



LIMESTONE MARKET RESEARCH OVERVIEW

FORECASTS (2021 - 2026) GROWTH, TRENDS, COVID-19 IMPACT

The Limestone Market is Segmented by Application (Industry Lime, Chemical Lime, Construction Lime, and Refractory Lime), End-user Industry (Paper and Pulp, Water Treatment, Agriculture, Plastics, Building and Construction, Steel Manufacturing and Other Industries, and Other End-user Industries), and Geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The report offers the market size and forecasts for limestone in volume (kilo metric ton) for all the above segments.

Market Overview

The limestone market was valued at 780,426.91 kilo metric ton in 2020, and it is expected to register a CAGR of 3% during the forecast period, 2021-2026.

The COVID-19 outbreak negatively affected the economic growth in various countries. Countries such as China witnessed impacts in the first quarter of 2020, while other countries witnessed major effects from the second quarter of 2020. With the rising number of COVID-19 cases, the construction industry was immensely impacted globally due to the difficulties with material supply chain disruption, labor shortages, and city-wise shutdown of construction sites. Moreover, due to the COVID-19 outbreak, steel production also declined during 2020, as the manufacturers reduced their operations in European countries. Such factors have impacted the market for limestone in applications, such as steel production and construction.

Over the medium term, increasing demand from the construction industry, along with rising steel production in the global market, is proving to be the key driver for the global market. The construction industry uses limestone for walls and floors in buildings. Properties like high strength, thermal resistance, long durability, and resistance to corrosion make limestone ideal for construction applications. It is used for residential and commercial construction applications, like manufacturing blocks and bricks, stone cladding on walls, retaining walls, and paving floors and tiles.

On the flip side, the negative economic effects of COVID-19 and the CO₂ emission factor from agricultural liming are expected to hinder the growth of the market studied.



The Asia-Pacific region is expected to dominate the market, and it is also likely to witness the highest CAGR during the forecast period.

Scope of the Report

Limestone is a sedimentary rock composed primarily of calcium carbonate in the form of mineral calcite. It can also be in the form of chemical sedimentary rock, formed by the precipitation of calcium carbonate from lake or ocean water. The market is segmented by application (industry lime, chemical lime, construction lime, and refractory lime), end-user industry (paper and pulp, water treatment, agriculture, plastics, building and construction, steel manufacturing and other industries, and other end-user industries), and geography (Asia-Pacific, North America, Europe, South America, and Middle-East and Africa). The report offers the market size and forecasts for limestone in volume (kilo metric ton) for all the above segments.

Key Market Trends

Steel Manufacturing and Other Industries (Including Energy) may Dominate the Market

On average, about 270 kg limestone is used to produce 1,000 kg of crude steel when produced through blast furnace (BF) and basic oxygen furnace (BOF). However, when an electric arc furnace is used, around 88 kg of limestone is used to produce 1,000 kg of crude steel.

According to the World Steel Association (Worldsteel) estimations, the global steel demand is expected to grow by 1.7% to reach 1.81 million metric ton by 2021, from 1.78 million metric ton in 2019.

On the other hand, in the Asia-Pacific region, the Chinese steel demand was expected to grow by almost 7.8%. This trend was slow in 2020, with the steel demand growing by only 1% and 2.5% in the Asia-Pacific region and the rest of the world, respectively, owing to the COVID-19 outbreak. Growth in China was driven by its real estate sector, and the steel intensity of new construction increased by almost 5%.

However, due to the COVID-19 outbreak, all countries have been under temporary lockdowns, which is expected to hinder the manufacturing of steel for a temporary period. However, production is expected to increase during the forecast period.

Apart from manufacturing steel, limestone is also used in fossil-fuel power plants to perform flue-gas desulfurization, which removes the sulfur dioxide from flue gas emissions.

According to UNEP, coal is currently the leading fuel in the power sector, accounting for 37.8% of electricity generated, with hydropower accounting for 17.5%, natural gas for 17.3%, nuclear for 16.8%, oil for 9%, and non-hydro renewables for 1.6%.

Coal is expected to remain the principal fuel for power generation (about ~36%), whereas natural-gas generation is expected to be the second-biggest source, surpassing the hydroelectric power capacity.

On average, the global coal plants were running approximately half the time in 2019, with a load factor of 53.5%. The trend is similar in the United States, the European Union, China, and India, with load factors of 49%, 37%, 49%, and 57%, respectively.

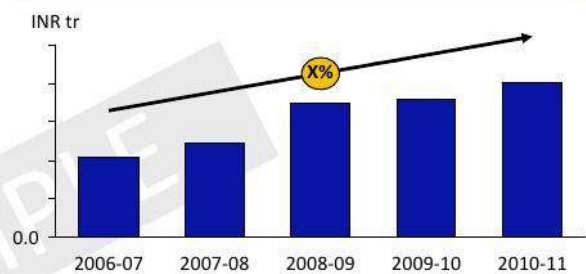
The Scenario for INDIA

Mining industry in India has been growing consistently on account of rich reserves and increasing demand

Mining Industry in India – Overview

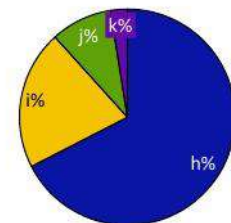
- India produces a minerals, which include b fuel minerals, c metallic, d non-metallic, e atomic and f minor minerals
- It has abundant reserves of iron ore, bauxite, dolomite, gypsum, limestone, mica and adequate reserves of chromite, manganese, zinc and graphite
 - It is a leading producer of key minerals such as iron ore, coal and bauxite
- Total value of mineral production (excluding atomic minerals) during 20-- has increased by g% over that of 20--
- Fuel minerals, especially coal, comprise of the majority of total mineral production in India
- Rich reserves of minerals in India make it very conducive for the growth and development of the mining sector in India
- Increasing domestic demand and supportive government participation will drive the mining industry in India

Growth in Mineral Production



Share of Minerals – Value

- Segment 1
- Segment 2
- Segment 3
- Segment 4



Source:



MINING INDUSTRY IN INDIA 2011.PPT

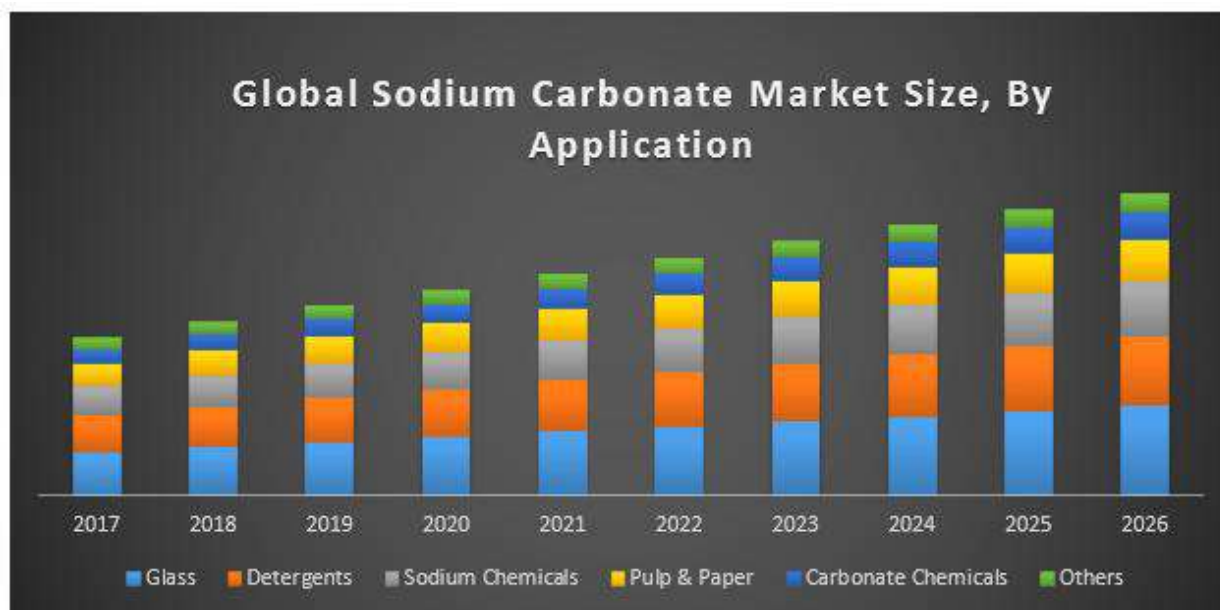
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The Government of India developed the National Electricity Plan of 2018 (NEP2018) and announced an additional 70GW or more of new coal-fired power plants by 2026-27, which is expected to create demand for limestone in the power generation sector.

Owing to the aforementioned factors, the demand for limestone in the power generation sector is projected to grow during the forecast period. However, the disruptions in R&D activities, owing to the economic slowdown and the lockdown due to the outbreak of COVID-19, are expected to have a negative impact on the growth of the power generation industry in the short term, with an adverse effect on the market studied.

India to Drive the Asia-Pacific Market Growth

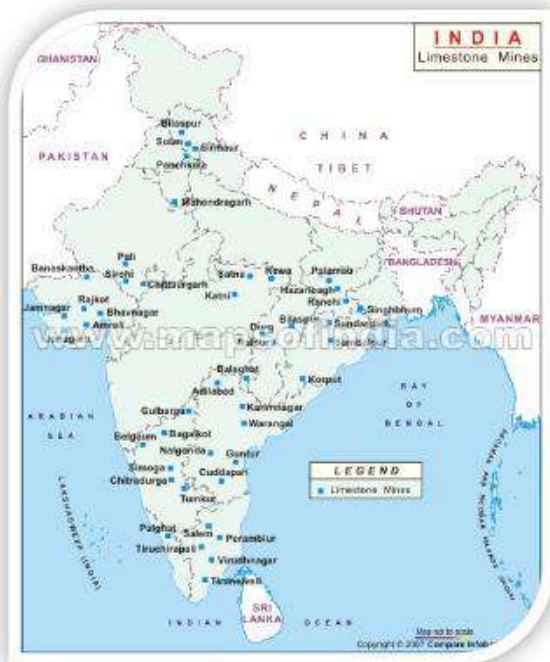


India is a growing economy and holds great potential for future market opportunities. The growth rate of India slowed down to 4.2% in 2019. According to the recent IMF forecasts, due to the COVID-19 outbreak, the country's GDP growth was estimated to be -10.3% in 2020 and pick up to 8.8% in 2021, subject to the post-pandemic global economic recovery. The stagnation caused in the industrial output, greenfield investment, and flattened demand have led to a decline in the growth rate in the country.

The construction industry in the country witnessed a growth of around 7.1% in 2019, and it was expected to grow at a high rate during the forecast period (before COVID-19). The residential construction industry is going through major structural changes, with

increasing construction of residential societies and high-rise building construction, rather than independent houses and bungalows.

Sourcing- Limestone



To the benefit of cement industry high grade limestone reserves are scattered uniformly all across India.

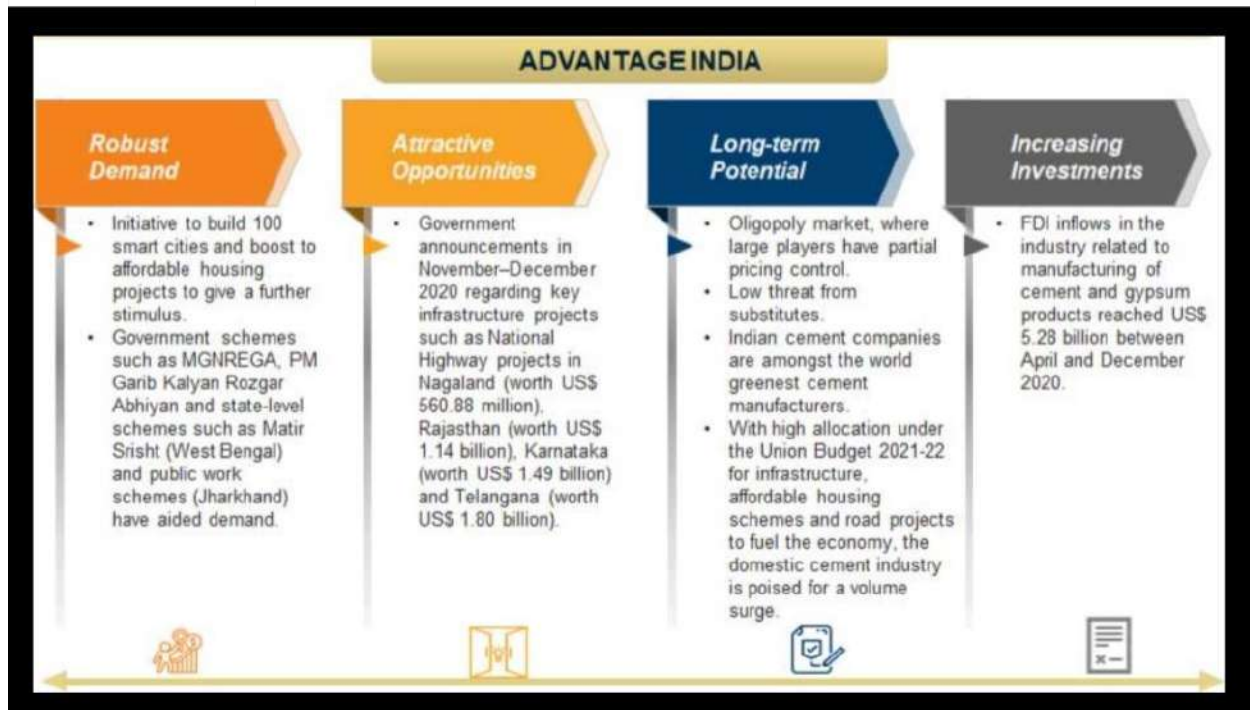
Volume wise limestone accounts for almost 60 % of raw material. Since setting up plants near quarry saves on inbound transport cost proximity to reserve is the single most important criteria.

Mining royalty imposed by state government are paid per ton basis. Dumpers and shovels used in mining consume high quantity of diesel making it the second most important cost driver

Private & Confidential

While the construction industry is expected to slow down in the 2020-2021 financial year due to COVID-19, the lion's share of the projects in the commercial space is likely to drive the construction activities after the lockdown, as they are either in public-private partnership (like smart city) or public projects, which are already budgeted.

Therefore, in the long run, the construction sector is expected to register a high growth rate, which is projected to positively influence the demand for steel, blocks and bricks, stone cladding for walls, etc. As limestone is used in the production of such construction materials, along with direct application during construction activities, such trends are likely to significantly create demand for limestone over the forecast period.



India is the world's second-largest producer of steel. The steel production in the country has been increasing at a rapid pace due to the soaring demand from the automotive and infrastructure sectors in the country, along with governmental initiatives (such as the National Steel Policy), which is supporting the growth of steel production in India.

The production of steel in the country is expected to double by 2031, while a growth rate of about 1.8% was recorded in 2019. Such targets of the country are expected to increase the demand for limestone from the steel industry in the years to come.

The water treatment and recycling industry is experiencing high growth, owing to the increasing water shortages occurring in the country. India has a total municipal water treatment capacity of about 22,960 million liters per day, whereas the required capacity is 61,754 million liters per day.

India has a large pulp and paper manufacturing industry. The capacity utilization of this industry is low, and it is still on a downward trend with increasing import pressure. This has been further affected by the outbreak of COVID-19, with production halted both due to lockdown and severe crunch of raw materials, which is expected to continue during the current year.

Clearly, the industry has come to a point where the raw material crunch has started to take its toll, and the sector has almost stretched its limit for capacity debottlenecking.



This is expected to have a negative effect on the demand for pulp and paper manufacturing over the coming years. While limestone is used as a coagulant, causticizing agent, bleaching agent, and neutralizing agent in the paper industry, limestone demand is also likely to witness negative repercussions of this scenario in the pulp and paper industry over the forecast period.

Therefore, considering such market trends, the limestone market is likely to hold huge growth opportunities in India over the forecast period, once the country revives its operations, which have currently been affected by the COVID-19 outbreak.

Competitive Landscape

The limestone market is partially consolidated. In terms of market share, few of the major players currently dominate the market. Key players in the limestone market include Imerys, CARMEUSE, Graymont Limited, Mineral Technologies Inc., and Lhoist Group, among others.

Recent Developments

In June 2020, Minerals Technologies Inc. announced that the company had signed an agreement with Phoenix Paper LLC to re-establish a 35,000 metric ton per year satellite precipitated calcium carbonate (PCC) plant at its paper mill in Wickliffe, Kentucky.

In August 2019, Graymont completed the acquisition of five Sibelco lime plants and a number of limestone quarries on the east coast of Australia, as well as lime plants in Malaysia and the Philippines.

MARKET SEGMENTATION (Market Size by Volume)

1. By Application

- .1 Industry Lime
- .2 Chemical Lime
- 3 Construction Lime
- 4 Refractory Lime

2 By End-user Industry

- 1 Paper and Pulp



.2 Water Treatment

.3 Agriculture

4 Plastics

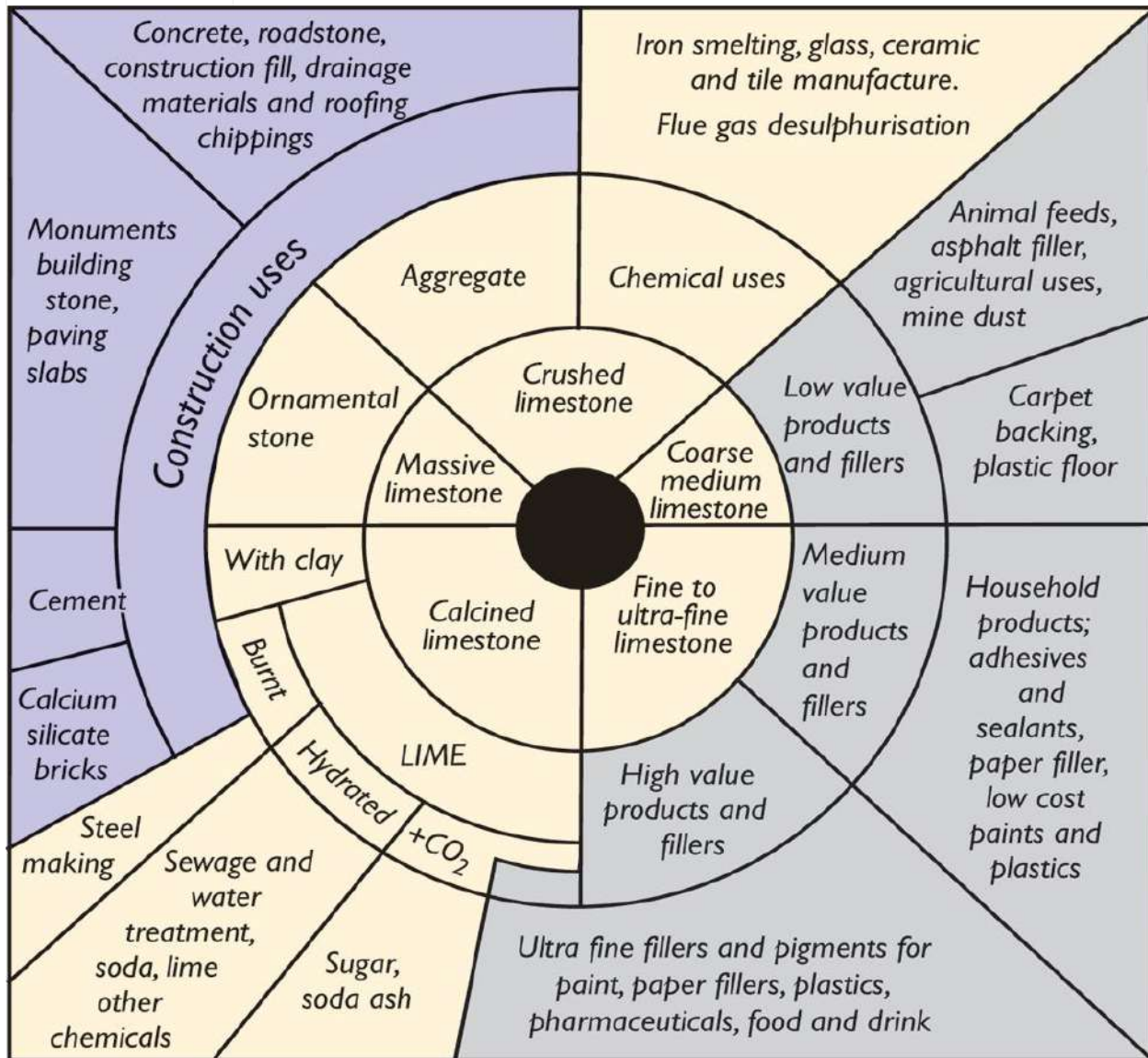
5 Building and Construction

.6 Steel Manufacturing and Other Industries (Including Energy)

.7 Other End-user Industries

Limestone in Karnataka : **Karnataka has the largest limestone reserve in India** It is another important mineral with an estimated 51,000 million tons.. The districts of Gulbarga, Bagalkot, Belgaum, Shivmoggga and other Uttara Kannada districts are endowed with extensive high grade limestone. The present and consistent production of approximately 14 million tone provides for the cement plants in these districts. Karnataka is the leading state in the country, with almost 27% of total resources followed by Andhra Pradesh and Rajasthan with 12% each.- Among these, Rajasthan produces around 21% of the limestone

Karnataka is among the very few Indian states to formulate a progressive mineral policy as early as the year 2000. Features such as transparency in granting mineral concessions, adoption of modern techniques in mining and emphasis on value addition and sustainability make this policy so progressive.



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An Overview of the usages of the Limestone and its end users

The above data is a preliminary research data to understand the potential of the Limestone market in Karnataka in contribution to a potential 1 trillion USD economy as a global value chain and harnessing the massive potential for global demand as the world markets picks up in 2023 -2027 . The data is secondary research approach collated with several sources and the copyrights of

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