

Dear Fellow Stakeholders:

**ROGELIO ZAMBRANO**

Chairman of the Board
of Directors

**FERNANDO A. GONZÁLEZ**

Chief Executive Officer

In the midst of the extraordinary conditions in which we had to operate, 2021 was undoubtedly transformative. The excellent results we achieved are a testament to the growth potential of our markets, our focus on customer experience, and, most importantly, the dedication and commitment of our people.

We Advanced Materially in Our Operation Resilience Strategy

We rolled out Operation Resilience in September 2020 in response to changes in market outlook brought on by the pandemic. This strategy focuses on de-risking the company, injecting growth into the portfolio with increased capital expenditure while advancing our sustainability agenda.

2021 results show the strategy paid off. Net sales grew 14% to US\$14.5 billion, and operating EBITDA improved 18% to US\$2.9 billion, the largest increase in more than a decade. EBITDA margin expanded 0.8 percentage points to 19.7%, supported by growing volumes and strong pricing, cost containment efforts, and a greater contribution from our urbanization solutions business.

Furthermore, we continued increasing our financial flexibility and strengthening our capital structure. We refinanced our syndicated bank facility at a record low cost and with an investment-grade style structure, a first in over a decade. We also

paid or refinanced over US\$7.5 billion of debt, and by applying free cash flow and asset sales proceeds, we reduced consolidated net debt by more than US\$2 billion. During the year, we reduced interest expenses by US\$141 million, or 20%, versus 2020. Most importantly, we reduced the leverage ratio by 1.4 times—the largest ever annual reduction—to 2.73 times and significantly lengthened our average life of debt to 6.2 years. The rating agencies took note of all these achievements. During the year, Fitch upgraded our credit rating by one notch to BB, and both Fitch and S&P raised their outlook to positive.

We also progressed significantly on our Operation Resilience goal of optimizing and rebalancing our portfolio for growth. To this end, we invested US\$380 million in strategic capital expenditures during the year. Much of this went toward our growth strategy of investing in bolt-on and margin enhancement projects as well as capacity additions. Importantly, the growth strategy is paying off, with a contribution of US\$100 million in incremental EBITDA in 2021. Additionally, EBITDA from our Urbanization Solutions core business grew 22% in the year. Through these investments and some strategic divestments, we are reorienting the portfolio more toward developed markets, particularly the U.S. and Europe. In the fourth quarter of 2021, we announced the sale of our operations in Costa Rica and El Salvador for US\$335 million. The proceeds from this sale should support our growth investments in key markets and deleveraging.

Future in Action: Committed to Net-Zero CO₂

Our achievements in 2021 were not just financial. We made significant advancements against our Operation Resilience climate action goals and rolled out our Future in Action program, focused on developing low carbon products, solutions, and production processes.

Our new more aggressive 2030 climate action goals are aligned to the most ambitious CO₂ reduction pathway in our industry and validated by the Science Based Target Initiative (SBTi) according to the Well Below 2°C Scenario. Most importantly, these goals will keep us on the right path to achieving our ultimate goal to deliver net-zero CO₂ concrete globally by 2050.

In 2021, we published our Sustainability-Linked Financing Framework, considered by specialists as the most comprehensive to date within our industry.



In 2021 we also joined the United Nations' "Race to Zero" campaign and the Business Ambition for 1.5°C coalition, and as of November 2021, we are a founding member of the First Movers Coalition, an initiative of the World Economic Forum launched at COP26 to create market demand for zero-carbon solutions.

In the first year since launching our CO₂ roadmap, we reduced our carbon emissions by 4.7%—the largest annual decline we have ever achieved—to a historic low for CEMEX. An almost two percentage point decline in clinker factor, coupled with a four percentage point increase in alternative fuel usage, drove the significant carbon reduction. As of 2021, we have reduced our specific net CO₂ emissions by 26.2% compared with the 1990 baseline, on track to achieve our more than 40% reduction goal by 2030.

Our aggressive climate action 2030 goal and detailed plant-by-plant roadmap are currently our industry's most ambitious CO₂ reduction pathway.

One of the main goals of our Future in Action strategy is, of course, to provide greener products and services to our customers so that the built world of the future is more sustainable and circular. We introduced our low carbon and net-zero CO₂ concrete and low carbon cement under the Vertua® brand in 2020. By March of 2021, we had successfully rolled out these products globally. The products have been very favorably received by customers, with Vertua® cement volumes growing almost 50% since its global launch. Vertua® has already been used in La Marseillaise, a new skyscraper in Marseille, as well as in the new HS2 high-speed railway in London and in the Querétaro-Irapuato highway in Mexico.

Our Vertua® products complement our existing and growing family of sustainable products and solutions designed to meet the needs of a green and circular economy—reducing energy consumption, improving insulation, enhancing the capacity of structures to withstand climate disasters, and, of course, reducing carbon emissions.

Our Vertua® net-zero CO₂ concrete, the first in the industry, is now available in all of our markets.

The actions we are taking under Future in Action are good for the world as well as for CEMEX. Our alternative fuels strategy not only helps to reduce carbon emissions but also supports our communities in dealing with one of society's most intractable challenges: waste. The ability of cement plants to use society's waste as alternative fuels reduces fossil fuel consumption and the amount of waste deposited in landfills where it produces and releases methane, a greenhouse gas 80 times more harmful to the environment than CO₂.

For the year, alternative fuels constituted 29.2% of our fuel mix, a record substitution rate for our company. While Europe continues to lead with the highest substitution rate, we are moving quickly to boost alternative fuels usage in all other regions. Our Mexican operations had an impressive performance, increasing alternative fuel usage by nine percentage points in 2021. To highlight the significance of this effort, our operations in Mexico processed the equivalent of 13% of the waste of Mexico City in 2021.

2021 was a year of many decade-long records despite unprecedented challenges

Highest growth in EBITDA in more than a decade

Achieved long-time leverage goal of below 3 times

First investment-grade style structure in our syndicated credit agreement

Record reduction in CO₂ emissions

We have been a pioneer in the adoption of hydrogen within the cement industry. Since 2019, we have used hydrogen injection to increase the use of alternative fuels and maximize thermal efficiency, and, as of 2021, hydrogen is in use in all of our plants in Europe. Our recently announced partnership with HiiRoc on a new hydrogen injection technology should accelerate this strategy, allowing us to further explore and significantly scale the adoption of hydrogen in all of our operations while reducing the consumption of fossil fuels. We are also working with Acciona and Enagas on a Green Hydrogen Project in Mallorca, Spain.

Additionally, we have made progress in our clean energy consumption strategy.

30% of our electricity supply is free of CO₂ emissions, keeping us on track to achieve our 2030 goal of 55%.

Our decarbonization experience in 2021 supports our strong belief that climate action is a tremendous opportunity and that the cement industry can shine in a circular economy. The transition to a low carbon and circular economy is not only good for the world and contributes to achieving the U.N. 2030 Agenda, but can also be a profitable journey. This year alone, through the use of alternative fuels and alternative raw materials, CEMEX managed close to 57 times the waste that we sent to landfills, and the use of alternative fuels alone produced US\$200 million in savings versus using fossil fuels.



Importantly, we have the knowledge and tools in place today to achieve our 2030 Climate Action goals. The technological challenge lies beyond 2030 to reach net zero. Carbon capture, in its many forms, offers the most encouraging prospects. We are actively engaged in seven carbon capture pilots, three of which have co-financing from the European Union and the U.S. Department of Energy. But many other possible technologies will contribute to the final solution. Among them, we recently announced that, for the first time, with our Synhelion partnership, we have produced clinker using solar energy, a breakthrough technology that we expect to continue to test to achieve an industrial scale.

As one of the world's largest suppliers of ready-mix concrete, our ability to transition our fleet to electric would be a pivotal event. We are piloting electric vehicles into our ready-mix fleet for the first time ever in several of our operations. This work is closely aligned to our founding membership in the First Movers Coalition (FMC), where we have committed to supporting breakthrough technology in developing heavy-duty electric trucks. FMC is an initiative launched at COP26 that unites forward-thinking companies ready to leverage their combined purchasing power to accelerate innovation and develop early-stage decarbonization technologies.

We continued to make a significant contribution to our five priority U.N. Sustainable Development Goals.

In 2021, we celebrated 20 years of CEMEX's Conservation Program in El Carmen, where we have been able to restore habitats and reintroduce wildlife in a region that is eight times larger than the total area of our global operations. Furthermore, we commissioned BirdLife International to implement a new Biodiversity Proximity Study across all of our quarries, aiming to protect the natural habitats surrounding them. We are also moving forward with implementing Water Action Plans for our operations located in high water-stressed zones so that we can contribute to an optimized use of this vital natural resource.

We executed our Social Impact strategy that allows us to contribute to the well-being of our communities in important areas such as education, employment, entrepreneurship, inclusion, environmental protection, community infrastructure, and affordable housing. Overall, we have positively impacted more than 25 million people on an accumulated basis.

Our growth strategy is firmly rooted in our digital efforts

Digital innovation is central to everything we do at CEMEX, including our commercial outreach, operations, and administrative management.

On the commercial side, CEMEX Go continues to be instrumental in enabling our customers to safely and reliably acquire our products and services and ensure the loyalty of a growing number of customers. After four years of offering a superior digital customer experience through CEMEX Go, 61% of our sales are processed through this global digital platform, with a 93% overall usage rate among recurring customers. CEMEX Go reliability and service are key factors in our securing, for the second consecutive year, our highest annual global Net Promoter Score of 68, substantially above average for the construction and engineering industry of 45. While CEMEX Go was not built expressly for a pandemic, it has been an important competitive advantage over the last two years.

We are grateful to our employees who ensured our products and services' safe operations and delivery during this second year of the pandemic.

On the operational side, machine learning is helping us run our cement plants more effectively as we look to optimize energy efficiency, fuel mix, production, and scheduled maintenance in our kilns. To deal with the complexities of the ready-mix business, we have developed a proprietary, cloud-based ready-mix management system that is now being commercialized under the Arkik name. This solution gives independent ready mixers the capacity to integrate end-to-end commercial and order fulfillment processes.

Our efforts take us one step further as the digital leader of the construction materials industry.

We leverage world-class digital partners and expertise to optimize our processes in our administrative functions. We are making material progress in our Working Smarter digital transformation initiative, through which CEMEX is leveraging a combination of digital technologies, operative models, and innovation from leading service suppliers to reshape its business management services. Working Smarter is the most comprehensive adoption of digital technologies ever to transform how business services are provided at CEMEX, ranging from finance and accounting back office, information technology, and human resources to commercial back- and middle-office services.

We are grateful to our employees who ensured our products and services' safe operations and delivery during this second year of the pandemic. Thanks to their determination, our health and safety protocols, and the efforts of our medical workers, we registered a lower COVID-19 contagion rate in our operations compared to the average rate in each locality. Still, we suffered the unfortunate loss of valued colleagues, and we want to extend our deepest condolences again to their families.

CEMEX continues to be a positive safety benchmark for a global company in our industry, registering an employee Lost Time Injury (LTI) Frequency Rate of between 0.5 and 0.6 for the past seven years. In 2021, 96% of our operations had zero employee and contractor LTIs. These results provide both motivation and clear evidence that our Zero4Life commitment is improving the way we operate and producing positive outcomes for our employees and contractors.

We are proud of our workforce

We could not have attained this success in our 2021 results and future goals without our outstanding people. We are firmly committed to prioritizing their health and safety, providing a superior workforce experience, and maintaining high levels of employee satisfaction. In 2021, we reached an employee Net Promoter Score of 48, higher for the second consecutive year than the global benchmark score measured by our survey provider and above our 2030 goal.



Building a Better Future

A year of many "records" and "firsts," 2021 was in many ways a milestone year for CEMEX. Our results, which were quite transformational, bolster our commitment to continue to live our purpose of building a better future.

Cement is fundamental to the needs of a growing, sustainable planet that is expected to continue to favor migration toward urban areas and welcome 68% of the population by 2050. We expect to continue playing an essential role in the construction and maintenance of the sustainable cities of tomorrow that are durable and designed to protect against climate change.

As we look forward, we are excited about the new opportunities created by our robust capital structure, growth investments, digital transformation, and commitment to continue leading our industry in the global transition to a low carbon, green, circular economy.

On behalf of CEMEX's Board of Directors, our management team, and our employees, we thank you for your continued confidence in CEMEX.

Sincerely,

Rogelio Zambrano

Chairman of the Board of Directors

Fernando A. González

Chief Executive Officer

Future in Action

Our purpose is to **build a better future**; to do that, we must address humanity's most pressing issue, climate change. As one of the world's largest building solutions providers, and the largest manufacturer of concrete in the western world, **climate action has been a priority for CEMEX** for many years.



FUTURE IN ACTION

FUTURE IN ACTION

As one of the world's largest building solutions providers, and the largest manufacturer of concrete in the western world, climate action has been a priority for CEMEX for many years.

We are aware that our production processes have a carbon footprint. We also know that our end-product, ready-mix concrete, is the most used man-made material in the world and plays an essential role in society's development and growth. As society is expected to continue developing, growing, and concentrating in urban areas, our purpose of building a better future calls for developing and offering net-zero products and solutions to society through the construction industry.

Recognizing that global climate action goals require stronger efforts, and ensuring sustainability is at the core of everything we do, in 2021 we created Future in Action, a program focused on becoming a net-zero CO₂ company.



Future in Action concentrates in four pillars:



Sustainable Products & Solutions



Decarbonizing our Operations



Innovation & Partnership



Promoting a Green Economy

We achieved the largest annual CO₂ reduction in our company's history.

4.7% CO₂ emissions reduction per ton of cementitious material vs 2020, to reach 591 kg CO₂/ton (-29 kg CO₂ per ton vs 2020).

We achieved our best performance

ever in the use of alternative fuels, clean electricity consumption, and clinker factor reduction.

Our 2030 climate action goals are aligned to the most ambitious CO₂ reduction pathway in our industry.

We reaffirmed our commitment to deliver net-zero CO₂ concrete by 2050 by joining the U.N. Race to Zero.

Urbanization Solutions

Through Urbanization Solutions, we are capitalizing on our critical mass and expertise in building materials to offer complementary solutions to solve the most pressing needs for cities: net-zero and sustainability, circular solutions, and resilient buildings and infrastructure.

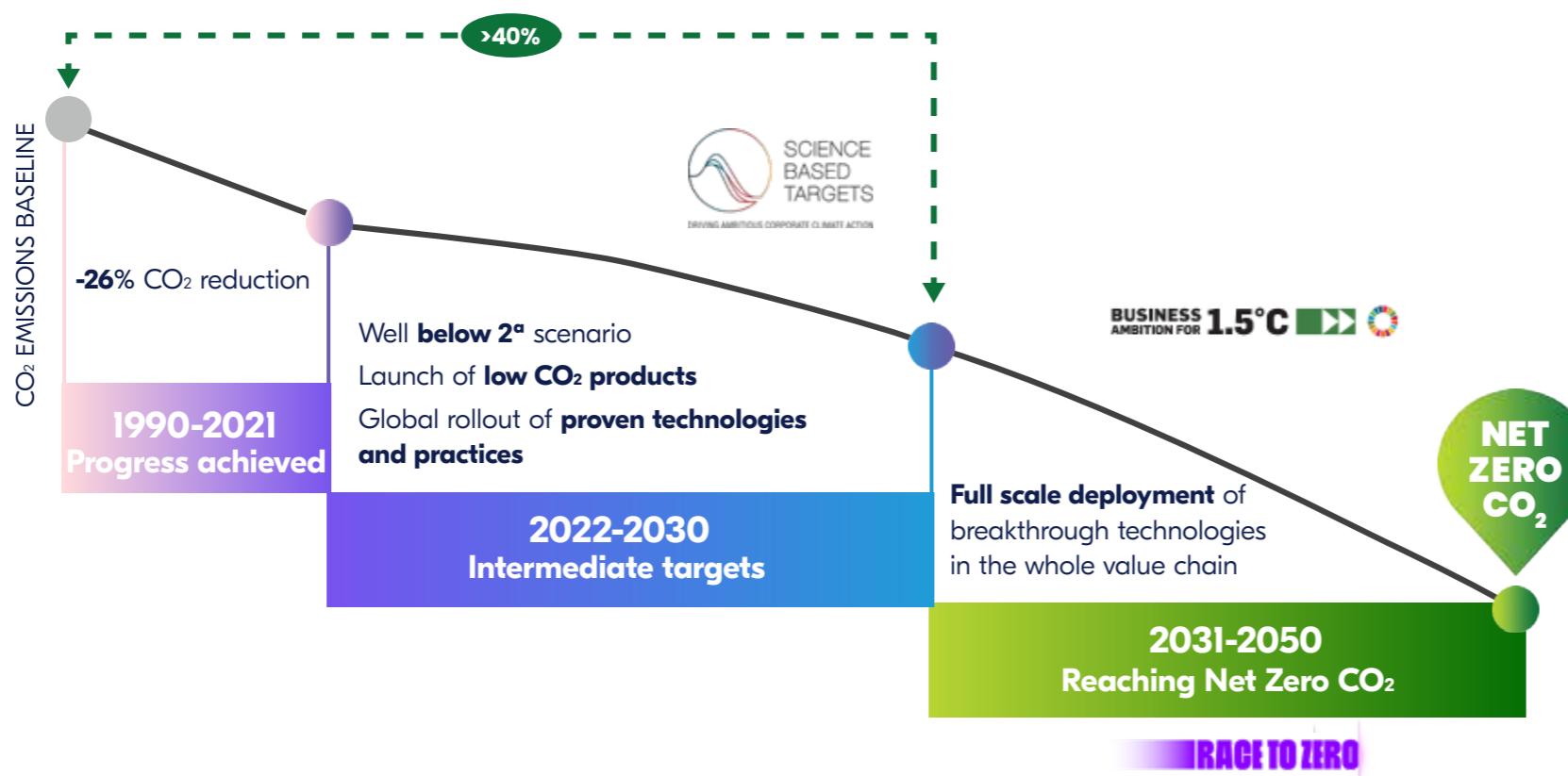
To learn more about our Urbanization Solutions core business and how it supports our Future in Action program, visit pages 50-51 of this report.

LEADING THE INDUSTRY TOWARD NET-ZERO CO₂

Our ultimate goal is to deliver net-zero CO₂ concrete globally by 2050. To ensure we are on the right track, we have set the most ambitious 2030 targets in our industry.

Our 2030 goals and commitments are aligned and have been validated by the Science Based Targets initiative according to the Well Below 2°C Scenario. Additionally, we signed for the Business Ambition for 1.5°C so that our targets beyond 2030 are fully aligned with the Paris Agreement goals.

CEMEX also joined the Race to Zero Campaign of the U.N. and its High-level Champions for Climate Action, to ensure that we will reach net-zero CO₂ concrete by 2050. Additionally, CEMEX is one of the founding members of the First Movers Coalition, launched at COP26 by the World Economic Forum and the U.S. State Department, to create market demand for zero-carbon solutions.



Delivering on Our Goals from Day One

As of 2021, we have reduced our specific net CO₂ emissions by 26.2% compared with the 1990 baseline. In 2021 alone, we achieved a 4.7% CO₂ emissions reduction per ton of cementitious material—the largest annual CO₂ reduction in our company's history. We reached 591kg of CO₂ per ton of cementitious material, a reduction of 29kg compared to 2020. This reduction, together with our clean energy and electricity efficiency improvements, allowed us to avoid emitting 10.2 million tons of CO₂, equivalent to the annual emissions of 2.2 million passenger vehicles.

Acceleration of Short Term efforts to Reach our Climate Goals

2025

- 35% reduction** of CO₂ emissions¹ in cement
- 43% use** of alternative fuels
- 74% of clinker factor**
- 40% in clean electricity** consumption

2030

- >40% reduction** of CO₂ emissions¹ in cement.
- 35% reduction** of the CO₂ content in concrete¹.
- 55% in clean electricity** consumption.
- 71% of clinker factor**
- 50% use** of alternative fuels

To deliver globally net-zero CO₂ concrete with an action plan that involves all the elements in the construction value chain.

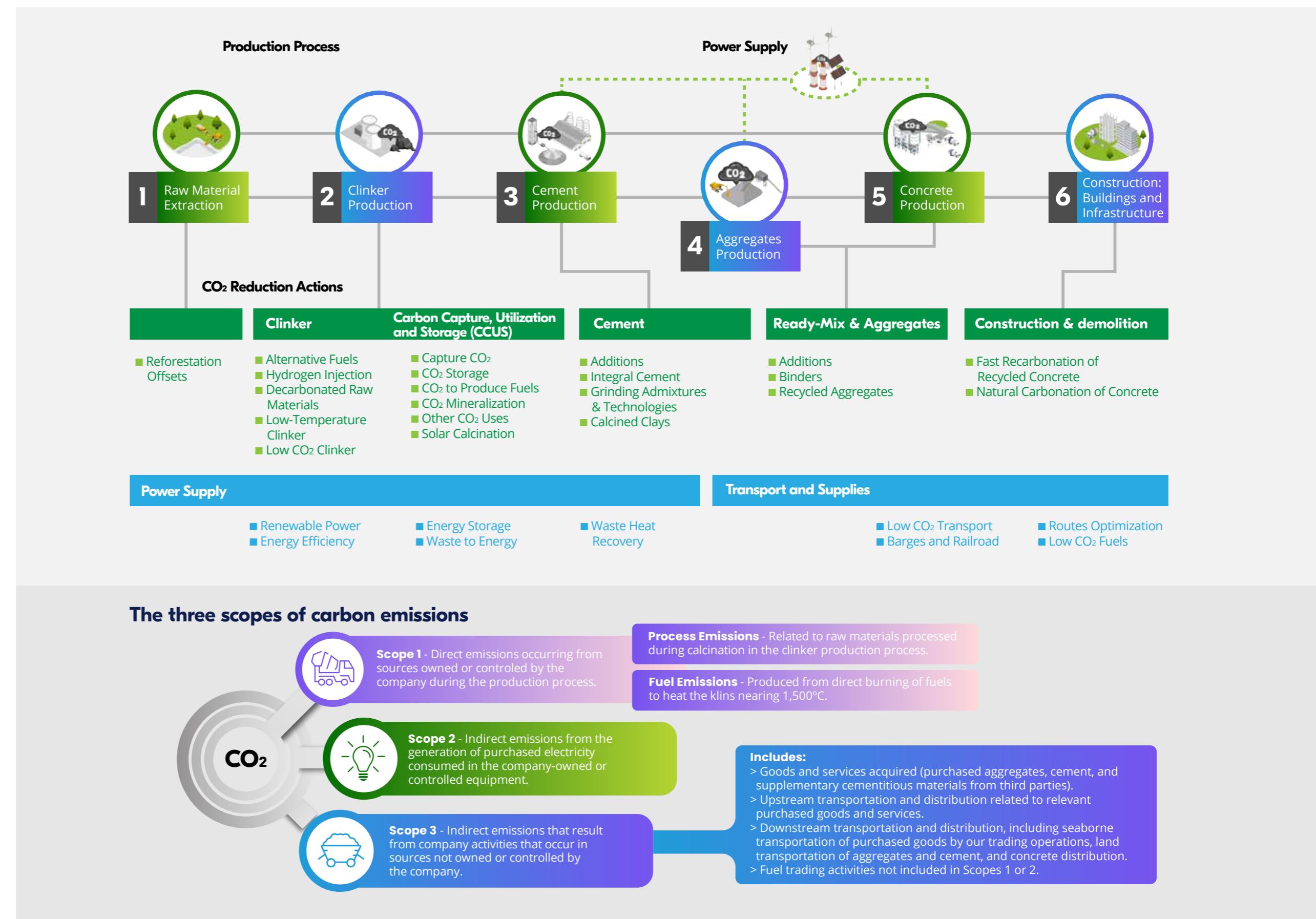
¹ Compared to our 1990 baseline.

CO₂ EMISSIONS IN THE CEMENT-TO-CONCRETE VALUE CHAIN

The cement industry is the source of about 5% to 8% of the world's CO₂ emissions¹. Clinker, the main ingredient of cement, is produced in a kiln by calcination, when limestone reacts with silica-bearing minerals to form a mixture of calcium silicates. This process generates the largest percentage of CO₂ emissions in the cement-to-concrete value chain.

~53 M tons

CEMEX total 2021 emissions



¹ According to the Global Cement and Concrete Association (GCCA)

Sustainable Products and Solutions

One of the main goals of our Future in Action strategy is to provide low carbon and sustainable products and solutions to our customers so that the built world of the future is more sustainable and circular.



To this end, we are investing in research and development to deliver innovative building materials and solutions that contribute to the construction of climate-smart urban projects, sustainable buildings, and climate-resilient infrastructures.

Vertua®: An Extensive Family of Low CO₂ Products

We introduced our low carbon and industry-first net zero concrete, as well as low carbon cement, under the Vertua® brand in 2020. By March of 2021, we had successfully completed the global rollout of these products. Customer receptivity has been very favorable; Vertua® cement volumes have grown almost 50% since its global launch in March.



Vertua® products are uniquely designed to balance customers' expectations for high-quality and performance with a lower carbon footprint for their construction projects. To this end, the Vertua® product range supports builders and contractors in earning credit points toward LEED®, Whole Building Life-Cycle Assessment, and other green building certifications.



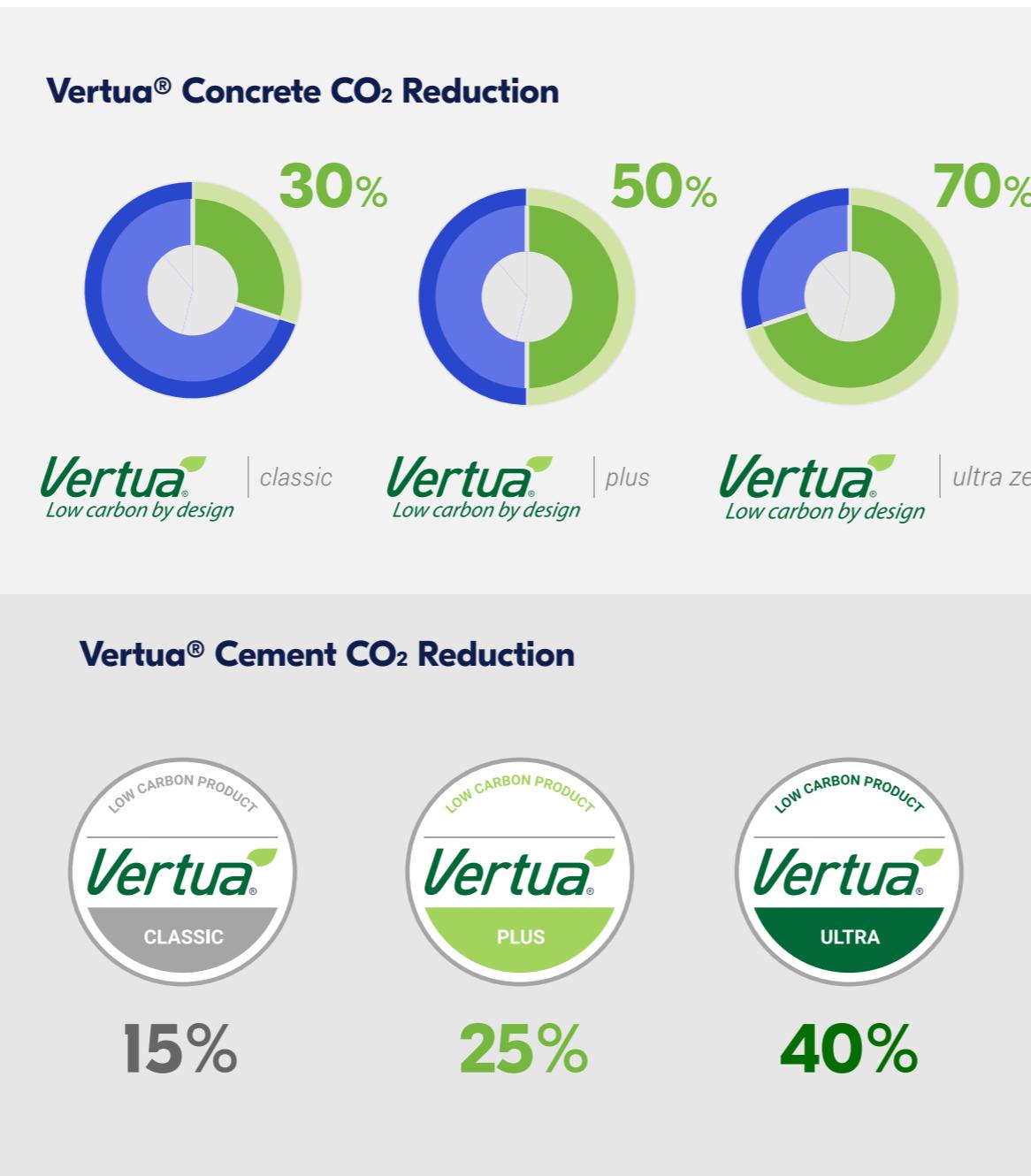
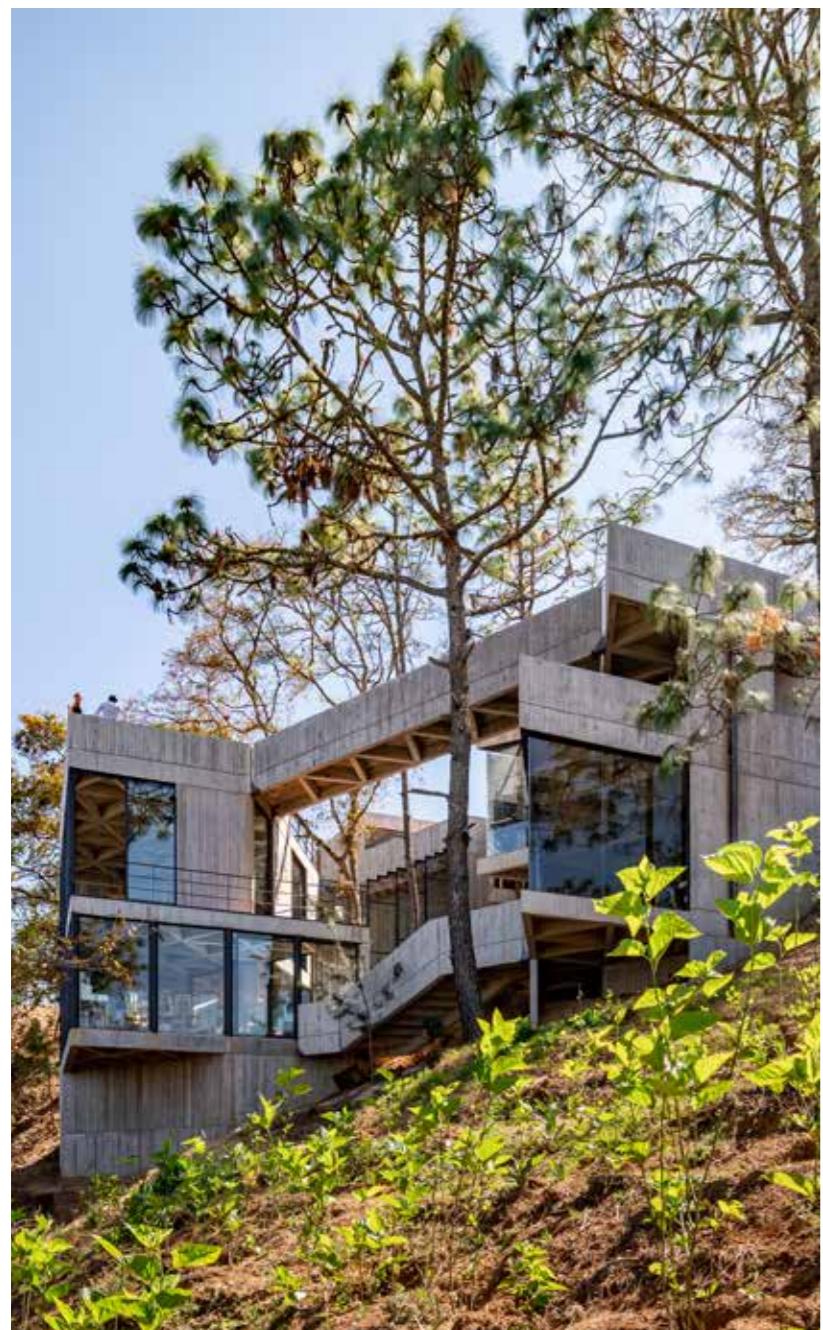
Our Vertua® net-zero carbon concrete, the first in the industry, is now available in our main markets.

The Industry-first Net-zero CO₂ Concrete²

Vertua Ultra® concrete uses cutting-edge technology to reduce its carbon footprint by 70%, neutralizing the remaining 30% through offsetting efforts. Vertua Ultra® concrete is a fundamental step in achieving our 2050 goal of delivering net-zero CO₂ concrete globally. It replaces limestone-based clinker with a geopolymer technology that eliminates associated process emissions from the calcination of clinker. This clinker-free concrete can be used as an alternative to more commonly used clinker-based cement solutions in multiple applications.

² Compared to industry-standard Portland-cement-based concrete. Sectoral global average net emission per ton of clinker. The direct net emission of each Vertua® cement is obtained through the "CO₂ Protocol" verified annually for clinker and the clinker factor corresponding to each cement. Getting the Numbers Right <https://gccassociation.org/gnr/>

Vertua® products are uniquely designed to balance customers' expectations for high-quality and performance with a lower carbon footprint.



We surpassed the first million cubic meters of Vertua® Concrete delivered to customers in 2021, contributing to emblematic projects in many parts of the world.



U.K.

UK HS2, high-speed rail.
Largest infrastructure project in Europe



FRANCE

La Marseillaise
30-story skyscraper in the city of Marseille



MEXICO

Querétaro-Irapuato Highway
Considered the first sustainable and ecological highway in the country



POLAND

PI80
Office building in Warsaw



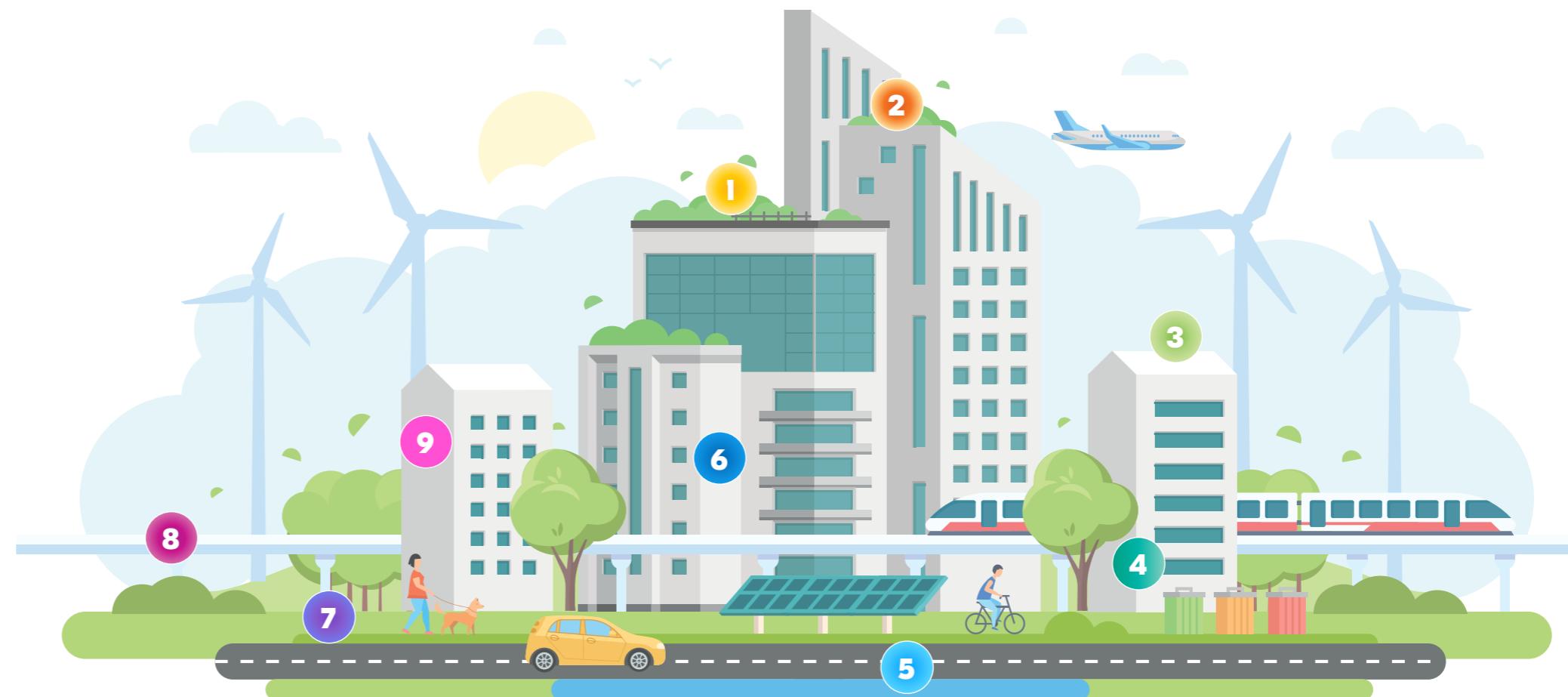
Click here for more information about Vertua® line of cement and concrete products.

Our global brands of value-added ready-mix concrete and aggregates products are helping meet the challenges of the cities of the future

OUR COMPLEMENTARY PORTFOLIO OF PRODUCTS WITH SUSTAINABLE ATTRIBUTES

Our Vertua® products complement our existing and growing family of products and solutions designed to meet the needs of a green and circular economy—reducing energy consumption, improving insulation, enhancing the capacity of structures to withstand climate disasters, and, of course, reducing carbon emissions.

An important share of our portfolio offers sustainability performance characteristics beyond traditional options. In 2021, 56% of our cement and ready-mix concrete sales were linked to products with outstanding sustainability attributes including resource and energy efficiency, resilience, low CO₂ footprint, and H&S benefits, among others.



1 Porofoam®
Ultra-light weight foamed concrete.

2 Hidratium®
Tolerates extreme conditions and has self-curing properties that eliminate concrete cracking.

3 Evolution®
Saves time and costs because it has self-compacting and self-leveling characteristics. It encompasses a range of strengths ranging from conventional to high strength.

4 neogem®
A range of value-added aggregates that offer unique construction solutions.

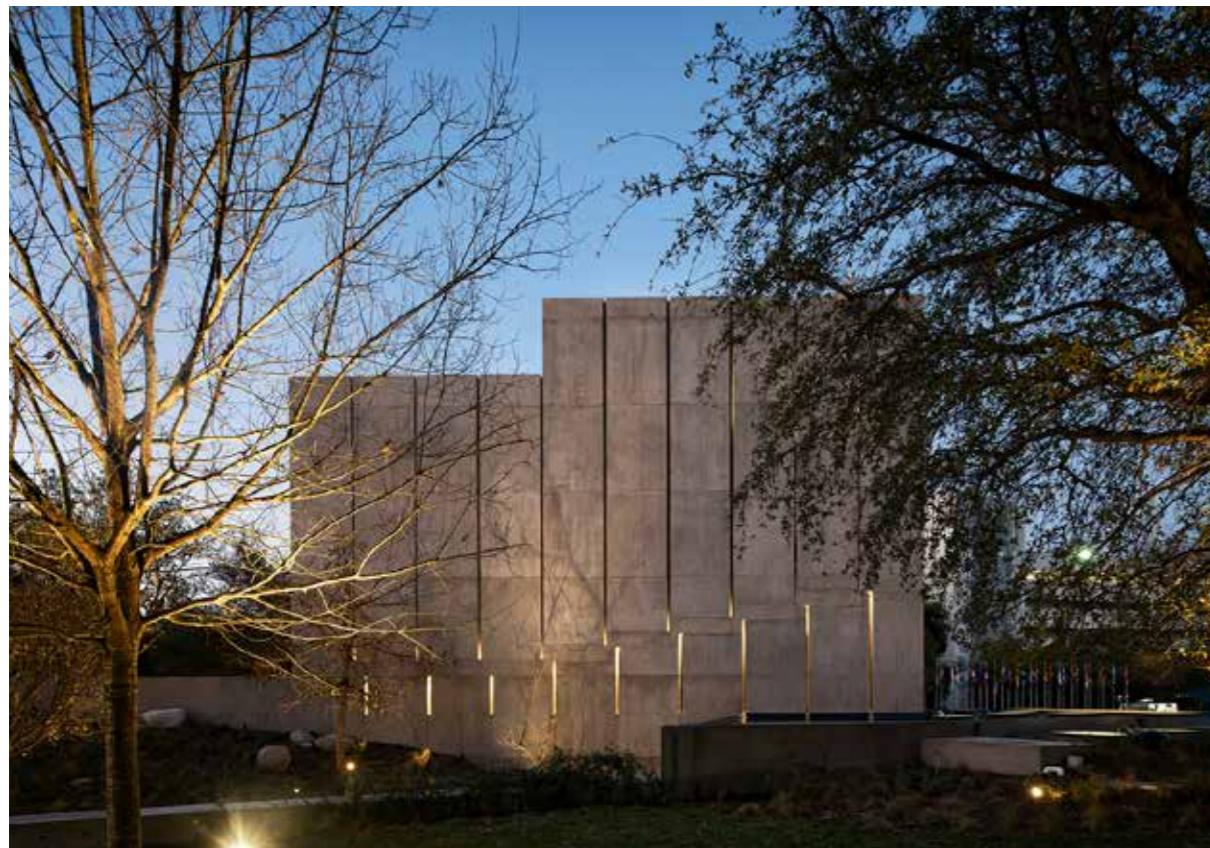
5 Pervia®
A solution for draining pavement that makes it easier for water to permeate and be conducted to a water management system.

6 Vertua®
Industry-first net-zero CO₂ concrete.

7 Promptis®
Rapid-hardening concrete that develops compressive strength to demold and move elements in four hours.

8 Resilia®
A substitute for steel with fibers that provide hyper strength and ductility.

9 Insularis®
Improves energy efficiency due to enhanced thermal insulation and elimination of thermal bridges.



THE ROLE OF CONCRETE IN BUILDING A CARBON-NEUTRAL ECONOMY

Concrete, the most used man-made material in the world, is a sustainable building material found everywhere in our society. No substitute can match its cost-effective performance, which makes concrete essential for building long-lasting infrastructure and buildings. Due to the unique characteristics of concrete, a future without it is difficult to imagine.

Some of the performance attributes of concrete make it essential in the transition to a carbon-neutral economy, including:

- **Longer-lasting buildings and infrastructure.** The inherent long-lasting characteristics of concrete contribute to developing durable structures, which conserves resources by reducing the need for reconstruction. Concrete will not rust or rot.
- **Thermal mass.** Concrete provides an efficient and cost-effective solution to reduce indoor temperature fluctuations, thereby lowering the energy required to heat and cool interior spaces. When combined with other materials, concrete has thermal insulation properties that can reduce the energy consumption of buildings.
- **Resilient to natural disasters.** Concrete is resistant to fire, wind, water, and earthquakes and can withstand weathering, erosion, and extreme weather conditions.
- **Flexible and shapeable.** Concrete is versatile and can be molded into any surface, texture, or pattern.
- **Low maintenance costs.** The durable characteristic of concrete contributes to its lower maintenance requirements throughout the entire life of the structure.
- **100% recyclable.** Concrete can be recycled as aggregate for other applications, including as a base material or in the production of ready-mix concrete, helping to avoid carbon emissions and costs associated with its disposition, or with the extraction and transport of raw materials.
- **Absorbs CO₂.** Concrete can absorb up to 25% of its total embodied carbon footprint³. This absorption occurs throughout the lifetime of concrete in built structures—and even beyond, since recycled concrete from construction and demolition waste, used as a secondary product, continues to uptake carbon.

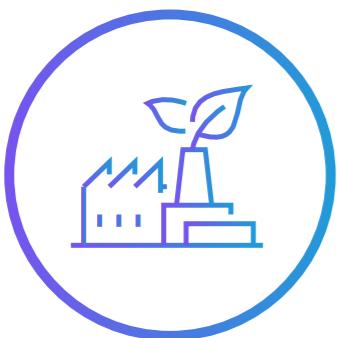
³ According to the United Nations' Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) on the physical science basis of climate change (August 2021)



Concrete has two unique attributes that make it one of the most sustainable construction materials on earth: it is the only building material that **absorbs CO₂** over its lifetime and it is **infinitely recyclable**.

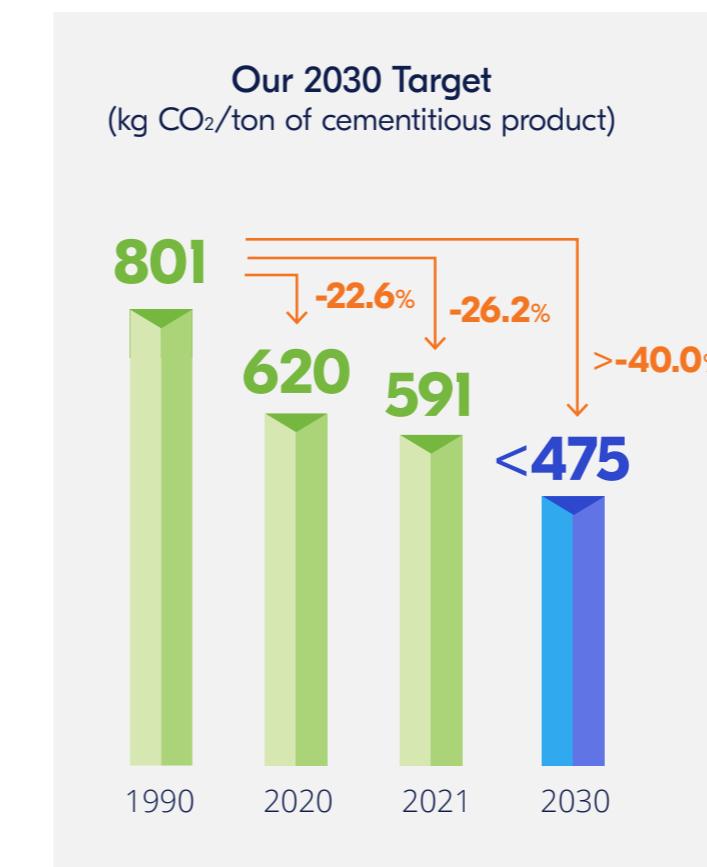
Decarbonizing Our Operations

We have been working globally to take full advantage of proven technologies and maximize the technical levers currently available in the cement and concrete production processes to reduce the carbon footprint of our global operations.

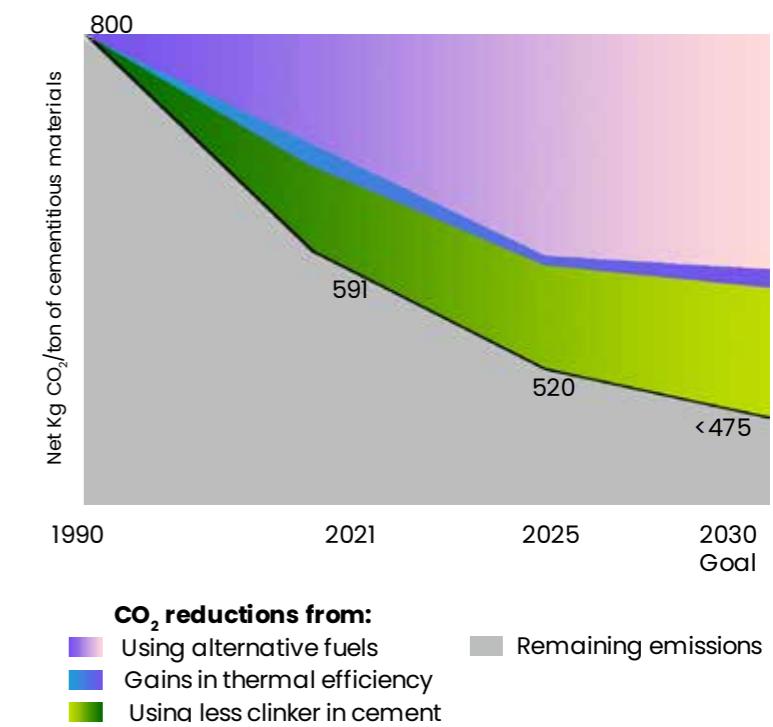


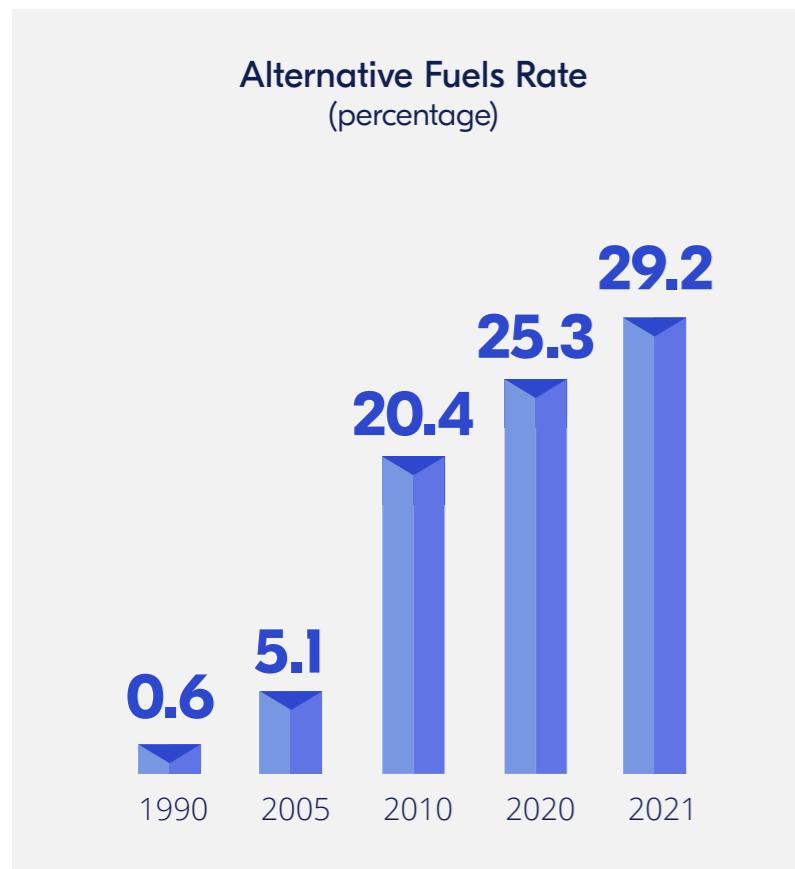
To achieve our 2030 goals, Future in Action focuses on maximizing the following levers to reduce our carbon emissions:

- Accelerating the use of alternative fuels with high biomass content
- Optimizing thermal efficiency in our cement kilns
- Increasing the use of decarbonated raw materials in clinker
- Using novel clinkers: low-temperature clinker and low CO₂ clinker
- Reducing the clinker factor through blended cements
- Maximizing our clean electricity consumption
- Reducing our Transport Emissions



Aligning Sustainability Targets to Well Below 2- Degrees Scenario of Science Based Targets Initiative





ACCELERATING THE USE OF ALTERNATIVE FUELS WITH HIGH BIOMASS CONTENT

In 2021, alternative fuels constituted 29.2% of our fuel mix, a record substitution rate for our company. In the year we increased the alternative fuels rate by four percentage points compared to 2020.

While Europe continues to lead the way with the highest substitution rate, we are moving to accelerate alternative fuels usage in all other regions. Our Mexican operations had an impressive performance, increasing alternative fuel usage by 9 percentage points in 2021. To highlight the significance of this effort, our operations in Mexico processed 13% of the waste of Mexico City in 2021.

The use of alternative fuels with a high biomass content is a key lever to reduce direct CO₂ emissions from the clinker production process, reaching 10.7% of the total fuel mix during 2021. Alternative fuels can eliminate our reliance on carbon-intensive fossil fuels, powering our kilns while also supporting our communities in dealing with one of society's most intractable challenges: waste.

Alternative fuels mostly waste from human activities, which contain recoverable energy that would otherwise end up in landfills without energy recovery. The ensuing decomposition of biomass waste in landfills generates



methane, a greenhouse gas up to 80 times more harmful to the environment than CO₂. Co-processing is a more efficient waste management solution than landfilling or incineration, positioning the cement industry as a net consumer of waste that shines in a circular economy.

The most common alternative fuels are biomass fuels (crop residues, nut hulls, wood waste), refuse-derived fuel (shredded or pelletized municipal solid waste), tire-derived fuel (tire waste, processed tire chips), and alternative liquids (waste oils). While there are many types of alternative fuels, they are not all equal. Biomass waste has already removed and absorbed CO₂ from the atmosphere, so when it is later used as a fuel it has a neutral impact in our gross emissions. CEMEX gives first priority to use of alternative fuels with high biomass content.

Successful Track Record

CEMEX is one of the largest contributors to the circular economy and a leader in using alternative fuels with close to 60% use across its European operations, significantly higher than the industry average. We currently have plants in the Czech Republic, Germany, and UK operating with substitution rates above 70%, and our plants in Poland have an alternative fuels substitution rate above 90%. To achieve our CO₂ reduction goals, we will accelerate and expand the use of these technologies and processes to new geographies.

In 2021, we announced a US\$25 million investment in a new system to replace fossil fuels at our Rugby cement plant in the U.K. Once fully optimized, the Rugby plant will have the capability to operate at 100% alternative fuels, contributing to our climate action targets.



OPTIMIZING THERMAL EFFICIENCY IN OUR CEMENT KILNS

During 2021, we used hydrogen injection in our cementitious kilns in all of our plants in Europe and we continued our global rollout of the technology.

CEMEX began using hydrogen injection in 2019 as a means to increase our use of alternative fuel as well as to maximize thermal efficiency in our cement kilns. This technology increases the burnability of the raw material mix, allowing for greater use of alternative fuels and reducing CO₂ emissions from fuel consumption.

Furthermore, we are an industry leader when it comes to research and development relating to the use of hydrogen in our kilns. Our recently announced partnership with HiiRoc on a new hydrogen injection technology will accelerate this strategy, allowing us to further explore and significantly scale the adoption of hydrogen in all of our operations while reducing the consumption of fossil fuels. We are also working with Acciona and Enagas on a Green Hydrogen Project in Mallorca, Spain.

Cement manufacturing is an energy-intensive process

Cement manufacturing is an energy-intensive process, requiring raw materials to be heated to about 1,500°C in our kilns. Specific heat consumption (SHC) is the energy needed to produce one unit of clinker, the main ingredient of cement. SHC is a key performance indicator that helps us measure the thermal efficiency of each kiln and is impacted by many levers in the 2030 CO₂ Reduction Roadmap. Each of these levers has potential to reduce the total fuel needed for clinker production and thus to lower net fuel emissions per clinker unit.

INCREASING THE USE OF DECARBONATED RAW MATERIALS IN CLINKER

In 2021, we avoided over 600,000 tons of CO₂ with the use of decarbonated raw materials in our global operations. In our European cement operations, we achieved a 60% increase compared to 2020 in the consumption rate of decarbonated raw materials, which contributes to positioning Europe at the forefront of emissions reductions worldwide.

The use of already decarbonated raw materials holds great potential to avoid process CO₂ emissions as well as to reduce fuel emissions thanks to lower heat demand compared to what is typically required in decarbonizing the raw meal. We are investing in the research and development of decarbonated raw materials to replace virgin limestone in clinker production with a range of alternative materials containing calcium.

The quality and scarcity of decarbonated materials is a challenge. CEMEX is continuously seeking collaborations with other industries, assessing new materials, and investing in developing new technologies to help us advance in the use of other decarbonated raw materials.

USING NOVEL CLINKERS: LOW-TEMPERATURE CLINKER AND LOW CO₂ CLINKER

As of 2021, we have introduced novel clinkers in a significant number of our cement plants, primarily in Mexico and Europe, reaching 50% share in our clinker production in the latter region.

CEMEX has researched low temperature and low CO₂ clinkers for the past 20 years, successfully developing novel clinkers with a 10% to 20% lower CO₂ footprint. By adjusting the traditional composition of clinker and using special mineralizers in the raw mix, these technologies significantly reduce the energy intensity of clinker production, improve the energy requirement for grinding, and utilize a different chemical reaction to release less CO₂ compared to ordinary Portland Cement. For instance, low-temperature and low CO₂ clinker require calcination temperatures below 1,350°C and 1,250°C, respectively. These temperatures are around 100 to 200 degrees lower than those required for ordinary Portland Cement clinker, and represent direct improvement in the energy intensity of clinker production.

The availability of the required raw materials to produce novel clinkers can be challenging in some locations. That's why CEMEX will continue to invest in the development of novel clinkers with a smaller CO₂ footprint, actively scout potential sources of the key input materials, and leverage its global footprint to unlock the deployment at scale of these solutions across regions.

REDUCING THE CLINKER FACTOR THROUGH BLENDED CEMENTS

As of 2021, the average clinker factor in our cementitious products was 75.2%. In the year we achieved an almost two percentage point improvement in clinker factor from the previous year—the lowest level reached in the last 10 years.

We aim to achieve further reductions in our clinker factor as a key contributor to reach our 2030 goal. To this end, in 2021 we continued to provide the market with more blended cements, increasing from 63% in 2020 to 66% of our total production.

Blended types of cement (or blended cements) are composed of a reduced amount of clinker blended with supplementary cementitious materials (SCMs) that have the same strength, resilience, and durability performance as traditional cement and the subsequently produced concrete. CEMEX is increasingly using SCMs as a substitute for clinker in cement to reduce embodied CO₂ process emissions and CO₂ emissions from energy use associated with clinker production. The SCMs can include limestone, coal ashes, slag, natural pozzolans, calcined clays, and others. By co-processing SCMs in the production of blended types of cement, we can decrease the clinker factor, reducing the overall emission factor of CEMEX cement.



Given the predicted gradual decline of SCMs, CEMEX is dedicating efforts and investing in the research and development of other cementitious materials and fillers to replace clinker content, like calcined clay a natural clay that has been partially calcinated to give it reactive properties. Additionally, CEMEX is developing the know-how to find the optimal synergies between chemicals admixtures and its clinker chemistry to develop tailor-made quality enhancer additives to improve the reactivity of cement and increase the inclusion of clinker substitutes.

In 2021 we achieved the largest annual reduction in clinker factor in the last 10 years.

MAXIMIZING OUR CLEAN ELECTRICITY CONSUMPTION

In 2021, CEMEX continued leading the industry in clean electricity with close to 30% clean electricity consumption in our cement plants.

In 2020, we achieved 100% renewable energy supply for our operations in Poland thanks to an agreement with PGE Obrót. Additionally, we extended for three more years our agreement with Engie to supply 100% renewable energy for our operations in the United Kingdom.

By 2030, CEMEX aims to source 55% of its global electricity consumption in cement from clean energy sources, almost double the current level. This target will require a combination of plant-specific solutions due to differences in the ability to generate clean electricity efficiently and cost-effectively as well as differences in the local regulatory and economic environments near each plant.

Advancing the use of clean electricity in CEMEX's cement operations complements the company's ongoing efforts to achieve its zero-emissions ambition. Also, it makes good business sense given that the price of clean electricity is competitive in many markets against the price of fossil fuel generation.

CLEAN POWER SOURCES DEVELOPED OR CONTRACTED*

Mexico	250 MW Eurus wind farm 150 MWac Tuli solar farm 150 MWac Helios solar farm 126 MW Ventika I wind farm 126 MW Ventika II wind farm
Germany	30 MW waste-to-energy facility
United Kingdom	100% renewable contract
Poland	100% renewable contract
Colombia	11 MW hydropower portfolio
Panama	100% hydroelectric contract
California	7 MW wind portfolio
Philippines	6 MW waste heat recovery facility in Solid 5 MW waste heat recovery facility in APO
Dominican Republic	1.5 MWac solar project 20MWac solar project contracted

* As of December 31, 2021.



IMPROVING ENERGY EFFICIENCY

Energy efficiency in production processes is also a relevant contributor to reducing the demand for energy and lowering energy-related emissions. At CEMEX, we are focused on promoting a mindset of continuous improvement and constant innovation that enables us to leverage opportunities to capture savings and reduce energy consumption across our operations by replacing outdated equipment and modernizing our plants with the latest available energy-efficient technologies.

Leading Energy Efficiency in the U.S.

Our U.S. operations were named EPA ENERGY STAR® Partner of the Year for the third consecutive year, earning the 2021 Sustained Excellence Award from the U.S. Environmental Protection Agency and U.S. Department of Energy—the highest honor among ENERGY STAR® awards—in recognition of the company's leadership in energy management and longstanding commitment to sustainability.

Being honored with this award is a testament to our commitment to company-wide energy management and affirms our efforts and activities reflect the highest industry standards. The award puts CEMEX USA among a distinguished group of companies that have made long-term commitments to fighting climate change and protecting public health through energy efficiency.

Since 2007, CEMEX USA operations have earned more than 50 ENERGY STAR® Certifications.



REDUCING OUR TRANSPORT EMISSIONS

As one of the largest ready-mix companies, our ability to reduce our transport emissions plays a key role to address climate change and reduce our CO₂ footprint.

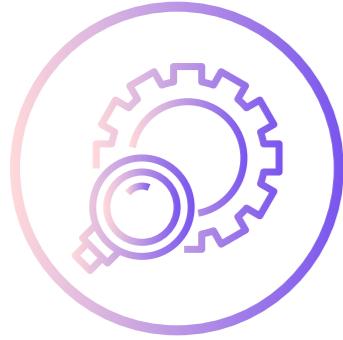
Electric vehicles: We conducted in Berlin and Paris the first-ever pilot study of electric vehicles in our ready-mix fleet. This work is closely aligned to our founding membership in the First Movers Coalition (FMC), where we have committed to support breakthrough technology in the development of electric heavy-duty trucks.

Renewable diesel: Furthermore, CEMEX is leading our industry in the use of renewable diesel. This advanced second-generation biofuel is fully compatible with our current fleet and can reduce 60% to 80% of the carbon footprint from transport when used in 100% concentrations.

Electromobility solutions: In 2021, CEMEX announced its collaboration with Volvo Construction Equipment and other global players to develop zero-emissions equipment, including electromobility solutions that improve productivity and reduce the CO₂ footprint of mobile construction equipment and trucks.

Natural Gas Trucks: Moreover, CEMEX will continue to grow in 2022 its natural gas fleet in the U.S., Mexico, and Colombia, reducing by 25% the CO₂ emissions of each truck replaced, contributing to cleaner cities while zero-emission technologies are developed for our main trucking applications.

Innovation and Partnerships



We have the knowledge and tools in place to achieve our 2030 Future in Action goals. The technological challenge lies beyond 2030 to reach our goal of delivering only net-zero CO₂ concrete for all customers and geographies.

In addition to relying on further gains from the 2030 CO₂ Roadmap reduction levers, the key to achieving our 2050 goal is to discover and scale breakthrough CO₂ reduction and mitigation technologies throughout our entire value chain. We are taking decisive action to materialize these advancements by leveraging the capabilities of three key assets: CEMEX's Global Research and Development, CEMEX Ventures, and our internal Smart Innovation process.

Our Rüdersdorf Carbon Neutral Alliance aims to create the first net-zero CO₂ cement plant

In 2021 we announced that as part of our Future in Action program, we are developing a carbon-neutral alliance in Germany to test and accelerate innovative technologies to reach carbon neutrality in our Rüdersdorf plant.

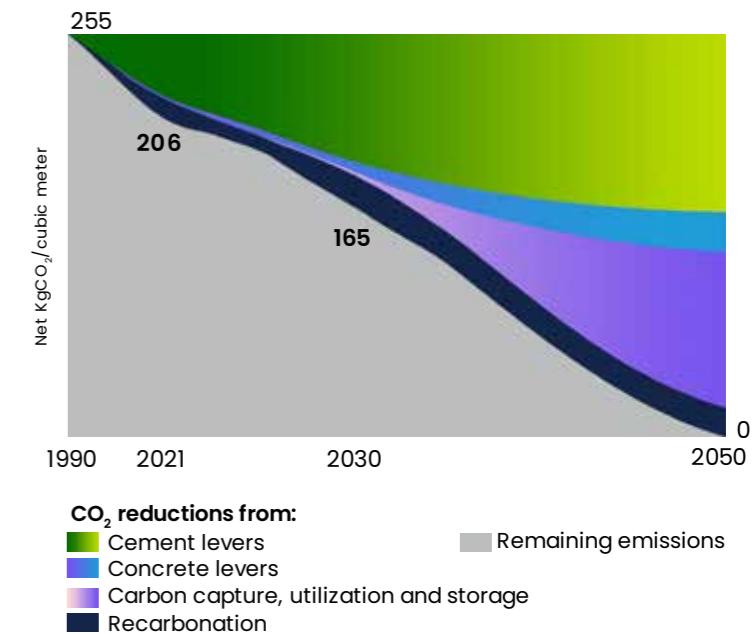
We are collaborating with startups, universities, other industries, and authorities to develop industrial-scale solutions using leading-edge technologies to create a carbon-neutral cluster with the participation of over 20 partners in Rüdersdorf, Germany. All findings obtained in the Rüdersdorf Carbon Neutral Alliance will be developed, shared, and adapted to local conditions to accelerate our goal of decarbonizing our main cement plants around the world. With the innovative technologies, the CO₂ emitted in this cement plant, will be captured and converted to new forms of energy and materials for local use by industrial, residential, and transport sectors.



Smart Innovation

Led by CEMEX Ventures, employees are encouraged to submit and identify valuable ideas aligned with the company's priorities and that can be executed on using agile, transparent, and disciplined processes.

Announcing a medium-term carbon reduction goal in concrete of 165 kg of CO₂ by 2030



165 kg by 2030
35% reduction

Net-zero CO₂ by 2050

CEMEX believes that CCUS technology is one of the most critical and underdeveloped levers to transition to a carbon-neutral economy.

INVESTING IN CARBON CAPTURE, UTILIZATION, AND STORAGE TECHNOLOGY

As of 2021, CEMEX is actively engaged in seven industrial scale Carbon Capture, Utilization, and Storage (CCUS) pilot projects scheduled to begin operations between 2023 and 2024. Three of the projects have co-financing from the European Union and the US Department of Energy.

CEMEX believes that CCUS technology is one of the most critical and underdeveloped levers to transition to a carbon-neutral economy. CCUS is a way of taking the CO₂ produced from energy-intensive processes and separating it from the rest of the exhaust gases, transporting it for further use in other industrial processes, or storing it underground so that it cannot enter the atmosphere.



LOCATION	PARTNERS	EXPLORING CCUS TECHNOLOGIES WITH HIGHEST POTENTIAL
Victorville Plant USA	Carbon Clean, RTI, Oak Ridge Lab	Carbon Capture Technology: Amines Chemical absorption using amine-based solvents.
Balcones Plant USA	MTR, Sargent and Lundi	Carbon Capture Technology: CO ₂ -selective membranes that entrap gas.
Monterrey Plant Mexico	Air Liquide	Carbon Capture and Usage: Cryogenic / Membranes
Rüdersdorf Plant Germany	Carbon Clean, Enertrag, Sunfire	Carbon Capture, Utilization, and Storage: Comprehensive Investigation of breakthrough technologies to prevent process-related CO ₂ from entering the atmosphere and put it to beneficial use.
Europe – Location TBD	Synhelion	Solar Radiation-driven Clinker production and capture and utilization of CO ₂ to produce synthetic fuels.
Chelm Plant Poland	Carbon Clean, Carbon Upcycling	Carbon Capture: Amines Chemical absorption using amine-based solvents.
LEILAC 2 Consortium Germany	Calix and other	Indirect Calcination and Carbon Capture

Leading-edge Collaborations

CEMEX is developing industrial-scale projects looking to put in place the technologies that capture CO₂ in the most efficient manner. CEMEX has been studying CCUS in collaboration with other companies, international organizations, and academic institutions.



Carbon Clean has developed a novel technology (CycloneCC) which can effectively and cost efficiently capture CO₂ from industrial processes. The goal of this breakthrough scalable modular technology is to reduce the equipment size by 10 times to reduce the footprint and cost by up to 50%.



The Low Emissions Intensity Lime and Cement (LEILAC 2) project seeks to separate the carbon produced from the clinker manufacturing process so the concentrated CO₂ that result can be easily captured or stored. This indirect calcination technology also has the potential to be powered by electricity, which would reduce significantly the need for fuels in the whole calcination process if the energy is sourced from renewable sources.



HARNESSING THE POWER OF SOLAR TO PRODUCE CLINKER

We have produced clinker using solar energy, a breakthrough technology developed in partnership with Synhelion that we will continue to test to achieve industrial scale. Synhelion technology harnesses the power of solar heat, amplified through hundreds of perfectly angled mirrors, to power cement kilns, thereby eliminating the need for any other sources of fuel. Furthermore, this technology captures 100% of the carbon emissions, which can then be stored underground or utilized as feedstock for fuel production, enabling cement manufacturing to achieve net-zero level.

DEVELOPING NEW CONCRETE TECHNOLOGIES

CEMEX continues developing partnerships and exploring innovative concrete technologies with a lower CO₂ footprint than conventional concretes. The development of new concrete technologies includes: the smart use of high-performance materials and novel binders, accelerated recarbonation processes, the analysis of new sources of potential Alternative Supplementary Cementitious Materials (ASCM), development of new admixture technologies, and the formation of circular economy solutions that help avoid carbon emissions related to extraction, transport, and processing of new raw materials.

STRENGTHENING THE CIRCULARITY OF CONCRETE

The recyclable properties of concrete help avoid carbon emissions and costs from disposing of old concrete and from extraction, transport, and processing of new raw materials. CEMEX has focused efforts on developing in-house technology while also seeking complementary innovation through investments in startups and high-value collaboration agreements to strengthen the circular economy of concrete. Our operations in Colombia are using our admixture technology ISOCYCLE to recover and reuse fresh ready-mix concrete and residues that return to the plant inside ready-mix trucks.

MAXIMIZING THE CAPACITY OF CONCRETE TO ABSORB CO₂

Like trees, concrete absorbs CO₂. Recarbonation, which occurs in all concrete structures, including buildings, roads, sidewalks, dams, airport runways, and bridges, helps remove greenhouse gases from the atmosphere. CEMEX believes that the recarbonation of built concrete products over their life cycle should be recognized uniformly in CO₂ emissions accounting, carbon footprint methodologies, and CO₂ certification removal schemes.



In a collaborative and multidisciplinary project administered by the French Institute for Applied Research and Experimentation in Civil Engineering (IREX), CEMEX is working on accelerated carbonation process to store CO₂ in the aggregates of recycled concrete. The FastCarb Project seeks to plug the porosity typical of recycled concrete through carbonation, reducing the impact of CO₂ in concrete contained in structures.

IMPLEMENTING REFORESTATION AND OTHER CARBON OFFSET INITIATIVES

Up to 23.5 million tons of CO₂ are currently stored within the vegetation of CEMEX's 300 quarries worldwide. Similarly, CEMEX's nature reserve, El Carmen (a 140,000 hectares wildlife reserve located on the U.S.-Mexican border), stores around 11 million metric tons of biologically sequestered CO₂. CEMEX strongly supports the role that natural carbon sinks can play in reducing the total CO₂ concentration in the atmosphere. Quarry rehabilitation and biodiversity conservation efforts help enhance natural carbon sinks and enable CO₂ removal in our industry.

Promoting a Green Circular Economy

ADOPTING POLICIES BASED UPON GREEN ECONOMY PRINCIPLES

The cement industry is a net consumer of waste that can shine in a circular economy. CEMEX believes adopting policies based upon green and circular economy principles offers significant opportunities to achieve substantial, near-term emissions reductions across multiple sectors, with the cement and concrete industries playing a central role. We promote and advocate for a circular economy, primarily focusing on:

Waste directives for energy recovery: We advocate for waste management policies that enable the valorization of waste streams and that are based on the understanding that our cement plants consume residues which simultaneously reduces landfilling and our CO₂ footprint by replacing the use of fossil fuels.



Promote the adoption of low carbon cements:

We promote a more widespread adoption of blended cements with a lower clinker factor in all types of projects. Lower clinker cements have the same performance standards as conventional cement and are key for advancing global CO₂ reduction targets.

Increase the availability of clean electricity:

We advocate for renewable energy policies that enable and promote the energy transition and clean electricity generation. Such policies will be key to achieve our target of 55% clean electricity consumption by 2030.

Recycling construction and demolition waste: We promote the recycling of concrete waste from demolition and construction activities and we advocate to implement waste directives to ensure the proper disposal of concrete and enable it to be used again in the production process of cement and ready-mix concrete.

Government and Multilateral R&D Funding: We promote government and multilateral funding for research and development aimed at accelerating the development and implementation of Carbon Capture, Utilization, and Storage (CCUS) technologies, or any other technology that can scale the decarbonization process.

Carbon Pricing:

We favor the implementation of market-based mechanisms in the form of emission trading systems to determine a carbon price. Such mechanisms provide certainty to investment and operational decisions to mitigate CO₂ in a significant manner.

Collaboration Within Our Industry and Other Industries

Close collaboration with stakeholders within our industry and other industries is crucial for accelerating climate action on a global basis. We are active members and hold leadership positions in national, regional, and global industry associations that promote the transition to a green economy such as the GCCA (Global), CEMBUREAU (Europe), FICEM (Central and South America), PCA (United States), and CANACEM (Mexico), among others. In addition, we proactively collaborate with cross-industry business associations, such as the CCE (Mexico).



Global Cement and Concrete Association (GCCA)

CEMEX is a founding member of the Global Cement and Concrete Association (GCCA), a global industry platform established to facilitate sustainable development of the cement and concrete sectors. GCCA members account for 80% of the global cement industry volume outside of China and include several large Chinese manufacturers.

The GCCA has published a detailed roadmap that sets out the industry's path to fully decarbonize by 2050, a target aligned with the Paris Agreement to limit global warming to 1.5°C. The move by the members of the GCCA marks the most significant global commitment by industry to net-zero so far. GCCA members are required to develop a robust climate change mitigation strategy, verify the key performance indicators by a third party, establish targets, and report progress following the GCCA Sustainability Charter. These measures are allowing the industry to standardize the measuring, and reporting of CO₂ emissions at a global level.

LEADING OUR INDUSTRY THROUGH PARTNERSHIPS TO ACCELERATE CLIMATE ACTION



CEMEX has signed the Business Ambition for 1.5°C commitment led by the We Mean Business Coalition in partnership with the Science Based Targets initiative and the U.N. Global Compact.



CEMEX joined The Race to Zero Campaign of the UNFCCC launched to mobilize net-zero commitments from cities, businesses, and investors ahead of the 26th U.N. Climate Change Conference of the Parties (COP26).



CEMEX is one of the founding members of the First Movers Coalition, announced at COP26. Created through a partnership between the U.S. State Department and the World Economic Forum, the FMC is a group of global companies joining together to scale up critical emerging technologies essential to the net zero transition.



CEMEX became a founding member of the recently created United Nations Global Compact CFO Coalition for the SDGs, which provides a platform to interact with peers, investors, financial institutions, and the United Nations with the aim of attracting more capital towards sustainable development.



CEMEX joined the Corporate Leaders Group Europe, convened by the Cambridge Institute for Sustainability Leadership in support of a climate neutral economy.

COMMITTED TO CLIMATE ACTION DISCLOSURE

CEMEX has been a driver of reporting and transparency within our sector. We are proud to be actively engaged and we adhere in our reporting to the guidelines and recommendation of the main carbon disclosure platforms.

Creating a common understanding of climate-related risks and opportunities across the cement and concrete industry is key in the delivery of the Paris Agreement goals. Disclosures of information on climate-related governance, strategy, risk, and metrics is essential for successful long-term investors.



CDP: In 2021, CDP awarded CEMEX its highest rating for climate action leadership, including the company in its prestigious A List. CDP recognized CEMEX for its actions to cut emissions, mitigate climate risks, and lead in the transition to a low-carbon economy. Furthermore, CDP named CEMEX a global leader in its Supplier Engagement Rating (SER), awarding the company its top score A for implementing best practices and successfully engaging its supply chain on climate change.



Transition Pathway Initiative (TPI): CEMEX's carbon strategy and the management of its risks and opportunities related to the low-carbon transition reached the top level according to its criteria.



Task Force on Climate-Related Financial Disclosures (TCFD): CEMEX is a supporter of TCFD and has adopted its recommendations for climate related reporting since 2020. Our 2021 TCFD Disclosure is located on pages 255-271 of this report.



Science Based Target Initiative (SBTi): CEMEX 2030 goals and commitments are aligned and have been validated by the Science Based Targets initiative according to the Well Below 2°C, the most ambitious scenario currently available for the cement industry. The SBTi, a partnership between CDP, the United Nations Global Compact, World Resources Institute, and the World Wide Fund for Nature, is the foremost authority on science-based climate action goals.

Environmental Excellence

We are fully committed to carrying out our business activities responsibly and sustainably, minimizing the environmental impacts and maximizing the value generated to society.



We contribute to our priority SDGs 8, 11, 13, and 15 through our environmental excellence initiatives, Biodiversity and Water Action Plans, and commitment to advancing a circular economy across our operations.

CEMEX ENVIRONMENTAL MANAGEMENT SYSTEM

Protecting and enhancing the environment and the communities in which we operate is fundamental to achieving our purpose of building a better future. This commitment is documented in CEMEX's Environmental Policy and is systematically and internally audited for compliance across our global operations through our risk-based Environmental Management System (EMS).

Our EMS integrates key mechanisms for environmental performance enhancement, impact assessment, stakeholder engagement, and response to events with input from a range of subject matter experts and specialists. We have management teams responsible for the implementation of the EMS across all locations who annually carry out internal audits across all sites. In 2021, we reached 92% implementation of the CEMEX EMS across all businesses, compliant with our internal environmental management standards.

The CEMEX EMS is aligned with global environmental standards such as the ISO 14001 and the EU Eco-Management and Audit Scheme. To this end, we have achieved ISO 14001 certification in 82% of our cement sites.

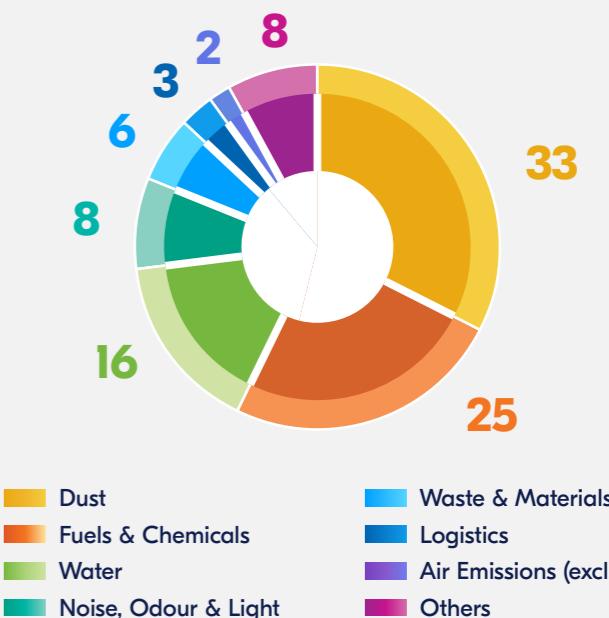
Robust Environmental and Social Performance Management

Open communication with our communities is fundamental to achieving our commitment to being good environmental stewards.

Our Global Environmental and Social Incident Reporting process enables all of our sites to maintain a proactive approach to respond to incidents that could potentially impact our communities or our operations. Moreover, it also serves as a grievance mechanism to register complaints from external stakeholders. The thorough application of this reporting procedure requires a timely registration of environmental and social impact events, identification and analysis of their root causes, and the implementation of corrective and preventive action plans towards avoiding their occurrence and reducing their severity.

This standardized framework, implemented across all of our operations, recognizes and registers incidents in three categories, according to their severity. In 2021, the overall number of reported incidents decreased by 52%, which is consistent with our permanent efforts for risk monitoring and transparency. There were no Category 1 (major) environmental events registered, for the third consecutive year.

Environmental and Social Incidents and Complaints Reporting (percentage)



CEMEX Global Environmental and Social Incident Reporting Framework

- Continuous Improvement: consistently recording events at every level of our business contributes to identifying recurring root causes and implementing and sharing corrective actions.
- Dialogue and Engagement: we maintain open communication channels with our neighbors, law enforcement officials, public agencies, and other stakeholders.
- Rapid Response: global, regional, and local Rapid Response Teams, trained to address environmental and social impact events, hold annual emergency drills according to contingency plans at each of our sites.

ENHANCING AIR QUALITY

Air emissions inherent to the cement manufacturing process are limited in countries by legal thresholds to ensure environmental quality. In some cases, applicable regulations also imply continuous online monitoring of these emissions.

Guided by CEMEX's Environmental Excellence purpose, we go beyond seeking compliance with local air regulations and are implementing Continuous Emissions Monitoring Systems (CEMS) across all of our operations, even when it is not mandatory in all countries. In 2021, we installed CEMS in pending operations, reaching 99% of our clinker production working under continuous monitoring systems. Ongoing projects in early 2022 keep us on track to achieve 100%.

CEMS for clinker production, together with our EMS, provide us with effective resources for air quality monitoring and optimization in our operations. Furthermore, to achieve our 2030 air quality emissions targets, we continually invest in high-quality emissions abatement techniques and equipment. In 2021, we invested more than US\$13 million in new technologies to monitor and reduce air emissions from our production process.

CEMEX Air Emissions Management and Performance in Our Production Process

Air Emissions: Major air emissions —particulate matter (PM), nitrogen oxides (NOx), and sulfur compounds (SOx)— are released as part of the cement manufacturing process. Minor air emissions—including dioxins and furans, volatile organic compounds, and other heavy metals—are released in very small or negligible quantities.

Continuous Emissions Monitoring Systems (CEMS): Allow our operations to maintain constant monitoring of major air emissions to implement operational controls in order to ensure compliance with air quality regulations and to go beyond and improve our kilns performance as per CEMEX standards.

Online Visualization Tool: Our industry-benchmark CEMS online tool allows our operators and management teams to closely monitor major air emissions in kilns with CEMS installed, strengthening our major air emissions efforts and performance.

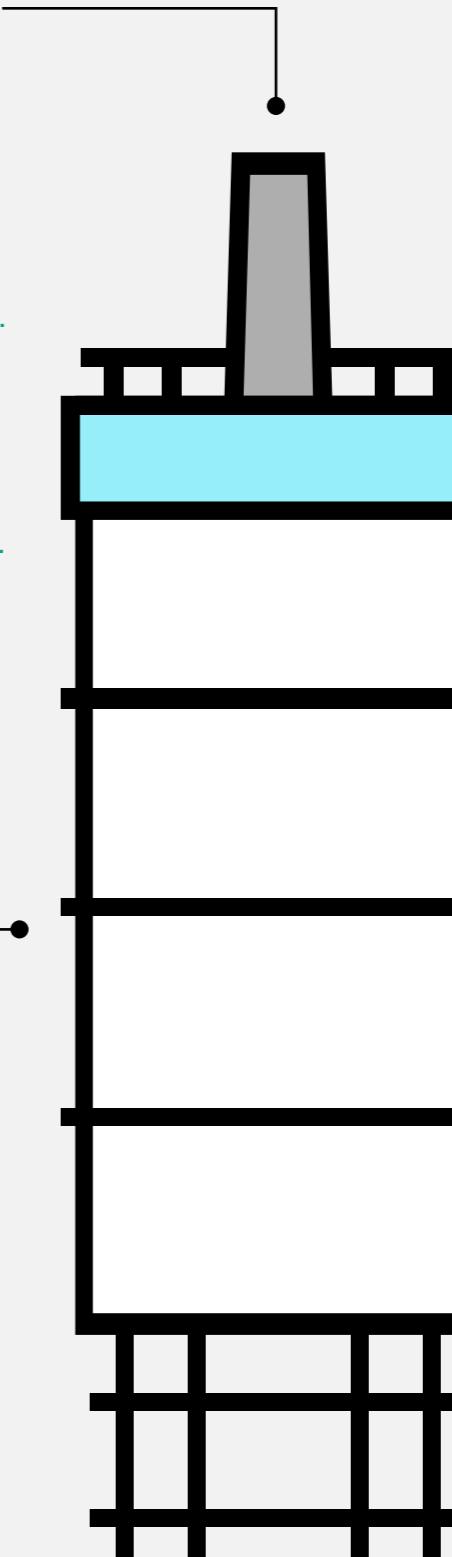
Air Emissions Reduction



-85%

We reduced our Dust emissions by 85% compared to our 2005 baseline.

2030 target: 95%



-66%

We reduced our SOx emissions by 66% compared to our 2005 baseline.

2030 target: 67%

-41%

We reduced our NOx emissions by 41% compared to our 2005 baseline.

2030 target: 47%

Emissions Abatement Techniques (Bag filters, Ammonia injection)



+US\$13 million

in CAPEX investments in 2021 in high-quality abatement techniques, including projects to monitor and reduce our air emissions.

CEMS online platform



99%

of our cement kilns have a CEMS to measure major air emissions

100%

of our cement kilns with CEMS have a new industry-benchmark online data analyzing tool

OPTIMIZING WATER MANAGEMENT

Although cement production is not a water-intensive process, we seek its efficient and mindful use across all our activities to avoid altering the ecosystems we rely on.

Understanding how we use water in our operations is a key step in prioritizing water-related risks and opportunities for our operational use, and for ecosystems and communities. To this end, we work continuously to optimize water consumption, implement maintenance routines to ensure leak-free systems, install water recycling systems, and follow up on discharge quality. We guide our efforts through a comprehensive water optimization process that prioritizes sites where water-related risks are highest, and the business impact could be most significant. These actions make us global leaders in high efficiency and low water consumption.

Developing Water Action Plans

Our updated water stress map, identifies the location of our more than 1,500 cement, ready-mix concrete, and aggregates sites in relation to water-stressed zones.

The research was completed in collaboration with the University of Alcalá Foundation using Aqueduct, an online tool run by the World Resources Institute that provides valuable information to understand and respond to water quantity, quality, regulatory, and reputational risks worldwide. The assessment identified current water stress in our operations as well as projected 2030 and 2040 water stress scenarios.

Results indicate that 1% of our operations are in extremely high water-stressed zones and 15% are in high water-stressed zones. In line with our 2030 targets, we plan to develop a specific Water Action Plan (WAP) and follow the implementation roadmap for each of these sites. In 2021, we completed the implementation of WAPs in 100% of the sites located in extremely high water-stressed zones and the first pilot for a site located in high water-stressed zones.

Water consumption by product

Cement

 **255 l/ton**

Ready-Mix Concrete

 **238 l/m³**

Aggregates

 **132 l/ton**

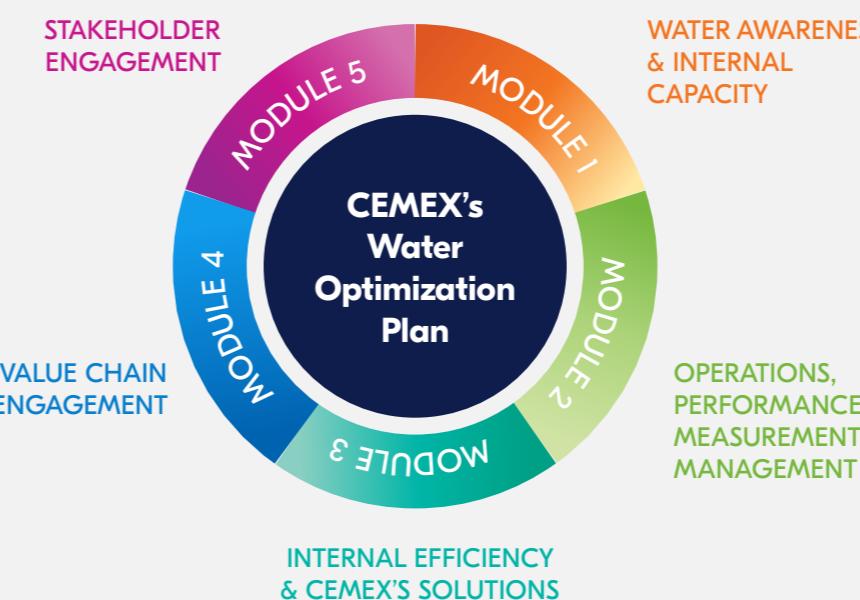
Total water (million m³)

**Withdrawals
57.2**



**Consumption
41.6**

CEMEX's Water Optimization Plan



Implementation Roadmap

2021

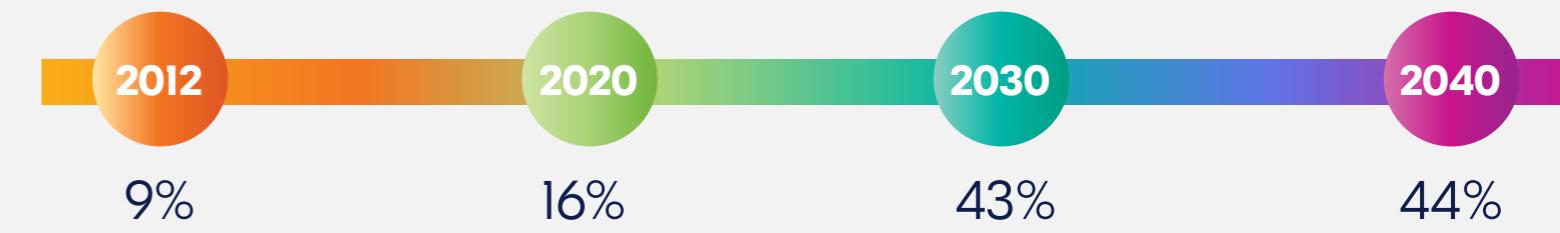
During 2021, CEMEX completed the implementation of water optimization plans in Extremely High Water Stress Zones (1%).

2030

High Water Stress Zones (15%) distributed in order of priority until 2030.

Water Stress Areas Future Scenarios

Percentage of our sites operating in high and extremely high water stress



Our WAPs offer a customized set of response actions to maximize water use efficiency and mitigate specific water risks for each community by adopting recommendations based on the Water Risk Filter tool from the World Wildlife Foundation.

Strengthening our water policy principles and going a step further in our water strategy, we have set new 2030 targets on freshwater withdrawal reduction.

Geographical mapping of more than 1,500 CEMEX sites for comparison with areas identified as water-stressed zones

64

Cement

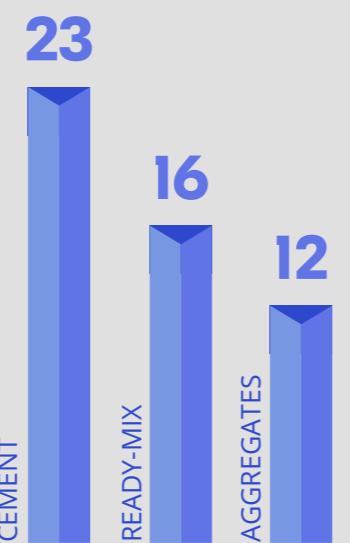
1,235

Ready-Mix Concrete

235

Aggregates

Sites Operated in High Water Stress Areas by Business (percentage)



Increasing the Use of Recycled Water

Strengthening our water policy principles and going a step further in our water strategy, we have set new 2030 targets on freshwater withdrawal reduction. By shifting to non-freshwater and promoting the recycling of water, our aim is to avoid the pressure in freshwater aggravated due to climate change and the access to sufficient quantities constrained by competing priorities.

New 2030 Targets on Freshwater Withdrawal Reduction

20%

reduction in specific freshwater withdrawal in **Cement**

15%

reduction in specific freshwater withdrawal in **Aggregates**

10%

reduction in specific freshwater withdrawal in **Ready-mix**





PRESERVING LAND, BIODIVERSITY, AND ECOSYSTEM SERVICES

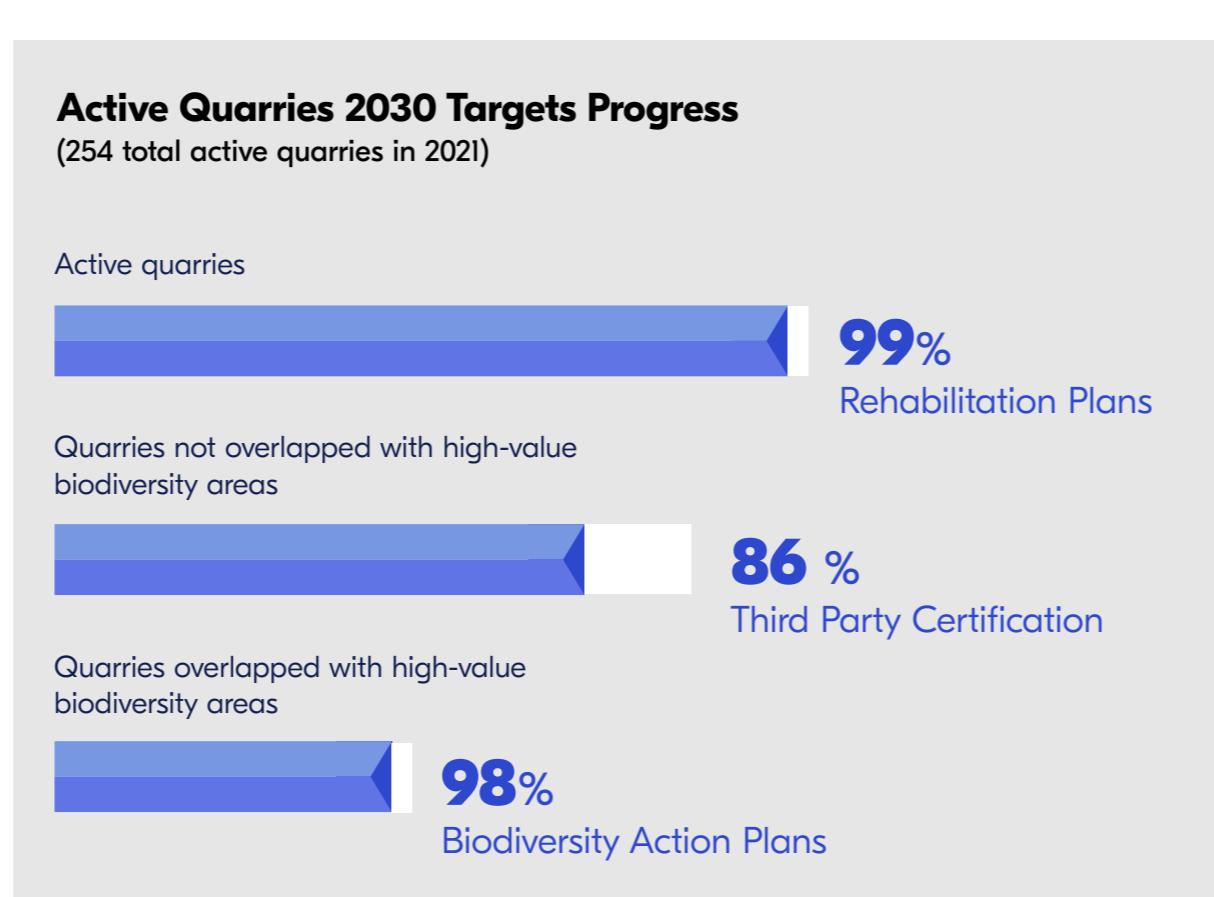
Our Biodiversity Policy enables us to responsibly handle natural resources by integrating practices with best standards and aligning our biodiversity initiatives with our decision-making process, management system, and business model. The policy is aligned with the Convention on Biological Diversity and its Aichi Biodiversity Targets.

In 2021 we continued taking action to enhance the biodiversity in and around our quarries through the implementation of rehabilitation plans, conservation initiatives, and the development of local Biodiversity Action Plans (BAPs).

Protecting biodiversity and the environment is fundamental to our commitment to carrying out our activities sustainably. The Global Cement and Concrete Association (GCCA) Sustainability Guidelines for Quarry Rehabilitation and Biodiversity Management—to which our company is fully committed—underscore the importance of these actions.

Third-party Certified Conservation Projects

Going beyond implementing BAPs in high-priority quarries, we have extended our strategy to achieve third-party certifications for our conservation efforts in sites that do not overlap with high-value biodiversity areas. Certifications are issued by leading environmental



Responsible Site Operation: Rehabilitation Plans in Our Active Quarries



Impact Assessment

Before starting any earthwork, we carry out an environmental impact analysis to map potential risks and extraction possibilities.



Avoidance and Minimization of Impact

We carry out activities with the least potential risks to avoid or minimize impact, for example, stopping extraction where biodiversity is especially high.



Restoration / Rehabilitation

During and after extraction activities in the quarries, we implement a rehabilitation plan. The goal is to help restore the ecosystem services to where they were before extraction.



Compensation

Lastly, for any part of the impact area that could not be restored or rehabilitated, compensation is sought with a Biodiversity Action Plan.

organizations such as the Wildlife Habitat Council (WHC), ECOCERT, Texan by Nature, Croatia's Ministry of Environment and Energy, among others.

Our conservation activities provide a valuable opportunity to engage employees and local communities in wildlife enhancement initiatives and foster awareness of how industry and natural habitats can coexist.

The WHC has awarded CEMEX with the Corporate Conservation Leadership Award, the most prestigious recognition presented by WHC to honor the corporate commitment to biodiversity conservation.

[Learn more about our WHC certified programs](#)

CEMEX-BIRDLIFE 2021 BIODIVERSITY PROXIMITY STUDY

In 2021, CEMEX commissioned BirdLife International to implement a new Biodiversity Proximity Study across our operations. The findings of this assessment provide a scientific basis by which to identify CEMEX's biodiversity-related priorities for the coming years, as well as for developing a sound biodiversity risk management program and activities to support the company's sustainability strategy for 2030.

This assessment follows the first Biodiversity Scoping Study published in 2010 by CEMEX and BirdLife International; which provided a solid base for developing the company's Corporate Biodiversity Strategy, including the development of a Biodiversity Action Plan (BAP) Standard and a Corporate Guideline on Biodiversity Management.

Significant changes occurred over the last decade that led us to launch the new Scoping Study, including CEMEX's commitment to having a net positive impact on Biodiversity, the evolution in CEMEX's portfolio, changes in policy regulations, and the increasing relevance of issues such as climate change that have created new risks and opportunities for the extractive sector.



The new study analyzed the proximity of all CEMEX's active and non-active cement and aggregates operations to areas of High Biodiversity Value (HBV). The research used the best available global-scale biodiversity information and data, provided by the Integrated Biodiversity Assessment Tool (IBAT). This tool results from a partnership between BirdLife International, Conservation International, the International Union for the Conservation of Nature, and the UNEP World Conservation Monitoring Centre.

Our goal is to have a BAP in place for all active sites identified as high priority by 2030. Furthermore, we expect to review the effective implementation of BAPs identified under the previous Biodiversity Scoping Study.

2010-2020 Biodiversity Scoping Study Achievements:

98%

of our quarries located in high biodiversity value areas with implemented BAP.

+100

priority species have benefited from Biodiversity Action Plans.

+25,000

hectares of area positively impacted by conservation projects.

~100

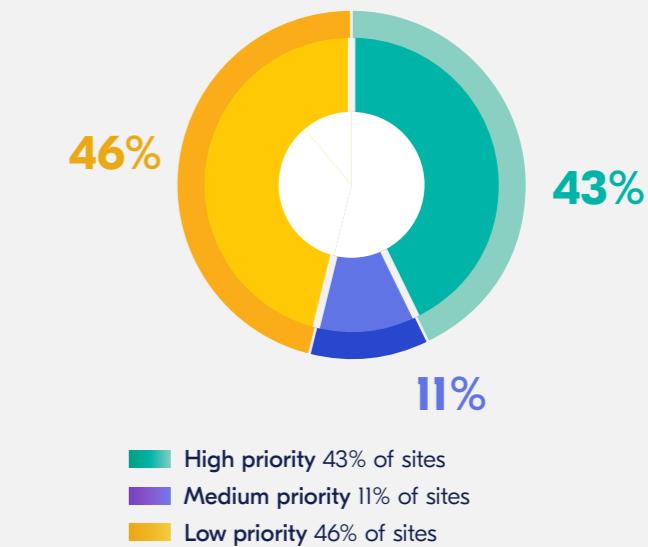
conservation groups and stakeholders identified and engaged.

+4,000

students engaged in environmental education.

2021 Biodiversity Proximity Study Results and Goals

A total of 399 CEMEX cement and aggregate sites, across 21 countries, were analyzed regarding their proximity to areas of High Biodiversity Value. Our goal is to have a BAP in place for all active sites identified as High Priority by 2030.



Areas of High Biodiversity Value

Accounted for in the 2021 Biodiversity Proximity Study

- Legally designated Protected Areas (PAs)
- Key Biodiversity Areas (KBAs)
- Natura 2000 areas (for European countries)
- Important Bird and Biodiversity Areas (IBAs)
- Alliance for Zero Extinction (AZE) sites
- The IUCN Red List of Threatened Species
- International Protected Areas (IPAs) including Ramsar sites, World Heritage sites, and UNESCO Man and Biosphere Reserves.

EL CARMEN: 20 YEARS OF CEMEX BIODIVERSITY CONSERVATION AND ENHANCEMENT

In 2021, CEMEX's El Carmen Conservation Program celebrated 20 years of continued habitat restoration, species preservation, and scientific research; a testament to the key role that sustainability plays in CEMEX's purpose of building a better future.

Through El Carmen Conservation Program, CEMEX has been able to restore habitats and reintroduce wildlife in a region that is 8 times larger than the total area of our global operations. Located in northern Coahuila, Mexico, and southern Texas, United States, El Carmen is home to more than 1,500 plant species, 289 avian species, 80 types of reptiles and amphibians, and 78 mammal species, including some endemic species.

El Carmen's extensive cross-border wildlife and biodiversity reserve has provided numerous educational opportunities to more than 1,250 students and academics, who have studied the region's biodiversity, as well as CEMEX's positive impacts and high conservation standards. To this end, El Carmen has been researched in 65 scientific papers and 19 Masters and Ph.D. thesis projects from prestigious universities across Mexico and the United States, including ITESM, UANL, UNAM, UCLA, Yale, and Texas A&M.

El Carmen Provides Valuable Ecosystem Services

- **Natural carbon sink:** Stores 12 million tons of CO₂ in its natural habitat, contributing to climate change mitigation.
- **Improves water cycle:** Captures close to half a million cubic meters of water every year, contributing to habitat restoration.
- **Habitat conservation:** Over 21,000 hectares of restored grassland with fire management programs, which contribute to forest protection.

El Carmen holds active cooperation agreements with several conservation NGOs from Mexico and the U.S. Our conservation initiatives are implemented in coordination with Mexican government agencies such as CONANP, SEMARNAT, CONAFOR and SEMA Coahuila and with United States entities such as the National Park Service, the Fish and Wildlife Service, and the Texas Department of Parks and Wildlife. El Carmen staff are permanent members of the technical advisory council of the Maderas del Carmen and Ocampo Flora and Fauna Protection Areas in Mexico, where they share experiences and coordinate conservation efforts with neighboring communities.

Since 2016, El Carmen has annually received the Gold Conservation Certificate, the highest award granted by The Wildlife Habitat Council for conservation efforts.

Reintroduced Species Living In El Carmen's Protected Area



250

Bighorn Sheep
+100 specimens released in nearby habitats



900

Desert Mule Deer
after the species was believed to be close to extinction in the region.



100

Pronghorn Antelope
specimens after being extinct since the 1950s in the region.



1,400

Black Bears
the largest population in Mexico.



+50

American Bisons
currently on Mexico's list of endangered species.

CEMEX Nature and Conservation Book Series

In 2021, we published the 28th edition of our Nature and Conservation Book Series titled "Key Biodiversity Areas". In publishing this book, we were honored to work with some of the world's most prestigious conservation organizations such as Key Biodiversity Areas alliance: Union for Conservation of Nature (IUCN), Re:wild, Amphibian Survival Alliance, Rainforest Trust, rspb, Wildlife Conservation Society, American Bird Conservancy, WWF, Critical Ecosystem Partnership Fund, GEF, Conservation International, and NatureServe.

In the book, leading global experts explore the critical role that key biodiversity areas have in the fight to stop the global loss of biodiversity and climate change, using stunning photographs that tell the stories of the sites themselves, and the species and ecosystems for which they are important.

Through our Nature and Conservation Book Series, we want to promote environmental awareness, which is key for decision-making on conservation issues, while reinforcing our company's commitment to promoting a culture of biodiversity conservation.

With over 140,000 hectares, El Carmen is one of the most biodiversity-rich areas in North America and one of the five great wilderness ecosystems in the world.