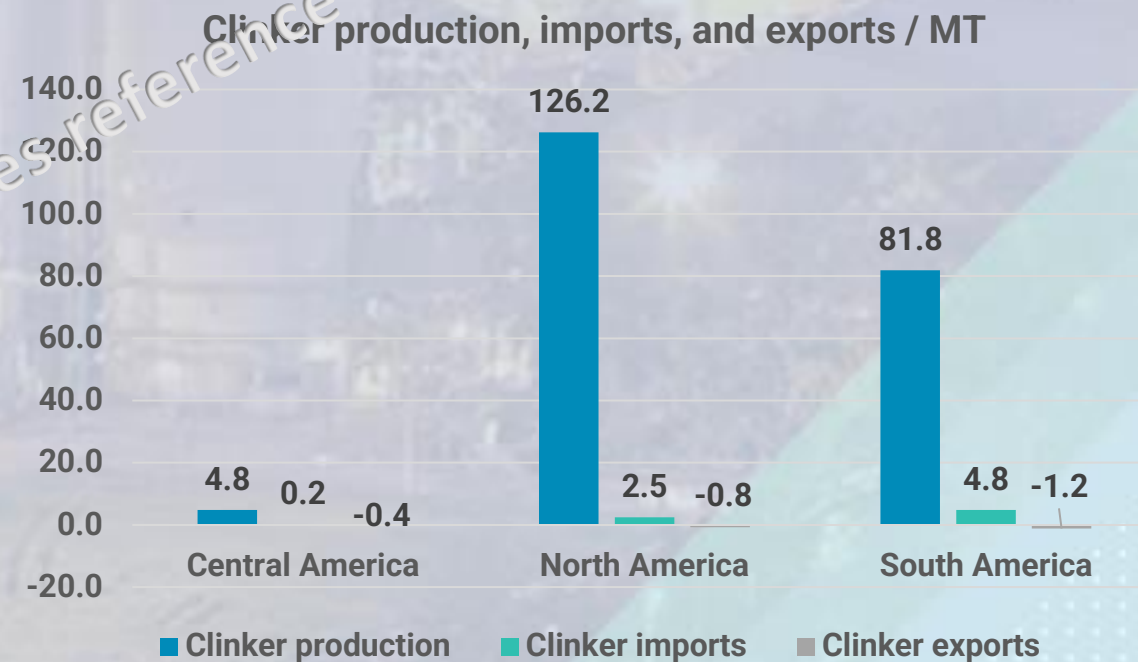
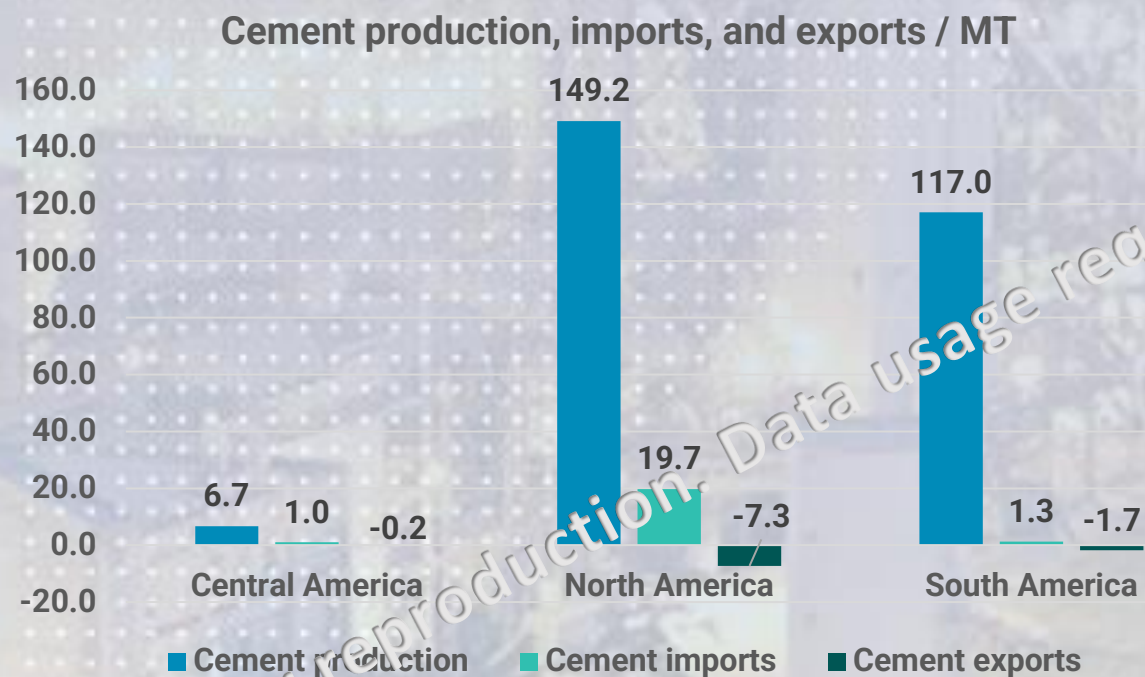
Regional average at 302 Kg. The large markets of Mexico and USA affect the average.

No market in the region is in the High or Very High per capita category.

Source:



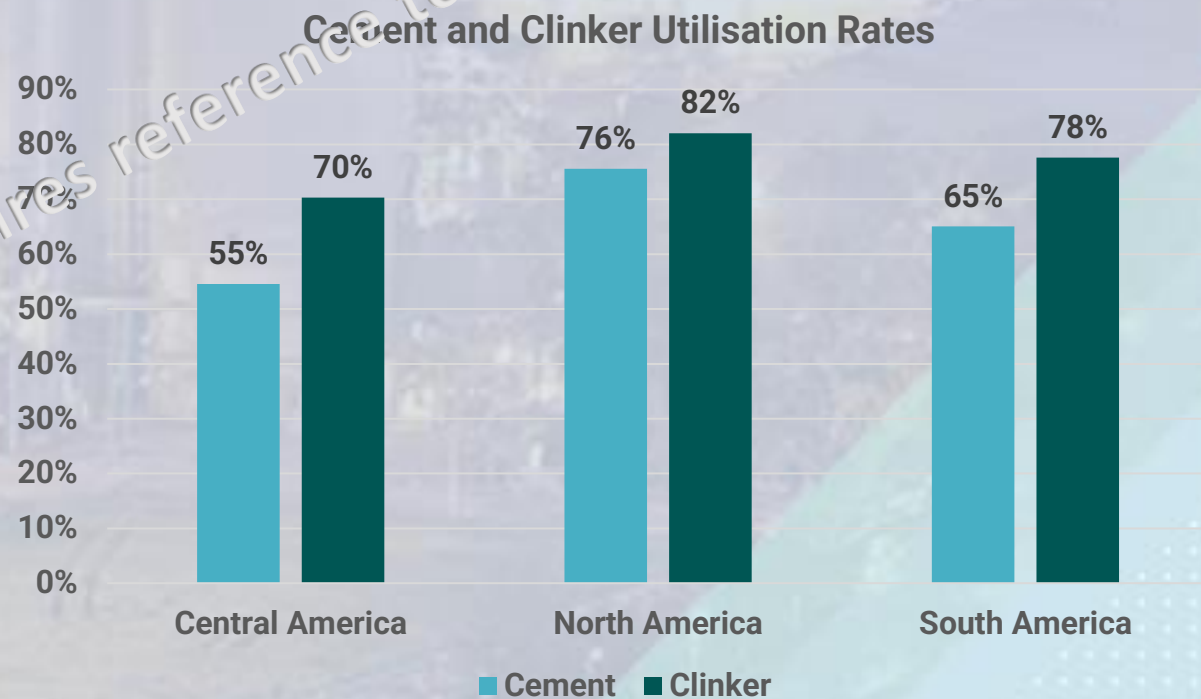
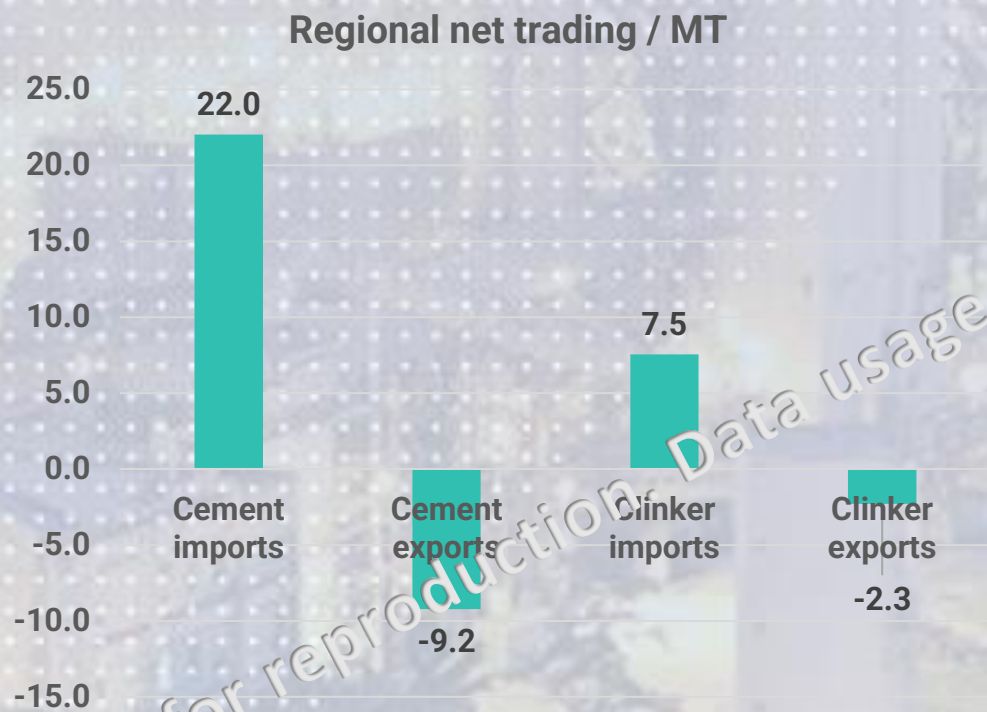
Cement and clinker production data & imports and exports – 2021E



Source:



Net trading and Utilisation rates – 2021E



Source:



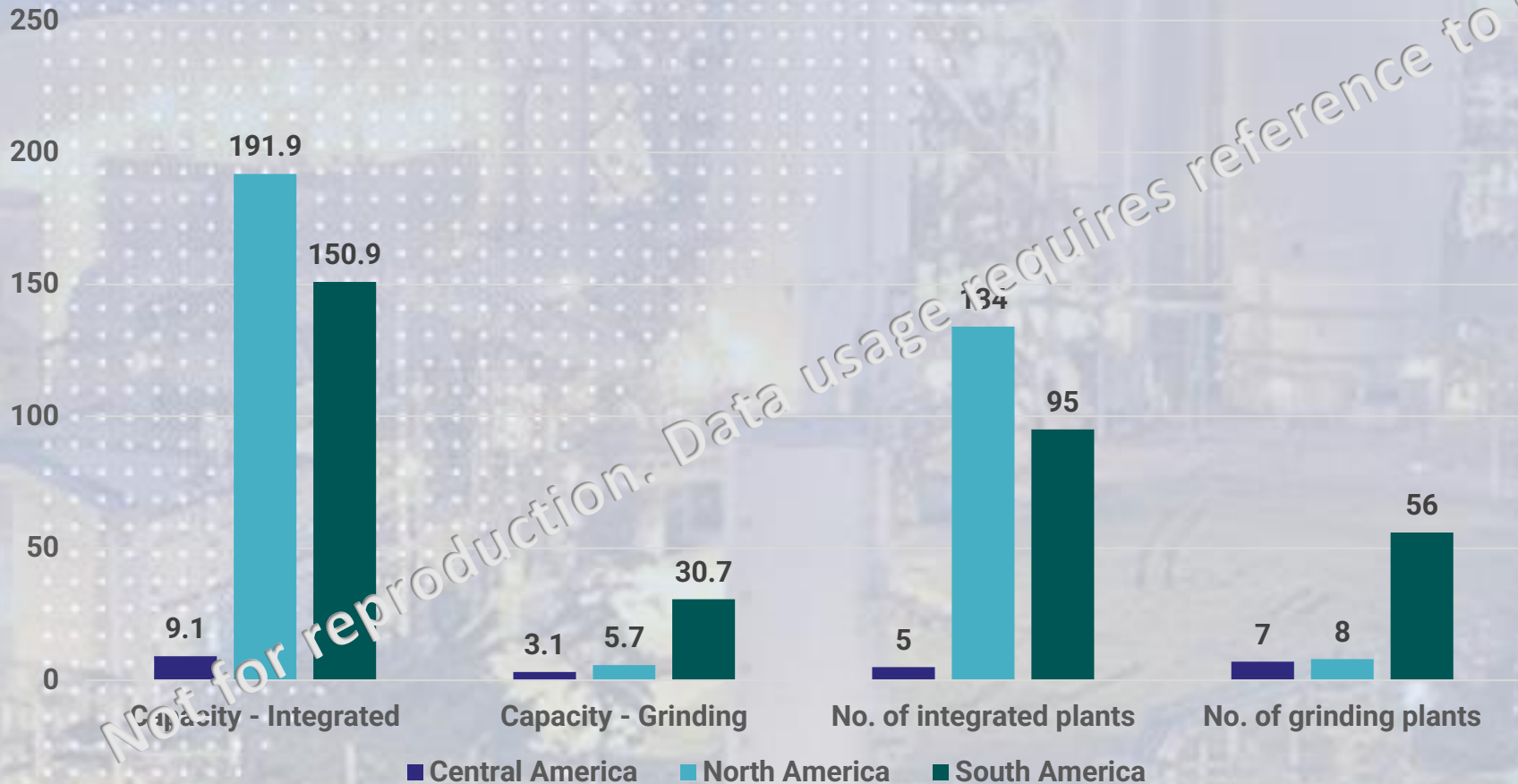
CGC™



CemBR
CLINKER

Supply characteristics – current situation

Cement capacity in MT and No. of plants



North America has the highest level of integrated capacity, 60% of which is in the USA

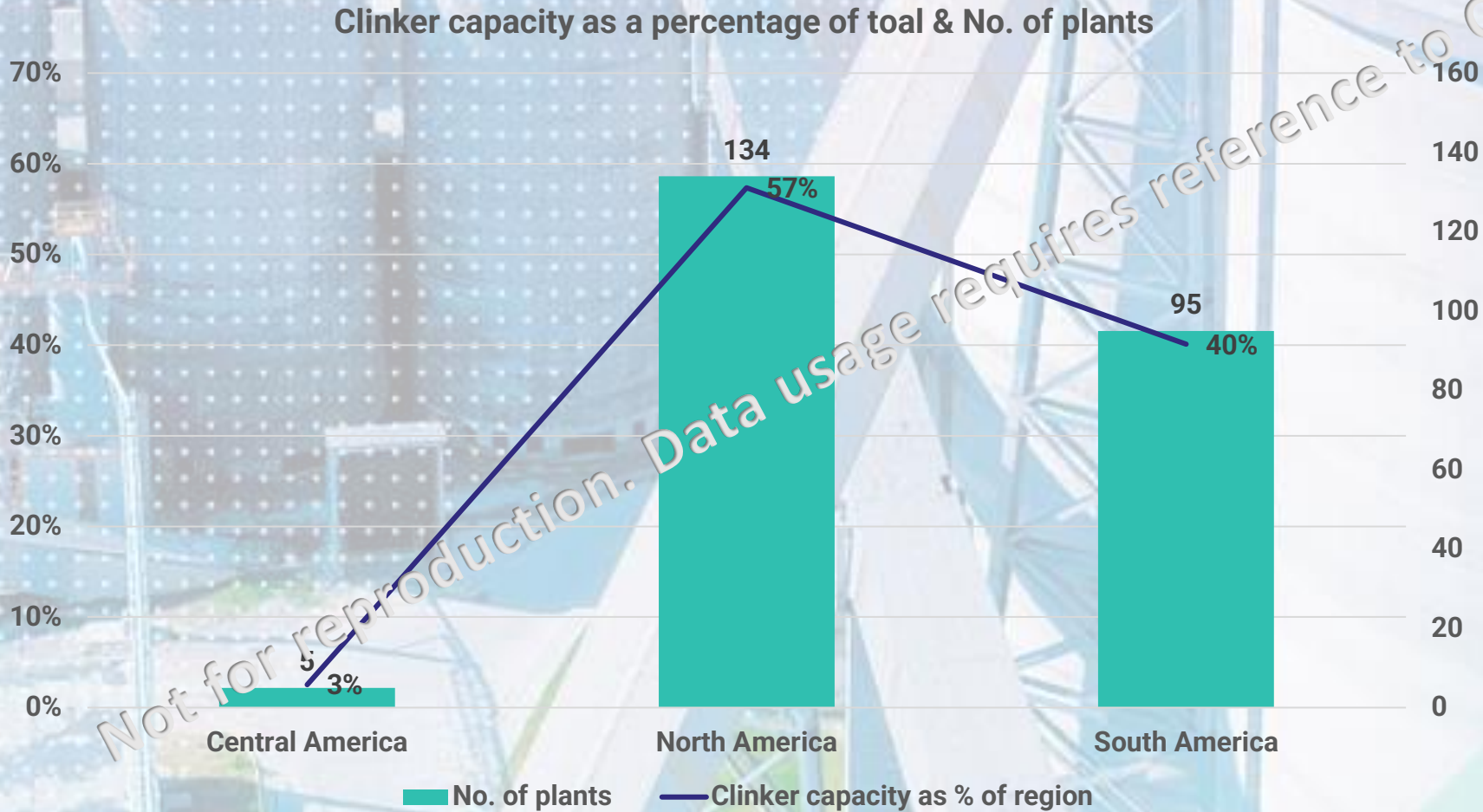
There are 21 operational plants in the region that produce GGBFS, Flyash (grinding), and white cement (10 plants)

Central America is dwarfed by the other two regions, both in capacity and number of plants.

Source:



Supply characteristics – clinker capacity and integrated plants

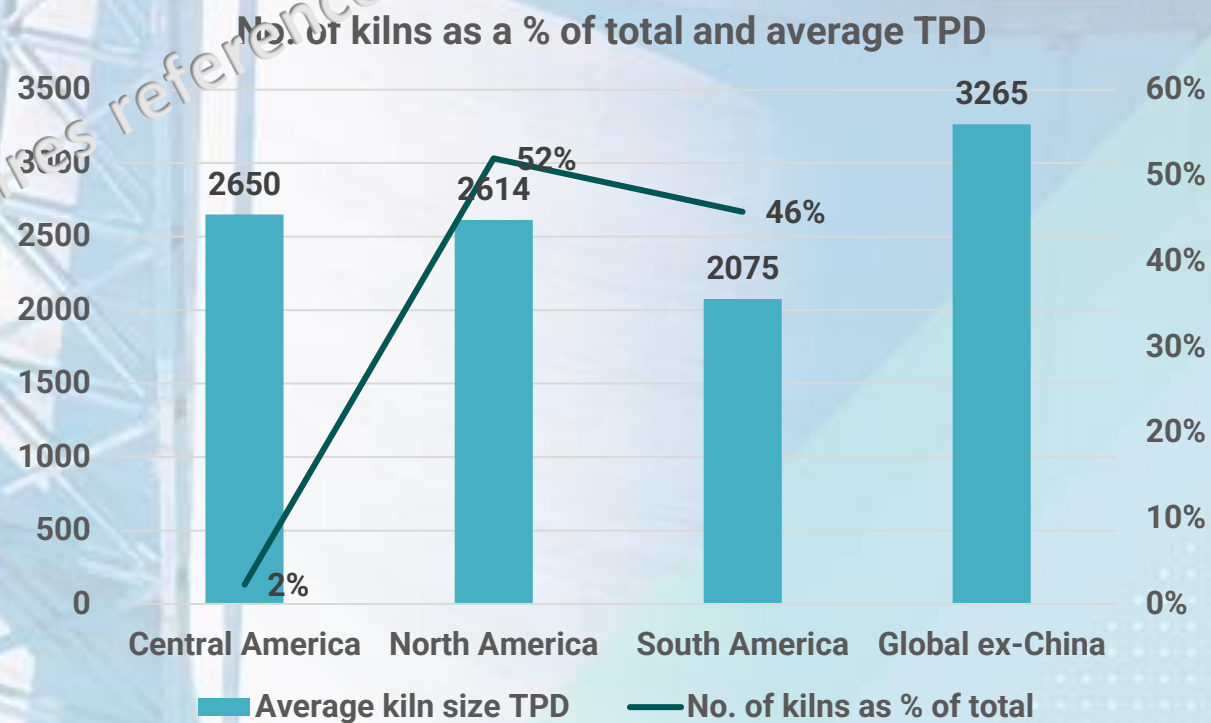
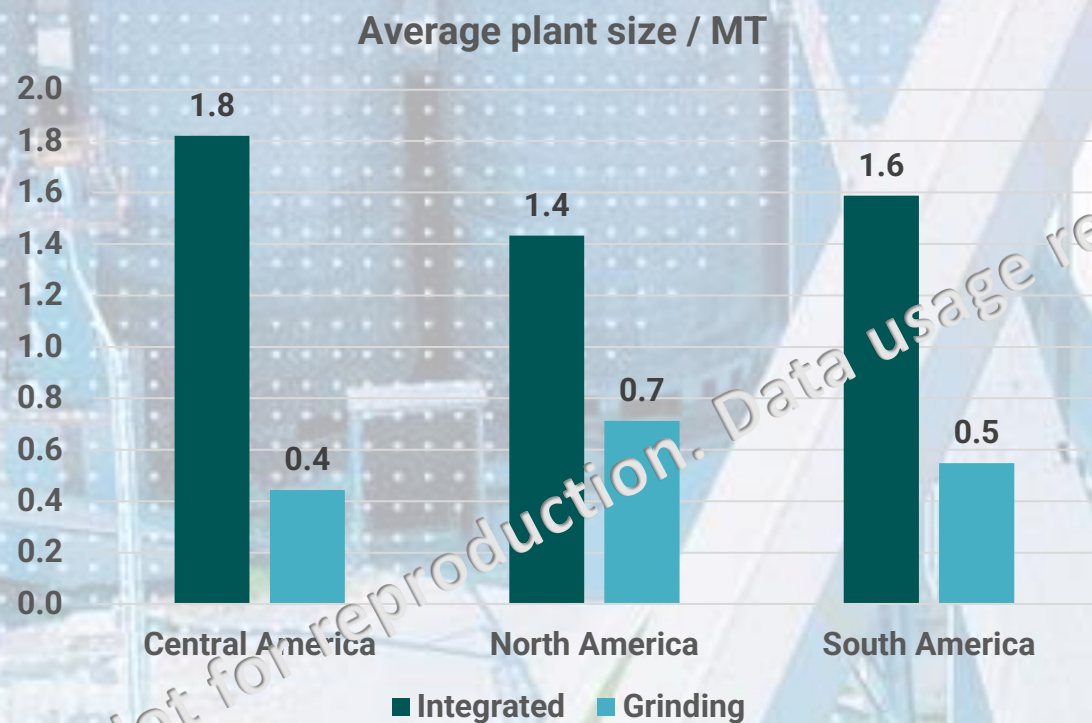


North America has also the highest clinker capacity, with the USA representing 60% of the sub – region.

Brazil dominates South America with close to 57% share of the sub-regional clinker capacity.

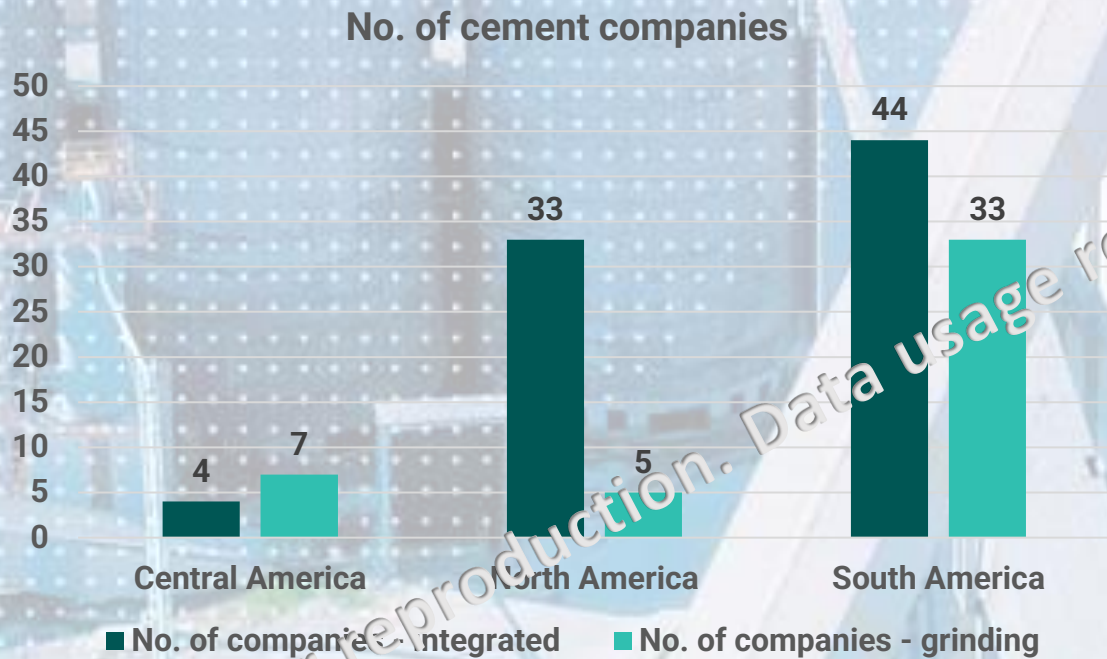
Source:

Supply characteristics – Average plant size and kilns data

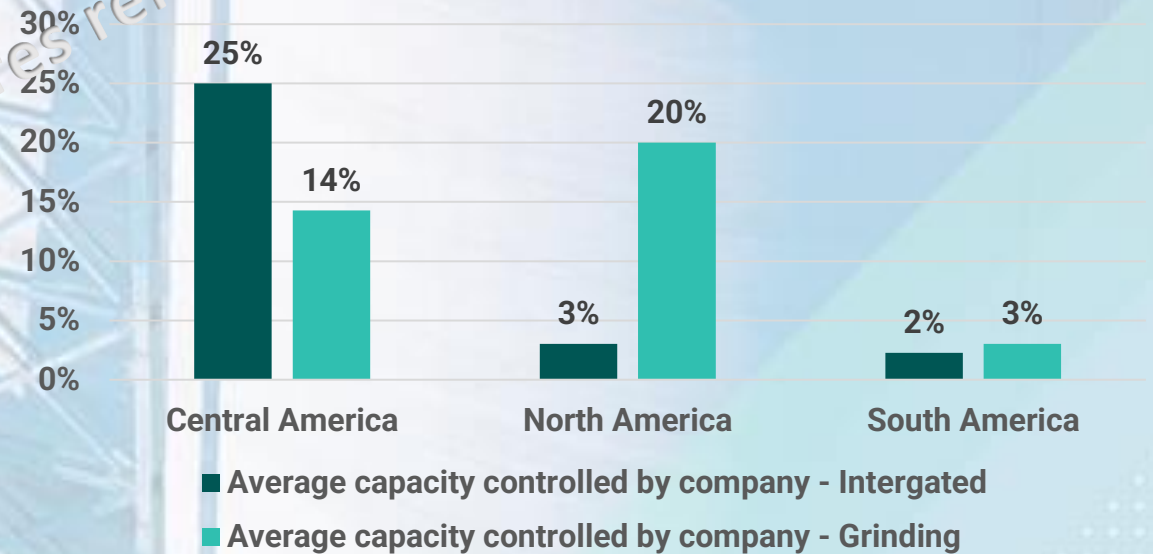


Source:

Industry structure and dynamics

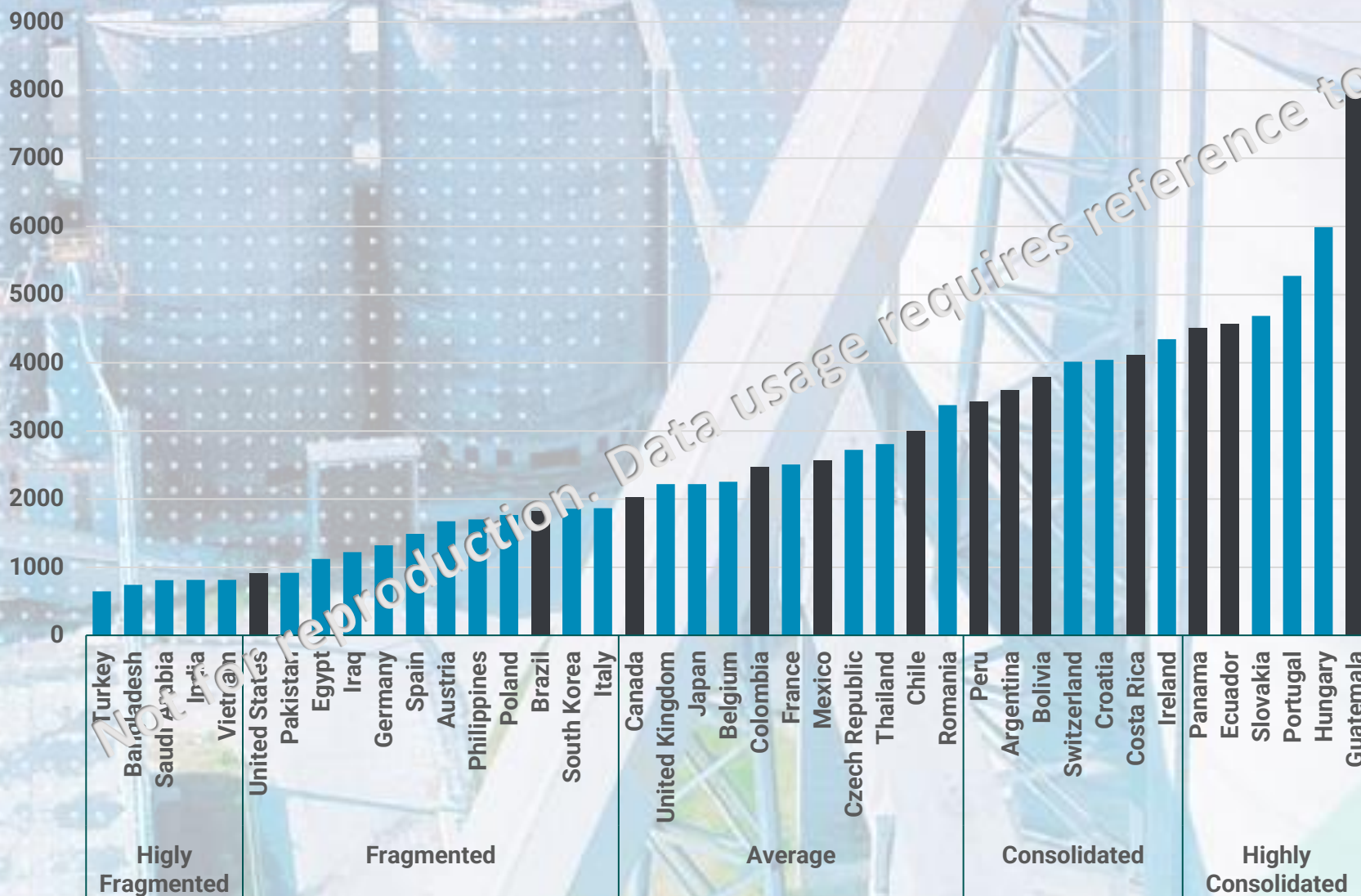


Average capacity controlled by companies as a % of total



Source:

Industry structure and dynamics – Consolidation Index selected markets



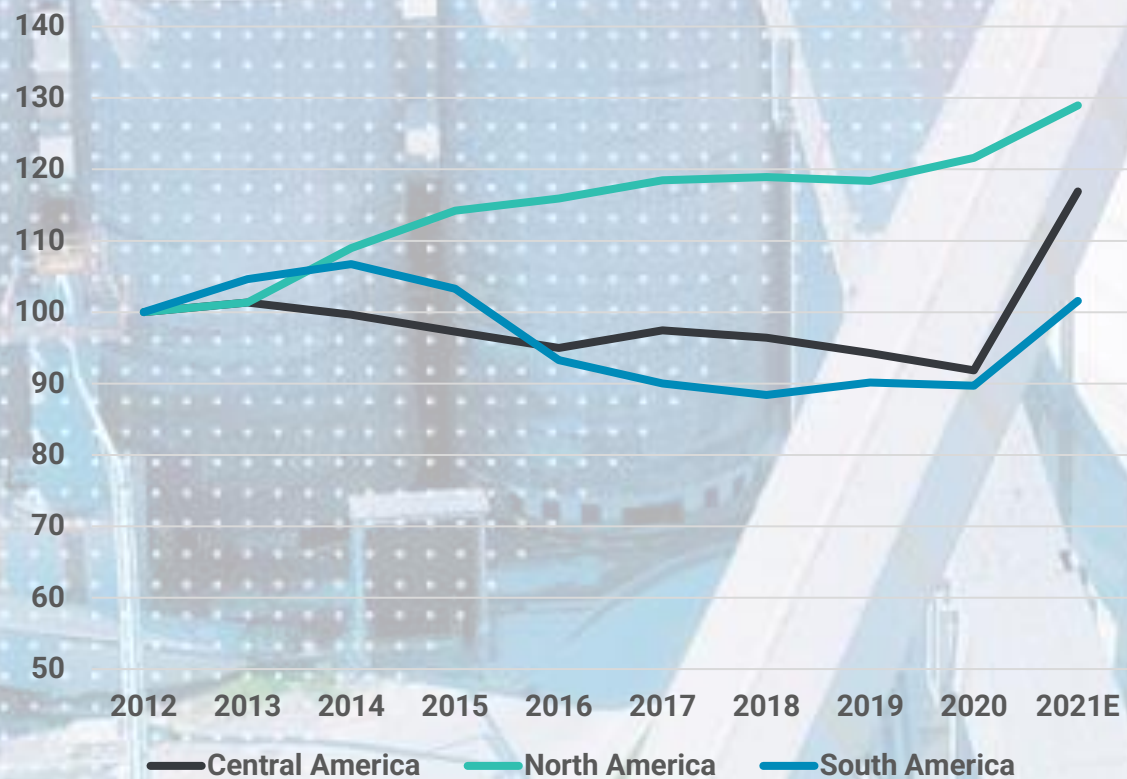
The largest markets in the region are either Fragmented or Average on the graph.

However, most smaller markets are Consolidated or Highly Consolidated. In particular, all markets in Central America are consolidated (where URs are low).

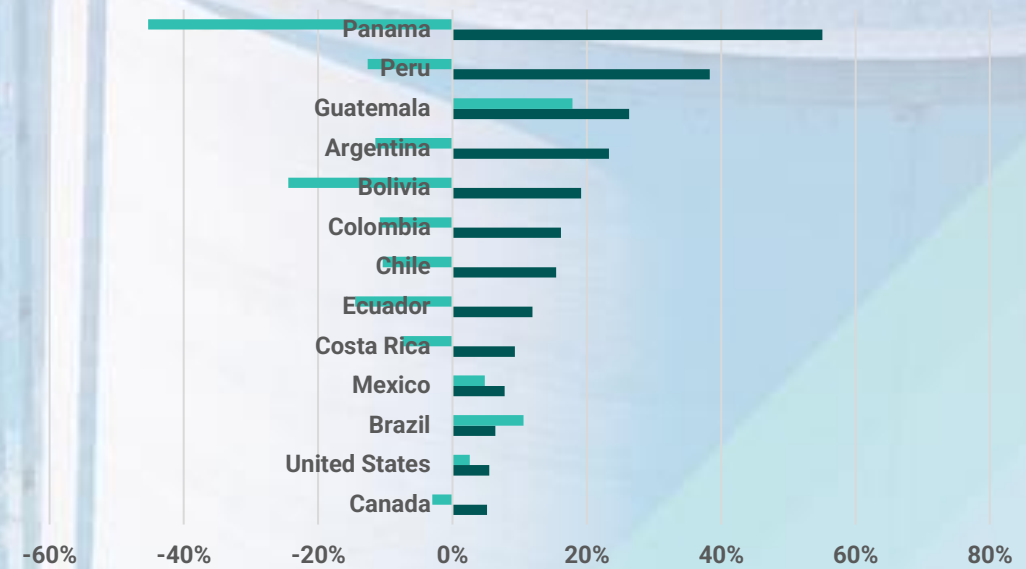
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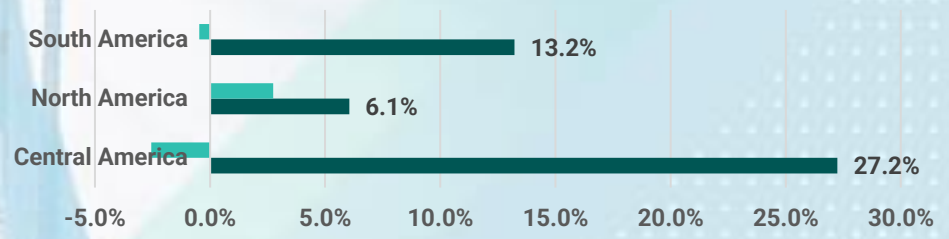
Market development and Consumption profile 2012 – 2021 and 2021 over 2020



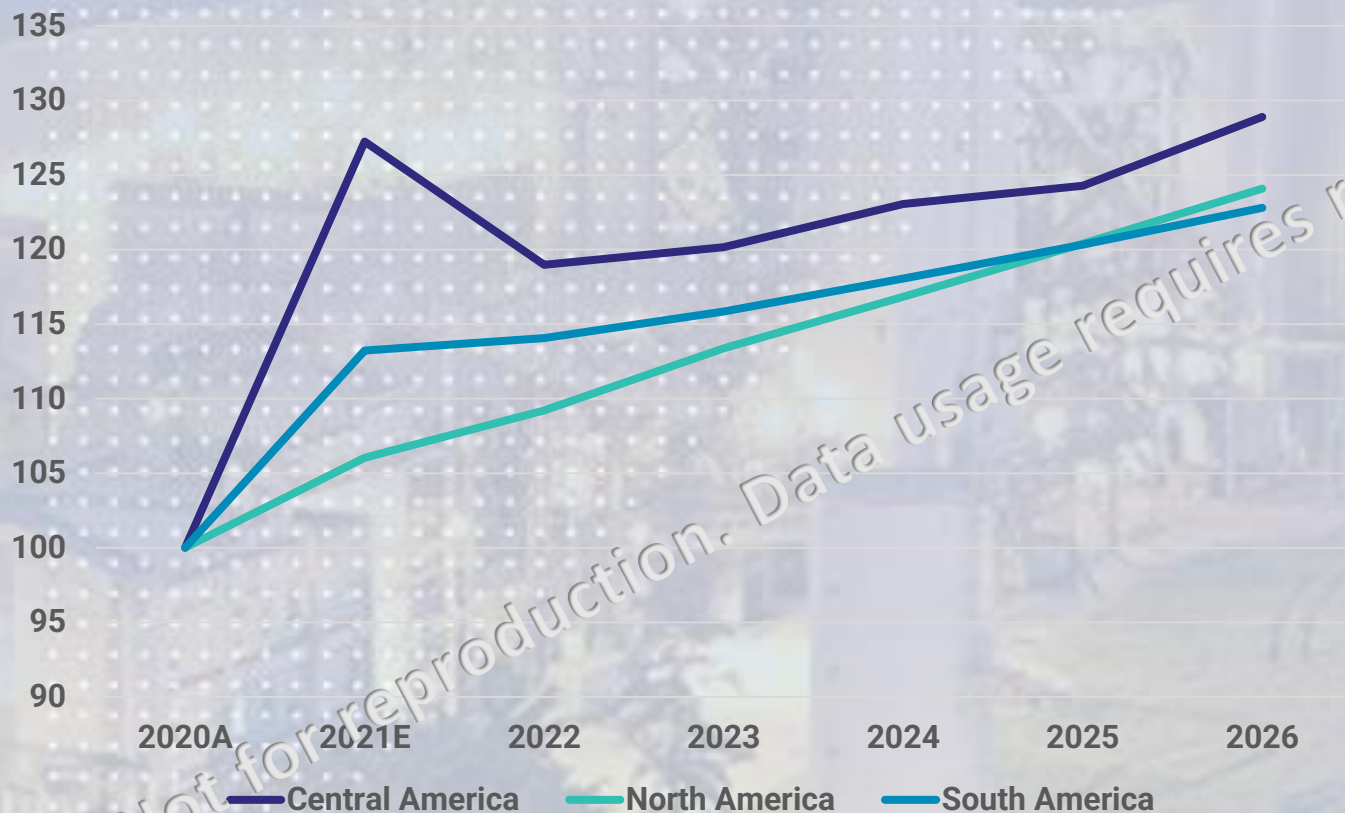
2021 over 2020 and 2020 over 2019 - consumption



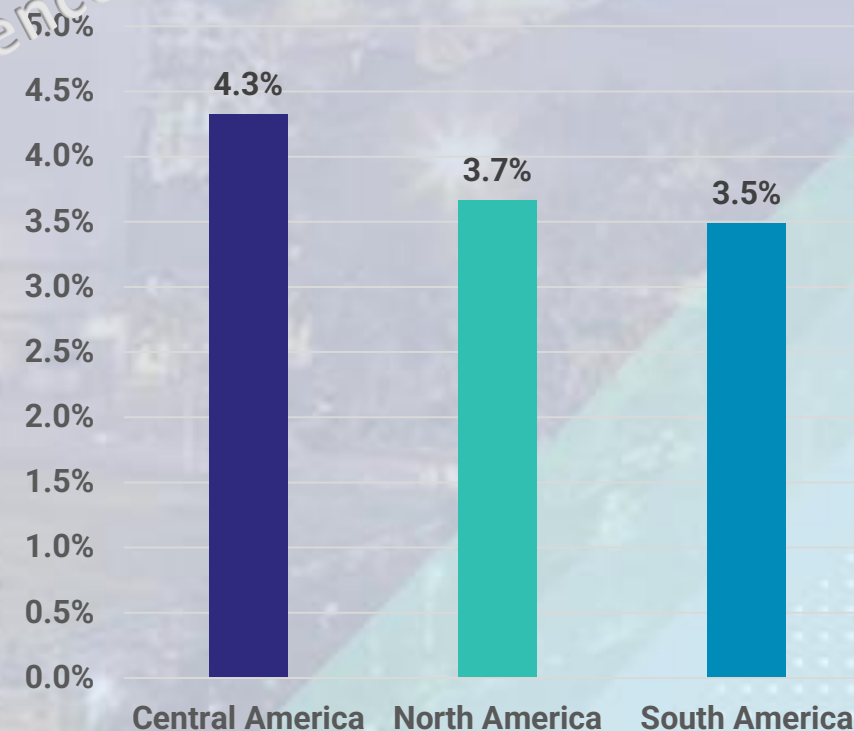
2021 over 2020 and 2020 over 2019 - subregions



2020 – 2026 Demand scenario profile



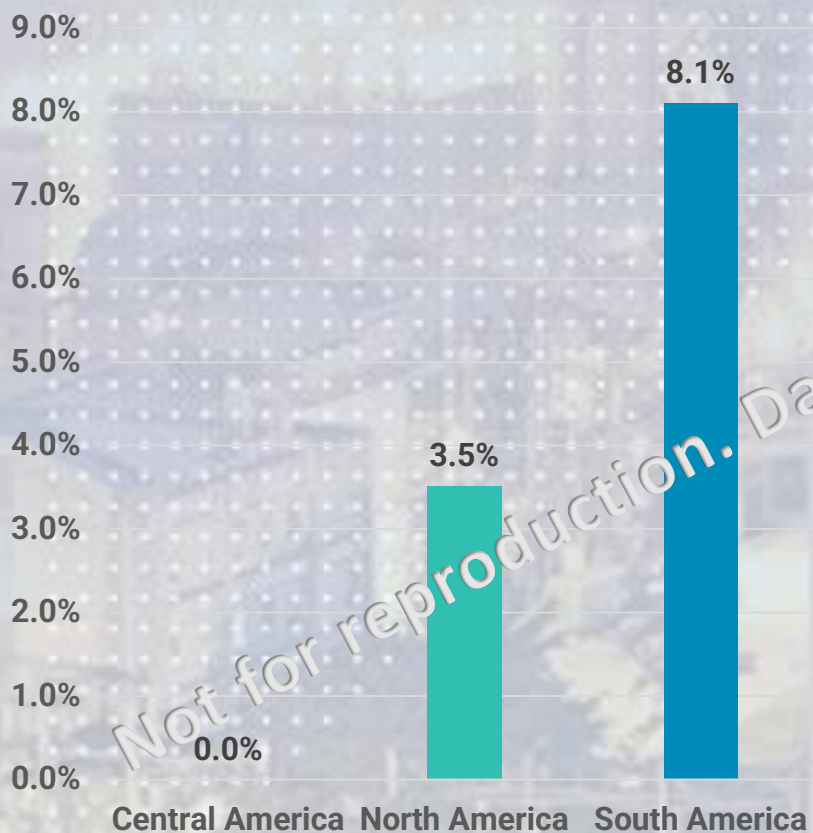
CAGR 2020 - 2026
Projected demand



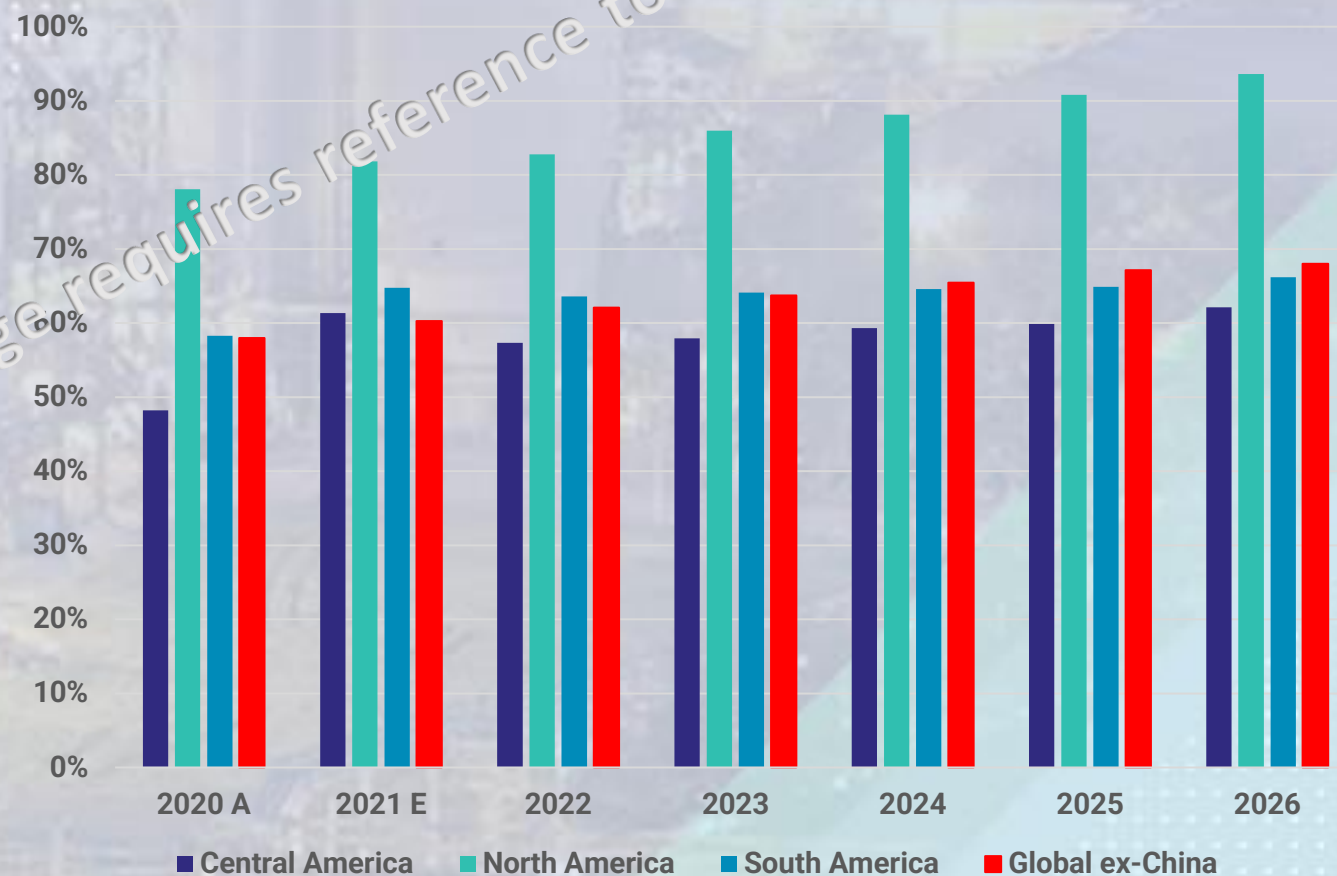
Source:

2020 – 2026 Supply – Demand balance

Capacity additions to 2026 as a percentage of 2020



2020 - 2026 DCUF



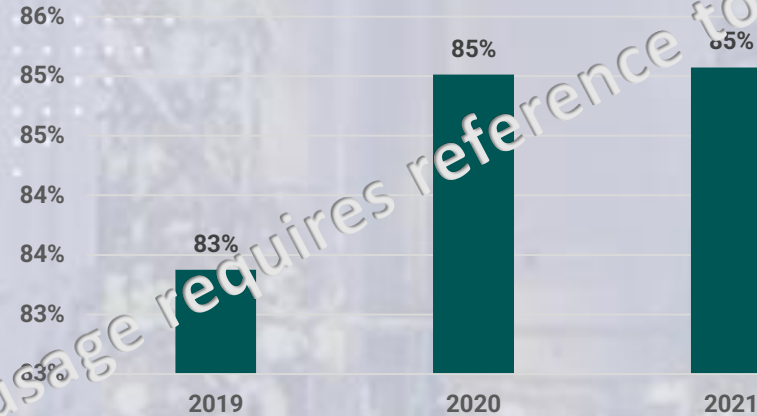
Source:

USA – CASE STUDY : A move to PLC

K:C RATIO FOR CONSUMPTION



Clinker UR



High K:C ratio compared to global ex-China average of 80%.

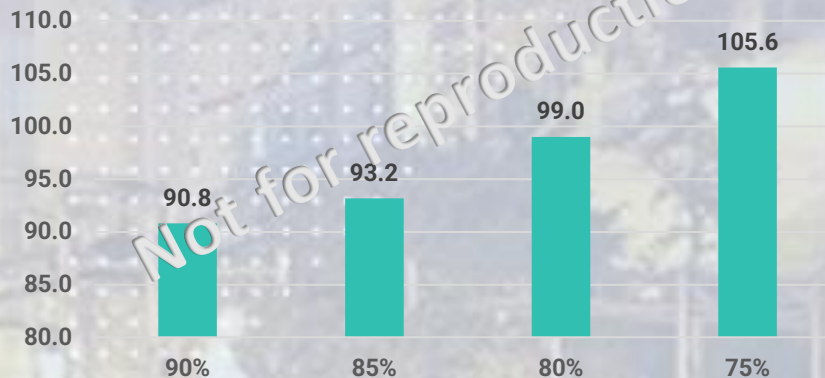
2020 and 2021 saw the highest clinker utilisation rates in the last decade.

USA plants cannot “squeeze” any more clinker.

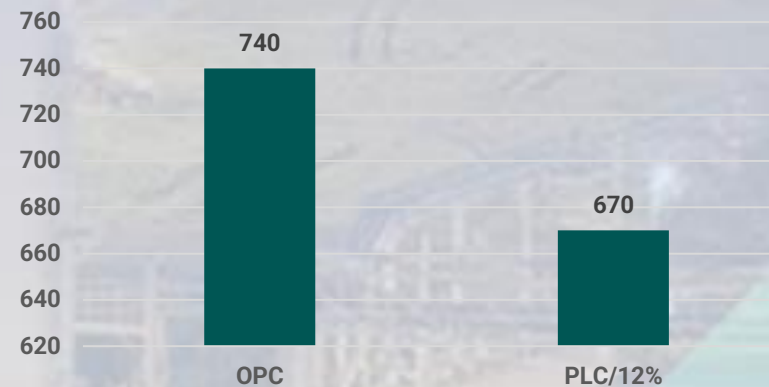
Clinker and cement imports in 2021 the highest in the last decade.

A drop of K:C to 80% will add over 8.0 million tonnes of domestically produced cement at the same clinker utilisation rate (85%).

Cement prod. at different K:C ratios



CO2 per tonne of cement - Kg



PLC may add supply, cut costs, and be more environmentally friendly.

Questions:

Will it be readily accepted by the market? How will it be priced?
Will it require more cement to achieve required strengths?

Source:



Conclusions:

5 – year prospects

Good growth in consumption in the next five years in most parts of America. The North USA dominated.

A modest rate of capacity additions is expected between 2020 and 2025 at around CAGR 1.0%

Improvement in URs, but significant regional variations. Both Central and South below global averages.

2020 - pandemic impact

Only a few markets grew (albeit large ones), most markets declined markedly

The region as a whole had a resilient performance in 2020 (up by only 0.4%) driven by the USA, Brazil, and Mexico

2021 recovery

The region was a stellar performer in 2021 with an overall 9.4% growth over 2020

Short term trends and pandemic impact

Unexpected supply squeezes coupled with increasing energy costs (expected to continue due to geopolitical events) have led to increased cement pricing

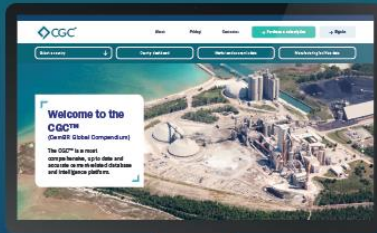
Questions for American cement:

Short term: Geopolitical events increase uncertainty and energy costs. Will there be a resolution soon?

Short to medium term: Will overcapacity, and in some cases high fragmentation exert themselves when normalcy returns?

The CGC™ Intelligence Platform

The CGC™ (CemBR Global Compendium) is the most comprehensive cement related database and intelligence platform in the world



Country dashboard

A snapshot of the market with twelve cement related indicators. Downloadable in PDF.



Market and economic data

Macroeconomic and cement data in tabular and graphical form. Compare markets and download in Excel.



Manufacturing facilities data

Every cement manufacturing facility with detailed information and data. Interactive maps and tables.

The CGC™ is accessed via an annual subscription
Register now at cembrgc.com



CemBR Global Compendium (CGC™) is a trading name of Cement Business Advisory Ltd (CBAL).

CemBR Forecasts



CemBR Clinker





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CemBR Forecasts report

The CemBR Forecasts report is based on CemBR's extensive cement related databases, including the CGC™ the most comprehensive, up to date and accurate cement-related database and intelligence platform in the world. The database is monitored on a daily basis. The report is prepared by a team of cement related professionals with extensive experience in the sector.

The report covers

95%
of global cement consumption

The projections are based on several research and analysis tools employed by CemBR, and they incorporate the views of CemBR's extensive network of cement professionals. Projections are thus real-life point to point assessments for the first two years, clearly identifying market inflections (including declines). The last three years of projections are based on CemBR's rigorous trend-based model providing realistic outcomes for cement consumption.

Report contents

The CemBR Forecasts report contains two sections:

Global and regional section

Five year global and regional forecasts covering the 90 largest markets representing around 95% of global cement consumption. Indicators include demand, supply, utilisation rates, and growth rates.

Plus, several aggregated cement related indicators globally and regionally for the last ten years including:

- GDP, average GDP per capita and population
- Cement capacity and utilisation rates
- Cement consumption and average consumption per capita
- Number of cement plants
- Top 15 cement markets (by production, consumption, imports and exports)
- Heat maps showing several cement related indicators

Country section

Forward looking data, narrative and five-year projections on the:

60

largest cement markets in the world

Five-year forecasts on...

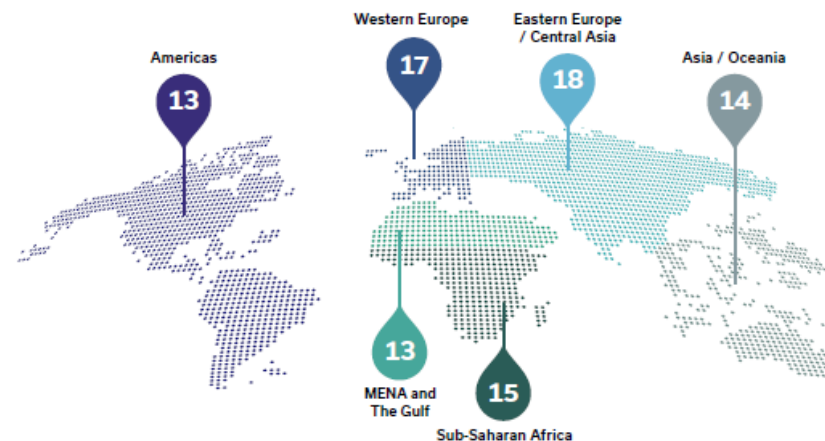
- Macroeconomic and construction indicators
- Cement capacity
- Cement consumption and consumption per capita
- Supply-demand balance, excess/deficit capacity

Data and insights on...

- Macroeconomic and construction activity insights - forward looking
- Current cement assets data (number of plants, cement capacity, cement utilisation rate)
- Narrative and insights on new supply, M&A activity
- Detailed historical data on trading and its impact on supply-demand balance. Insights of impact of trading going forward.
- The data, insights, and cement related indicators contained within the report are extensive, up to date, and accurate reflecting our team's cement expertise and experience.

Regions represented

Number of markets by region



The 90 countries included in the global and regional sections of this report provide a truly representative picture of the cement market, as they represent 95% of total global cement consumption. CemBR is adding more and more countries in our global database, with a view to include all meaningful cement markets in the world soon.

The country section includes the following markets

Americas	Western Europe	Eastern Europe / Central Asia	MENA and The Gulf	Sub-Saharan Africa	Asia/Oceania
Argentina	Austria	Croatia	Algeria	Angola	Australia
Bolivia	Belgium	Czech Republic	Egypt	Ethiopia	Bangladesh
Brazil	France	Hungary	Iraq	Ghana	India
Canada	Germany	Kazakhstan	Morocco	Kenya	Indonesia
Chile	Greece	Poland	Qatar	Mozambique	Japan
Colombia	Ireland	Romania	Saudi Arabia	Nigeria	Malaysia
Ecuador	Italy	Russia	Tunisia	Senegal	Pakistan
Mexico	Portugal	Ukraine	Turkey	South Africa	Philippines
Peru	Spain	Uzbekistan	United Arab Emirates	Tanzania	South Korea
USA	Switzerland			Uganda	Thailand
	UK				Vietnam

These 60 markets have been selected based on a) their size, b) on their characteristics making them interesting to a larger audience, and c) they represent the most important markets in their respective regions.

> Colombia

General data 2020



CemBR region
Americas



Area in square KM
1,142,000



Population
50.9 million



Comparative economy size
44/193



GDP per capita in US\$
5,336

Cement market data 2020

Cement consumption (MT)	11.3
Consumption per capita (Kg)	222
Consumption growth rate (CAGR 10yr)	2.4%
Cement trading net (MT)	0.5
Cement production (MT)	11.8

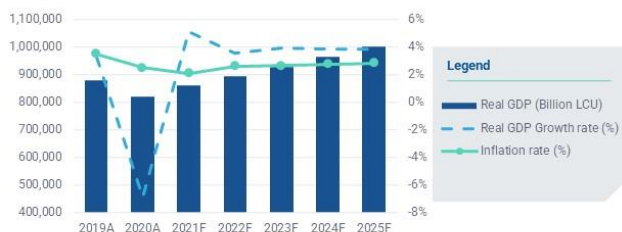
Recovery in 2021

Some downside risks for the economy given its dependence on commodity pricing. Cement consumption steady growth to the end of forecasting period.

Macroeconomic considerations

Colombia's economy contracted by 6.8% YoY in 2020. This was the largest recession on record. The economy relies on services and manufacturing sectors and on commodity exports, such as oil, coffee and coal. In 2021 it is expected to grow by 5.2% while recovery to 2019 levels is expected after 2022. For the period 2020 to 2025, growth is expected to average 4.1% p.a., higher than the realized 3.6% CAGR between 2010 and 2019. In the short run, the direction of the economy will depend on vaccination rates, with support from a fiscal package of COP 31 trillion. Lower interest rates are expected to boost consumption growth and encourage investments. A short-term risk for the economy is social unrest, which began earlier this year as protests to proposed tax reforms, but then escalated after alleged excessive use of force by the authorities. A medium-term risk is the dependence of the economy on commodity price fluctuations.

> Real GDP and growth rate 2019A - 2025F



Construction

Between 2010 and 2020, nominal construction GVA increased by 5.7% CAGR. In 2020, construction GVA dropped by around 22.1% YoY. In 2021, construction GVA is expected to grow by around 17%. In the next five years, construction GVA is expected to rise to 7.1% of total GVA. Construction growth is expected to be driven by infrastructure investments and housing. Housing credits are expected to boost residential building construction. Concessions programmes and recovery funds of USD30bn are expected to spur investment in transportation, such as roads and airports, and in energy infrastructure. Public-private partnerships with international participation are an additional growth driver. Potential risks are project delays and inefficiencies in public sector works.

> Construction % of GVA 2019A - 2025F



Colombia



Cement demand forecast and supply-demand considerations

Cement consumption dropped by around 10.8% YoY in 2020. In the first four months of 2021, domestic demand has increased by around 44% YoY to 4.3 million tonnes. For the full year it is estimated that demand will recover by around 8.8% YoY with a long-term trend of +4.5% CAGR between 2020 and 2025. Colombia's cement consumption per capita is considered low according to global comparisons. It is lower than both the regional and South American averages. As shown in the regional section, Colombia is below the trend line of the Cement Economic Curve (CEC) indicating that significant growth in cement consumption per capita in the current development phase of the economy is possible. The forecasts reflect this partly, as per capita consumption is expected to rise to its highest level since 2016 by 2025.

Indicator	2019A	2020A	2021E	2022F	2023F	2024F	2025F
Cement consumption (MT)	12.7	11.3	12.3	12.7	13.2	13.6	14.1
Consumption growth rate (%)	4.2%	-10.8%	8.8%	3.3%	3.6%	3.5%	3.5%
Consumption per capita (KG)	252	222	240	247	255	263	271
Cement supply (MT)	19.5	19.5	19.5	19.5	20.8	20.8	20.8
DCUF (%)	65.0%	58.0%	63.1%	65.2%	63.3%	65.5%	67.7%
Excess supply (MT)	6.8	8.2	7.2	6.8	7.6	7.2	6.7

Cement supply

There were twenty grey cement plants in Colombia in 2020, fourteen integrated and six grinding, operated by twelve companies or groups. There was also one white cement plant. Grey cement milling capacity was estimated at 19.5 million tonnes at the end of 2020. Around 80% of cement capacity was operated by international groups. Clinker capacity increased by 0.2% CAGR between 2010 and 2020 and was at 10.4 million tonnes at the end of 2020. Between 2020 and 2025, cement milling capacity is expected to increase by around 6.7%. An integrated grey cement plant, with estimated capacity of 1.3 million tonnes, is under construction in Maceo. The plant is expected to be commissioned in 2023.

Manufacturing data 2020

Number of cement plants	20
Cement capacity (MT)	19.5
Cement capacity growth rate (CAGR 10yr)	1.9%
Cement utilisation rate (%)	61%
DCUF™	58%

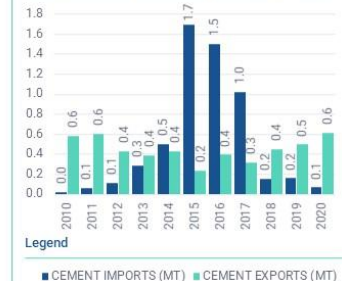
> Grey cement projected supply 2019A - 2025F



Trade

Colombia turned from a net exporter of cement in the early 2010s to a net importer between 2014 and 2017. Imports increased significantly to a peak of 1.7 million tonnes in 2015. After 2018, imports dropped significantly and exports resumed, turning Colombia to a net exporter of cement again. In 2020, cement imports dropped to the lowest level since 2011, while exports increased to the highest level of the decade. Looking forward to 2025, with DCUF levels near 68% and significant excess cement capacity, Colombian cement companies may consider increasing cement exports further to raise utilisation rates to previous peak levels of 72%-75% achieved in 2014/2015. However, clinker availability may be an issue.

> Cement imports and exports 2010 - 2020



CemBR Clinker report

The CemBR Clinker report is based on CemBR's extensive cement related databases, including the CGC™ the most comprehensive, up to date and accurate cement-related database and intelligence platform in the world, and CemBR's integrated cement plants and kilns proprietary database containing in-depth details on around 1,350 integrated plants and around 2,300 kilns globally (excluding China). The database is monitored on a daily basis. The report is prepared by a team of cement related professionals with extensive experience in the sector.

The report is based on

1,350
clinker producing plants and
2,300 kilns

The projections are based on CemBR Forecasts, a cement related report published by CemBR on a yearly basis.

The CemBR Clinker report contains two sections, The Global and Regional section, and the Country section. The Global and Regional section is based on the assessment of the 90 largest cement producing countries representing close to 90% of total clinker producing capacity in the world excluding China. The Country section contains a detailed depiction of the 60 largest cement industries in the world.

Report contents

Global and regional section

Five year global and regional forecasts covering the 90 largest markets. Indicators include demand, supply, utilisation rates, and clinker trading. Plus, Several aggregated clinker related indicators for the last ten years including:

- Clinker capacity
- Clinker production
- Clinker utilisation rates

Also, detailed current data on:

- Number of plants
- Number of kilns
- Average kiln size

Country section

Detailed data, insights, and forecasts for the:

60

largest cement industries in the world

- Current clinker producing asset data (No of plants, clinker capacity, number of kilns, average kiln size)
- Number of kilns installed by time period
- Clinker capacity installed by time period
- Number of kilns by size
- Commentary on above data
- Clinker utilisation rates – current year and last five years average
- Commentary on utilisation rates trends
- Five- year forecasts for new clinker capacity additions
- Clinker production forecasts
- Clinker supply-demand balance and trading
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> Colombia



General data 2020



Current clinker asset overview

Number of integrated plants	14
Clinker capacity (MT)	10.4
Number of kilns	20
Average kiln size (TPD)	1,631

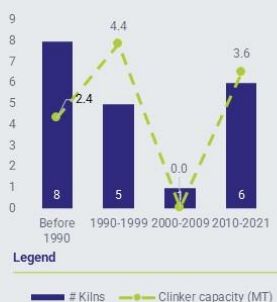
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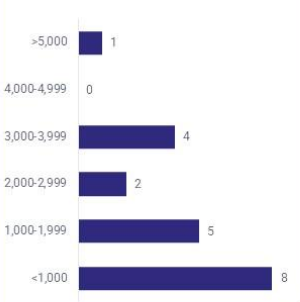
Current clinker asset configuration

Colombia is the 7th largest clinker industry out of the 13 countries that make up the Americas region. The industry represents 3.9% and 5.6% of the regional totals for clinker capacity and number of kilns. The age of the assets in the industry is above the average for the region. Colombia has 57% of its kilns installed before 1990 whereas the region has almost 50% of its kilns installed at the same time. In terms of kiln size, Colombia's average is much smaller than the regional average (2,368 TPD). Around 65% of kilns are preheater/precalciner (5 stages).

> Asset configuration by time period



> Number of kilns by size (TPD)



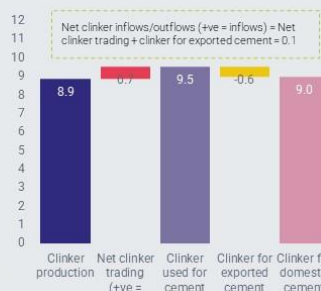
Current clinker statistics

2020 Clinker utilization rate	85%
Last 5Y clinker utilization rate	94%

In 2020, clinker production stood at 8.9 million tonnes resulting in a 85% clinker utilisation rate.

Colombia's cement consumption experienced a spectacular growth in the first part of 2010s. Since that time, the country has experienced significant net clinker inflows culminating at 520,000 tonnes in 2017. In 2020, cement consumption saw a significant decline of around 11%, easing the pressure on the industry to produce clinker.

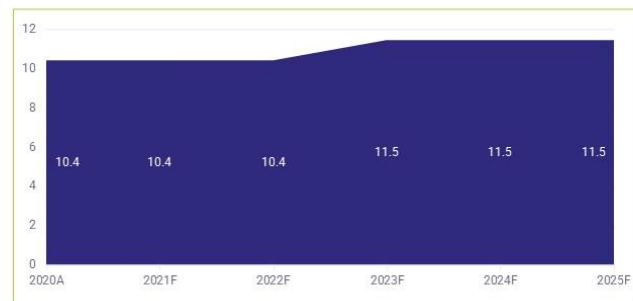
> Clinker balance 2020



Clinker supply

There is a new plant expected to be commissioned in 2023 in Colombia. This will add around 1.1 million tonnes of clinker to the market. There was another integrated plant announced recently, but it has been put on hold at this time.

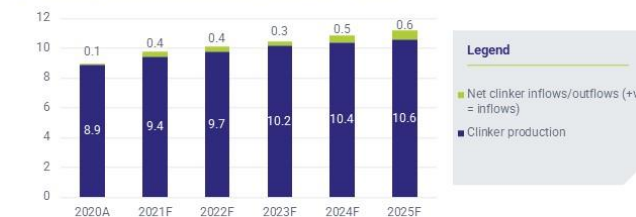
> Clinker supply curve 2020A-2025F



Clinker estimates 2020A – 2025F

Colombia's domestic cement consumption is expected to recover in 2021 and beyond returning to the 2015 highs at the end of the forecasting period. This will necessitate a growing net clinker inflows trajectory going forward. By 2025 the industry is expected to have reached net clinker inflows of the order of 600,000 tonnes.

> Clinker production forecasts in MT 2020A – 2025F



NB: Net clinker inflows/outflows is the sum of net clinker trading and clinker for exported cement.

Clinker supply-demand balance and trading 2020A – 2025F

Net clinker inflows are projected to increase over the forecasting period to cover increasing domestic demand growth. Despite this and the expected new clinker capacity coming on stream in 2023, the industry will continue to experience clinker utilisation rates around the 90% mark.

This may encourage local players to reinvestigate their investment plans for new clinker capacity to ease the industry's high utilisation rates. Given the nature of the existing clinker manufacturing facilities, a new plant will assume the competitive high ground and thus be able to capture the growth in the market in an efficient way.





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