Sustainability Report 2018

LafargeHolcim

Highlights 2018

CLIMATE AND ENERGY

We reduced our net CO_2 emissions per tonne of cementitious material by **25 percent** compared to the 1990 baseline.

CIRCULAR ECONOMY

We reused **52 million tonnes** of waste in our operations, making us one of the world's largest waste solution companies.

ENVIRONMENT

Freshwater withdrawal per tonne of cementitious material was reduced by **19 percent** since 2015.

COMMUNITY

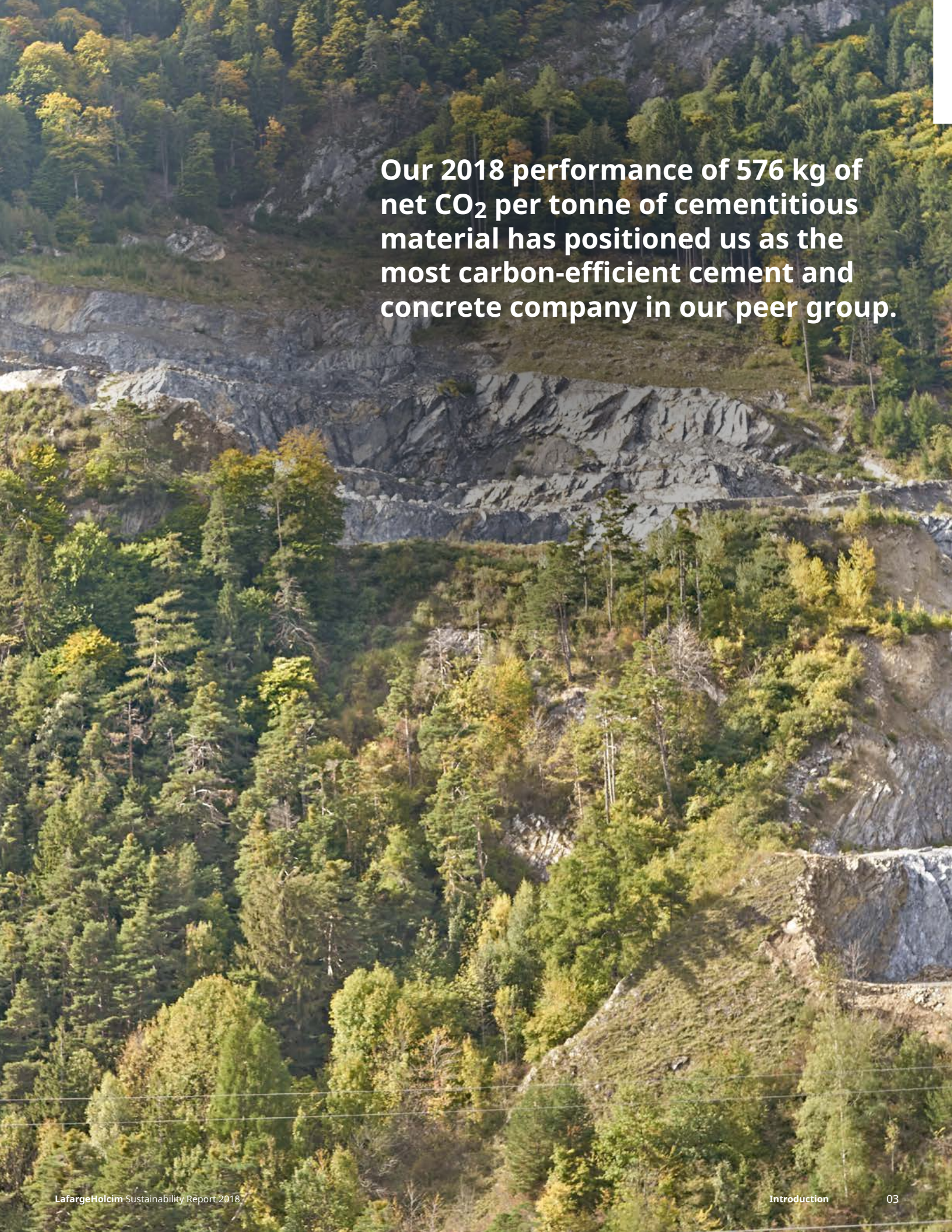
An additional **three million people** benefited from our community investments.

Cover picture: Colleagues working on the Grand Paris Express (GPE), the largest infrastructure project in Europe. Our building materials and sustainable solutions are helping to make sure the GPE is environmentally friendly and in line with the Universal Climate Agreement signed at COP21. Aggregates come from our nearby quarries in the Seine valley. These are delivered by barge, which is a more environmentally friendly method than by road (two barges can handle the load of 220 trucks). Most of the earth excavated from the GPE tunnels and stations will be removed the same way, traveling as far as Le Havre to re-landscape some of our quarries along the Seine.

Contents

Note: The Group is LafargeHolcim. However, both Lafarge and Holcim are names used in various countries where those brands are established and recognized, and this is reflected throughout the report.
This report also serves as our Communication of Progress (COP) to the UN Global Compact.

Untervaz, Switzerland
Cement plant, operating since 1957



Our 2018 performance of 576 kg of net CO_2 per tonne of cementitious material has positioned us as the most carbon-efficient cement and concrete company in our peer group.

We are keeping plastic out of the oceans with projects in Egypt, Mexico, Morocco and the Philippines. In 2018, we repurposed 2 million tonnes of plastic waste.

Quarry Mülligen, Switzerland
The terrain is constantly renaturalized and recultivated after the gravel has been removed.

In many communities we have a net positive water impact. In India, Ambuja Cement is calculated as being six times water positive.

Ewekoro, Nigeria
Community medical center

In 2018, LafargeHolcim spent CHF 47.8 million on community programs.

Health, Safety and Sustainability Committee (HSSC) Chairman's statement

Dear stakeholders
In 2018, LafargeHolcim consolidated its position as a global leader in building materials and solutions. At the same time, we are conscious of the bigger picture and strive to ensure that we live up to the responsibilities that come with our presence in many diverse countries. We aim to demonstrate, with our actions, how we are a responsible and ethical company, with sustainability as a core value. Sustainability creates value for our business, our shareholders and society, and we aspire to be a leader in this field and leverage resulting opportunities.

It is pleasing to see that our safety program, supported by the dedication and hard work of our employees, is having an impact. Our global Lost Time Injury Frequency Rate has improved significantly over the last three years for employees and contractors alike. However, despite a notable reduction in year-on-year fatalities, 19 people lost their lives in 2018 while working for LafargeHolcim. This is unacceptable and everyone in our organization, starting with the Board, recognizes their responsibility to ensure we develop and practice a zero-harm culture.

The Health, Safety and Sustainability Committee (HSSC) has been working closely with the sustainability team reviewing our sustainability framework and receiving regular updates on key environmental and social topics as well as on our performance against key indicators. We have noted the positive trends of reduced net CO_2 emissions and water withdrawal per tonne of cementitious material, and we are committed to go further.

To ensure that we approach sustainability in a structured manner, the HSSC has set an agenda of topics to be discussed at scheduled meetings. Standing agenda items for each meeting are an update on achievements, results, controversial issues, policies and relevant new studies. Other agenda items are reviews of sustainability reports and results, sustainability risks and opportunities and a review of sustainability targets and action plans. In 2019, we will additionally conduct a materiality review with inputs from an external stakeholder panel.

Finally, we thank the company's employees for living up to our commitment to health and safety and sustainability. Our success depends on their dedication and efforts.

Adrian Loader
Chairman of the Health, Safety and Sustainability Committee

Adrian Loader
Member of LafargeHolcim Board of Directors and Chairman of the Health, Safety and Sustainability Committee

"We aim to demonstrate, with our actions, how we are a responsible and ethical company, with sustainability as a core value."

CEO statement

The various activities of our 75,000 employees have a direct impact on people's lives.

Dear stakeholders
Our products are the basis for human development and prosperity, and indeed, a world without concrete is hard to imagine. It provides infrastructure, housing, and mobility for billions of people around the world. Compared with other building materials, concrete is resilient, versatile, affordable, recyclable and essentially local. Not only does it have many benefits, but those benefits endure for decades or even centuries.

In 2018, we made excellent progress in executing our Strategy 2022 – "Building for Growth." In the context of our growth strategy, I believe that sustainability is a great opportunity for us. Our innovative products and solutions enable customers around the world to reduce their impact on the environment and build more quickly and efficiently.

We are cogniscent of the carbon footprint of the building materials industry. LafargeHolcim is at the forefront of efforts to mitigate climate change. Since 1990, we have reduced our net carbon emissions per tonne of cement by 25 percent.

Our cement plants provide an excellent opportunity to address society's waste problem.

In 2018, we treated over 51 million tonnes of waste. This increase of 6 percent versus 2017 makes us one of the largest waste processors. Plastic waste and marine littering moved to the forefront of public attention. We are part of the solution with two million tonnes of plastic waste treated, predominantly in emerging countries where the problem is most urgent.

Last year, we reduced our water withdrawal in our cement plants by 7.5 percent worldwide, with a special focus on water in dry areas. In some communities we already have a net positive water impact, for example those served by our subsidiary Ambuja Cement in India.

Our business is truly local. We are determined that our activities continue adding value to the communities and countries in which we operate. Many of our 75,000 employees around the world contribute to projects in areas ranging from education and training through basic healthcare and safe water. Over the past four years, more than 15 million people have benefited from our community programs worldwide. Every contribution of a LafargeHolcim employee has a direct impact on people's lives. As a participant in the United Nations (UN) Global Compact, LafargeHolcim stays committed to the ten universal principles.

I would like to thank our employees, customers and suppliers for their partnership in creating sustainable value and growth.

Jan Jenisch
Chief Executive Officer

Jan Jenisch
Chief Executive Officer

75,000
Employees

2,300
Operating sites

CHF 27.5 billion
In net sales (2018)

Embedding sustainability

4

Strategic sustainability pillars

7

High focus materiality issues

Embedding sustainability

Sustainability ambitions
The global megatrends of population growth, urbanization and rising living standards offer significant business and growth opportunities in our industry. The global building materials market is worth CHF 2.5 trillion annually and is continually growing. At the same time, these trends are challenging our planet through increased carbon emissions, depletion of natural resources and an increase of waste. As countries develop, solutions for sustainable prosperity are needed.

Buildings and infrastructure have come into focus in this challenge. While on one side they form the very basis for societal development, they also account for 30 to 40 percent of worldwide CO_2 emissions, with around 5 percent occurring during the construction phase. Also, they consume substantial amounts of raw materials and generate significant volumes of waste. Society thus urgently needs to find solutions for a more sustainable built environment.

At LafargeHolcim we are committed to contribute our share along our entire value chain. Our 2050 vision for the built environment rests on four strategic drivers: **Climate and Energy**, **Circular Economy**, **Environment and Community**.

In the center of all our activities to address the four drivers is Innovation. We will continue to develop innovative products and solutions for a built environment that meet these criteria, satisfying a continuously growing market demand for sustainable solutions.

Our materiality matrix

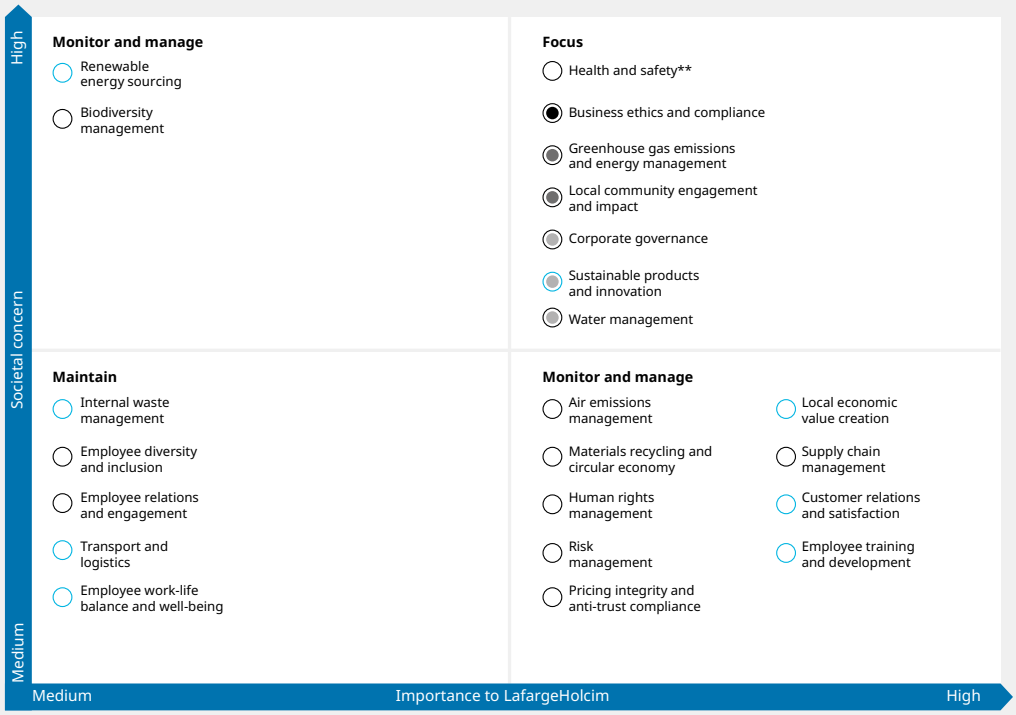
Size of impact is estimated based on actual or potential short-term financial, environmental or social impacts, whether positive or negative.

**
Every incident is a tragedy – we do not try to quantify impact

Key

- Global focus and standards, local accountability
- Local focus and accountability

- Significant impact
- Medium impact
- Low impact



Materiality
Alongside our robust business risk management process, we conduct material issue reviews to ensure that sustainability risks, as well as opportunities, are correctly prioritized.

In 2018, the Health, Safety and Sustainability Committee reviewed an internal update of our material issues matrix, shown above. In preparation for the transition to integrated reporting, a full material issues review will be conducted in 2019.

The issues material to our stakeholders are environmental, social and governance-related. In the revised matrix, we present the focus of our efforts and where we monitor and manage, giving an estimated size of the impact of the most material issues and showing how we approach each issue – either globally or locally.

Strategic pillars

The graphic below shows our four strategy pillars and the lead metric and targets we are aiming to achieve. 2017 performance and targets have been restated according to the revised scope of consolidation. Details on our scope can be found on page 69.

Sustainability pillars	CLIMATE AND ENERGY	CIRCULAR ECONOMY	ENVIRONMENT	COMMUNITY
Objective	**Reduction of CO_2 emissions**	**Increased reuse of waste-derived resources**	**Reduction of freshwater withdrawal**	**Creation of shared value**
Lead metric	**CO_2 emitted** ($kg\ CO_2/t$ cementitious)	**Quantity of waste reused** (M tonnes)	**Freshwater withdrawn** (liters freshwater/ tonne cementitious)	**Number of new beneficiaries per year** (M new beneficiaries)
Performance 2018	**576**	**52**	**305**	**2.9**
2017 restated with 2018 scope	582	49	330	2.8
Target 2022 restated with 2018 scope	560	60	291	5.0
Target 2030 restated with 2018 scope	520	80	262	5.0

Note: See methodology and assurance section for details of consolidation scope.
Our performance against all targets and operating principles is shown in the performance data tables on pages 64–68.

Achievements and targets
Aligning with the timeframe of the Group Strategy 2022, we are now stating interim 2022 targets, replacing the 2020 and 2025 targets previously in place. For climate and water, we have adapted the targets to reflect the performance level we will achieve, rather than a percentage reduction. We have revisited our climate target based on new external references and accounting for current national climate change ambitions in the countries in which we operate (see page 23 for more details). For beneficiaries we now state the target as a yearly figure rather than an accumulative total.

We are operating 270 cement and grinding plants, 663 aggregates plants and 1,448 ready-mix concrete plants globally for which we are setting higher standards on key environmental, social and corporate governance topics. In some cases, these have replaced former targets. These operating principles cover human rights, drinking water and sanitation, stakeholder engagement, quarry rehabilitation and biodiversity, environmental management systems, air emissions, our Code of Business Conduct and our Supplier Code of Conduct. We will continue reporting our performance against these principles annually.

Climate
In 2018, our net CO_2 emissions per tonne of cementitious material decreased to 576 kg CO_2/tonne, a 1 percent reduction from 2017 and equal to a 25 percent reduction compared with 1990 emissions. This exceeds our year-on-year reduction objective and positions us well to deliver our new carbon reduction target of 520 kg CO_2/tonne by 2030. We have achieved this by reducing our clinker-to-cement ratio and consuming less energy per tonne of product, mostly by using alternative fuels and improving the efficiency of our processes.

Circular economy
We are one of the world's largest waste processing companies. In 2018, we treated 52 million tonnes of waste, an increase of 6 percent versus 2017. More than 11 million tonnes was used as fuel and alternative raw materials that we fed into our kilns.

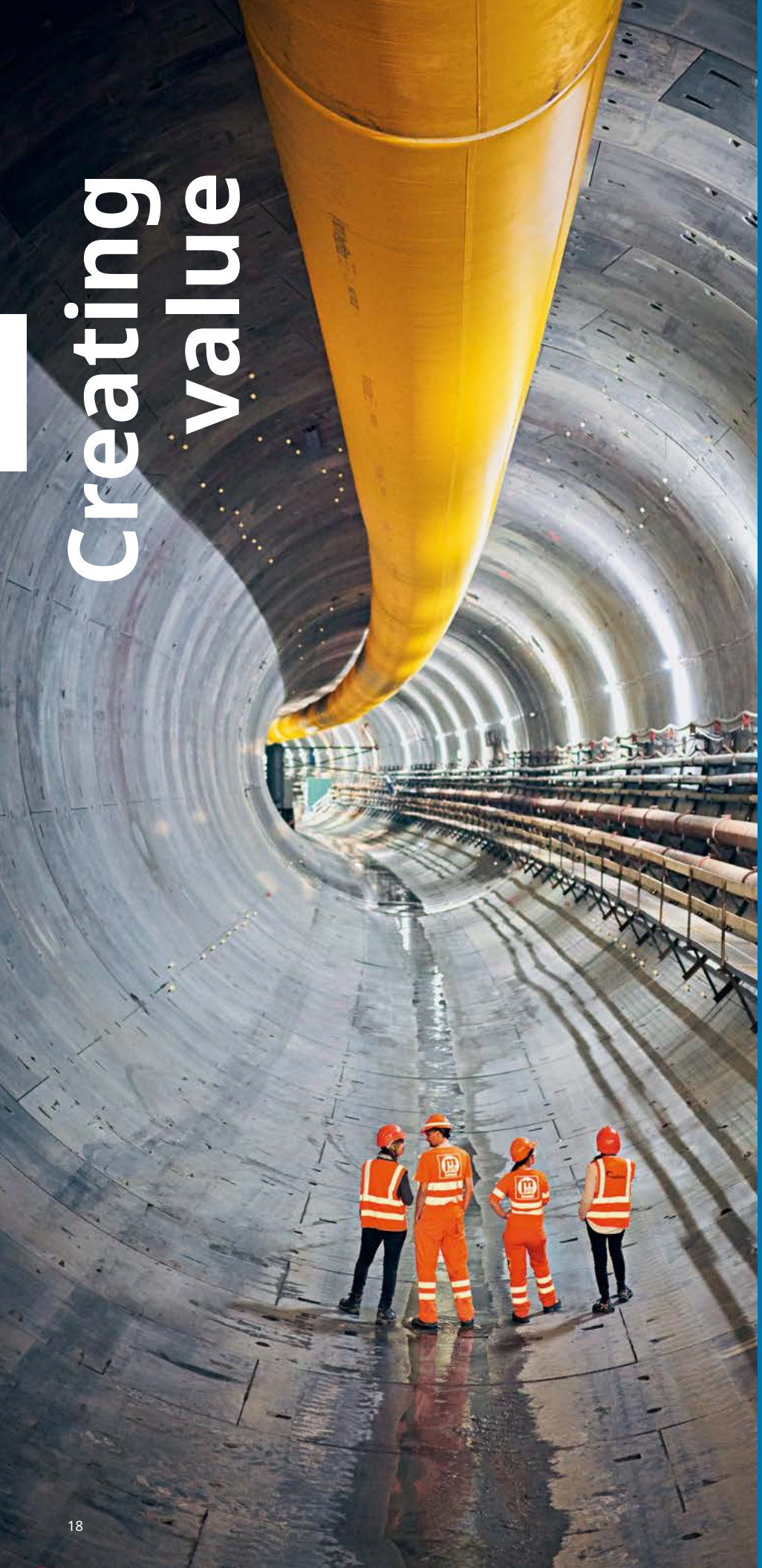
We co-process all types of waste, including solid shredded waste from industrial and municipal origin, spent solvents, used tires, waste oils, contaminated soils, industrial and sewage sludges and demolition waste. Depending on the waste regulation in a country and the development of its waste market we can reach a fossil fuel replacement rate of more than 90 percent.

Besides using waste as a fuel substitute, we also use waste streams from the power and steel industries to replace clinker in our cement, thus saving primary raw material and reducing CO_2 emissions. In some of our markets replacement rates reach 50 percent.

Environment
Over the last four years we have reduced water withdrawal in our cement plants by around 19 percent (or 73 liters per tonne of cementitious material). Over this period the initiative has created water awareness in our plants and we have refined our measurement methodologies. Today, we are shifting our focus to consider our total impact on water resources in the communities where we operate, particularly in water-scarce areas. In consequence, we will revise our ambitions to reflect water impact, which we intend to reduce by focusing on the most vulnerable areas of operation. In some communities we already have a net positive water impact, such as those served by Ambuja Cement, which we have calculated as being six times water positive.

Community
In many countries we enlarge the positive impacts of our operations – such as direct employment, tax revenues, infrastructure development and local procurement – beyond the factory gate. In 2018, 2.9 million people benefited from our community programs worldwide – with over 15 million having benefited over the last four years.

Creating value



CHF 3.0 billion

Retained value

CHF 5.2 billion

Estimated triple bottom line value

Value creation

Creating value through sustainability
The building materials market is worth CHF 2.5 trillion per annum globally and is expected to continue to grow by 2–3 percent each year. LafargeHolcim is the leader in building materials that provide infrastructure, housing and mobility for billions of people all over the world. Our products are resilient, versatile, affordable and increasingly recyclable. These benefits endure for decades or even centuries, making them an investment in our collective future. Indeed, a world without our products is unimaginable.

The Group Strategy 2022 is focused on building for growth, and sustainability is a key element. Our vision is to be recognized by our industry and by society as being at the forefront of sustainable construction solutions and innovation, and by our stakeholders as a responsible and ethical company.

The LafargeHolcim Integrated Profit & Loss Statement
This is the fourth consecutive year that LafargeHolcim displayed the order of magnitude of its financial impacts across the triple bottom line. The LafargeHolcim Integrated Profit & Loss Statement (IP&L) represents our approach to impact valuation. It is also a key element of our sustainability reporting tools and plays a vital role in helping us achieve our sustainability ambitions. The LafargeHolcim IP&L 2018 results are displayed in the graph on page 21.

Why impact valuation?
The IP&L is not intended to be a definitive statement of our financial accounts. Rather, it is a tool to allow us to understand and share with stakeholders the extent of our impacts and to track progress against our sustainability framework. The tool enhances decision-making processes and sustains value creation in the long term, by raising awareness of risks and opportunities posed by externalities (through quantification), and enabling analysis on what the impact could be on the bottom line.

The discipline of impact valuation
We published our first IP&L together with our subsidiary Ambuja Cement in 2014. Since then, the discipline of impact valuation[1] has been further developed and adopted by different companies. Currently we are working with a number of leading companies, which are in various stages of piloting, implementing and communicating their efforts on impact valuation, as part of a roundtable to develop this discipline and share best practices with other interested companies. In 2017, this group published a white paper[2] describing how impact valuation can be practically implemented and shared it with the World Business Council for Sustainable Development (WBCSD) and other parties.

The IP&L statement tool complements our traditional financial and sustainability metrics to give us an indication of the scale of our extended impacts. It provides a compass, pointing us in the direction of increasing sustainable value creation for shareholders, society and the environment. This is the fourth consecutive year we have produced an IP&L.

CHF 3.0 billion
Retained value

CHF 2.2 billion
Net positive socio-economic and environmental impacts

CHF 5.2 billion
Estimated triple bottom line value

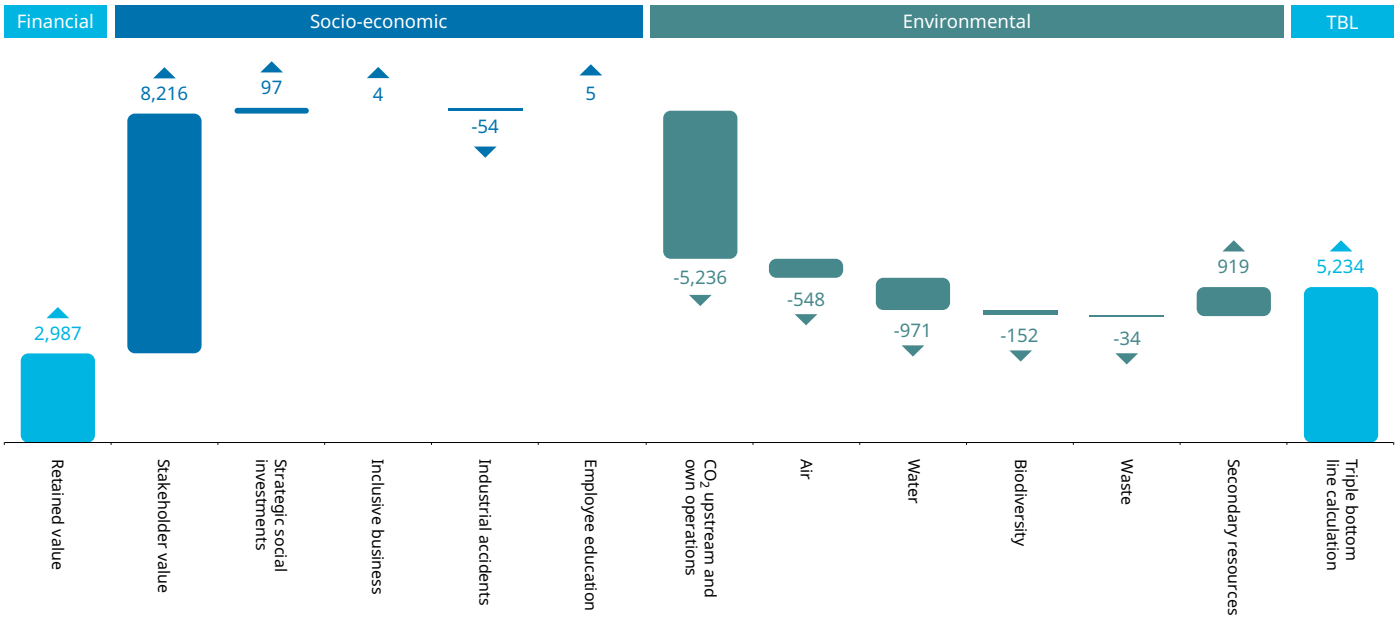
Understand the extent of impacts
Assess and quantify the risks of externalities on the LafargeHolcim bottom line, and translate environmental and social KPIs into a common language, understandable throughout the organization.

Shape the mindset
Have a comprehensive view of company performance/ impact, track progress over time and engage, mobilize and inform beyond sustainable development experts.

Enhance decision-making process
Investments lock LafargeHolcim into assets for a long period of time. The IP&L enables us to start assessing decisions from the bottom up, working with interested companies.

[1] Impact valuation refers to the application of welfare economics to determine the positive and negative value contribution of business activities to society in monetary terms.
[2] Available at: https://www.lafargeholcim.com/sites/lafargeholcim.com/files/atoms/files/impact-valuation-white-paper.pdf

Manta, Ecuador
At our customer's site.



TRIPLE BOTTOM LINE CAN BE USED TO ASSESS OPPORTUNITIES BEYOND COMPLIANCE
COMPLIANCE WITH GOVERNANCE, SOCIAL AND ENVIRONMENTAL REQUIREMENTS AND STANDARDS

The IP&L statement is not part of LafargeHolcim's financial reporting or projections. The IP&L is intended to raise awareness of externalities that may or may not affect LafargeHolcim's business, and to assess their relative importance. It contains preliminary considerations that may be subject to change. Furthermore, the IP&L may also change, for example as valuation techniques and methodologies evolve. It should be considered as indicative and it neither represents any final factual conclusions nor is intended to assert any factual admission by any person regarding the impact of LafargeHolcim or any of its related parties on environment or society.

What the IP&L tells us
The IP&L indicates that our triple-bottom-line calculation – taking into account the monetized social and environmental impacts – is 1.8 times the company's retained financial earnings.

The value created in the **Socio-Economic dimension** is mainly driven by the "stakeholder value" externality, which measures our contribution to local economies through the multiplied effect of salaries, taxes and social investment.

Sadly, and despite all our efforts, we regret that 19 employees and contractors lost their lives in 2018, down from 31 in 2017. The human cost of an occupational accident cannot be monetized, but even if only the lost capacity of a person to generate income is considered, the cost is considerable.

The impact on lives and families is immeasurable. Health and safety is a core value of the LafargeHolcim Group and we will continue to act to improve the safety and the health of employees, contractors, third parties and communities.[3]

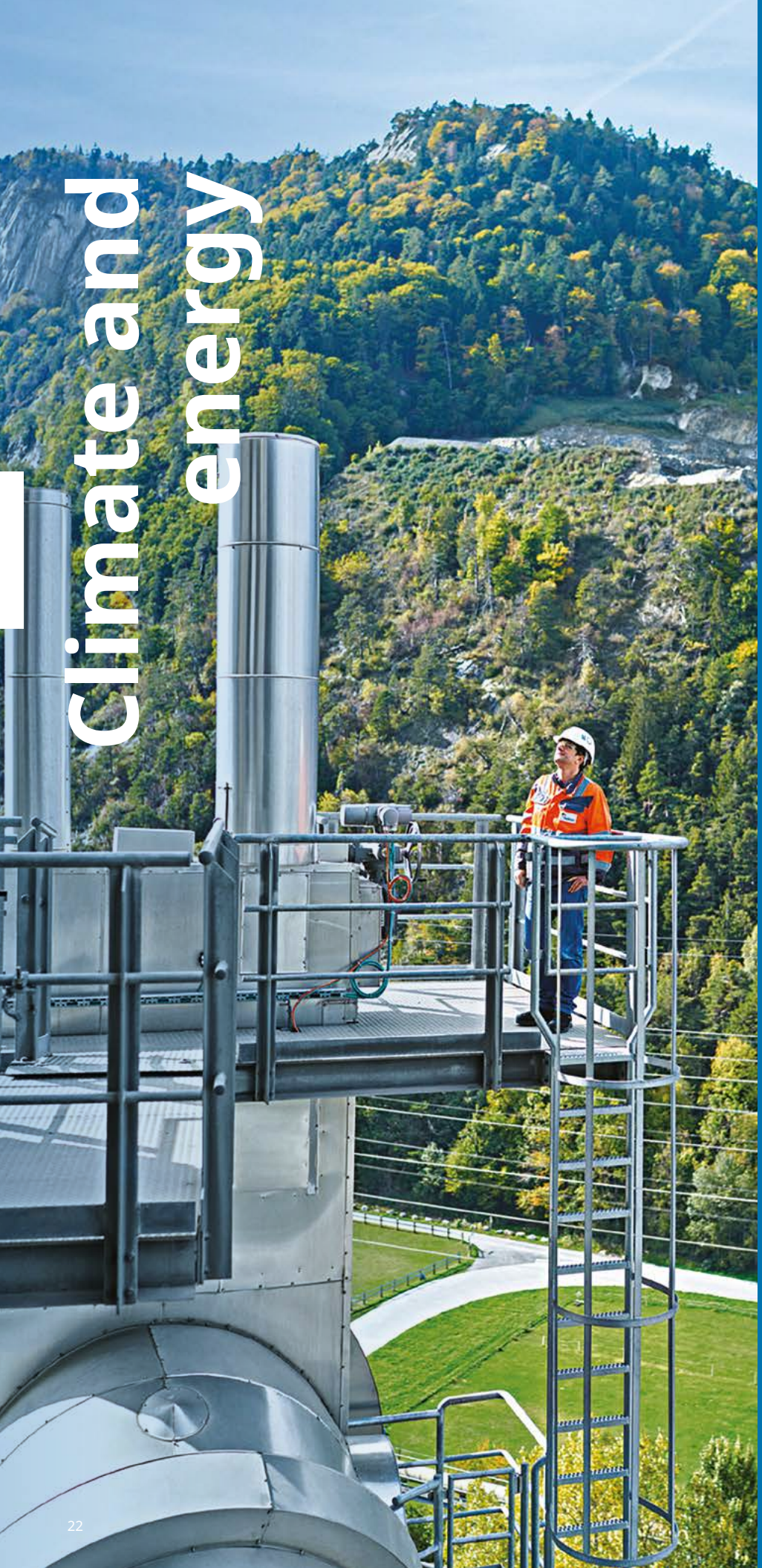
In the **Environmental dimension**, the most significant externality is our CO_2 emissions. These account for 75 percent of our total cost to society, and represent the largest negative impact of our operations. In 2018, our net CO_2 emissions per tonne of cementitious material decreased to 576 kg CO_2/tonne, a 1 percent reduction from 2017 and equal to a 25 percent reduction compared with 1990 emissions. This exceeds our year-on-year reduction objective and positions us well to deliver our new carbon reduction target of 520 kg CO_2/tonne by 2030. We have achieved this by reducing our clinker-to-cement ratio and consuming less energy per tonne of product, mostly by using alternative fuels and improving the efficiency of our processes.

Water usage continues to have a negative impact. However, over the last four years we have reduced water withdrawal in our cement plants by around 19 percent (or 73 liters per tonne of cementitious material). We now believe that we should shift our focus to consider our total impact on water resources in the communities where we operate, and particularly in water-scarce areas. In some communities, we already have a net positive water impact, such as those served by Ambuja Cement, where we calculate being six times water positive (see case study on page 38).

The IP&L highlights challenges but also opportunities that can help us to maximize our sustainable value creation for shareholders, society and the environment. We are confident that, as we continue to implement our sustainability framework, the IP&L will assist us to measure the effectiveness of our programs.

Where can I find more details?
A document containing all the assumptions and the calculation values used, together with a short animation explaining the IP&L statement, can be found on our website (*www.lafargeholcim.com/Sustainability-reports*).

[3] See "People" section on page 55.



Climate and energy

576 kg

net CO_2 per tonne cementitious material

25%

reduction of specific CO_2 emissions since 1990. This is equivalent to over 40 million tonnes CO_2 avoided compared to 1990 performance levels

Climate and energy

Highest reduction in peer group.

2030 commitment
LafargeHolcim cement is among the most carbon efficient in the world. Since 1990, we have reduced our net carbon emissions per tonne of cement by 25 percent. We lead the international cement companies, with the highest reduction compared to our 1990 baseline.

We have achieved this by reducing our clinker-to-cement ratio and consuming less energy per tonne of product, mostly by using alternative fuels and improving the efficiency of our processes.

We measure our climate goal in terms of reduced net CO_2 emissions (measured in kilograms of CO_2 per tonne of cementitious material, or kg CO_2/tonne). Our current 2030 emissions reduction target of 40 percent compared to 1990 – translating to net emissions of around 460 kg CO_2/tonne – exceeds the standard for a 2 degree scenario, consistent with the low-carbon technology roadmap defined for our sector by the International Energy Agency (IEA).

We are revisiting this ambition based on new external references and revised internal scenario planning, and accounting for current national climate change ambitions in the countries in which we operate, as well as limited progress toward those targets.

With our revised target of 520 kg CO_2/tonne by 2030, we remain the most ambitious company in our sector. We are still committed to reducing emission levels in line with a 2 degree scenario, as agreed at the COP21 world climate conference in Paris. Aligning with the Group Strategy 2022, we have now stated an interim 2022 target of 560 kg CO_2/tonne, replacing our previous 2020 and 2025 targets.

In our scenario planning, we considered the impact of a high, medium and low variability of regulatory framework incentives on our potential to reduce emissions. Our goal is consistent with a "medium" variability of regulatory framework incentives, which we arrived at by following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We will continue to monitor developments and update our scenario planning in line with the TCFD recommendations.

CO_2 emissions overview: our 2018 performance

135 million
tCO_2/year

Scope 1: Direct emissions from our operations: decarbonation of raw materials and fuel consumption for cement production and on-site power generation.

8 million
tCO_2/year

Scope 2: Indirect emissions from the generation of purchased electricity consumed in the company's owned or controlled equipment.

22 million
tCO_2/year

Scope 3[1]: Other indirect emissions assessed (extraction and production of purchased materials and fuels, transport-related activities in vehicles, employee commuting).

Our CO_2 reporting is aligned with the WBCSD-CSI | GCCA CO_2 Accounting and Reporting Standard for the Cement Industry and aligned with TCFD recommendations on data disclosure. Further details can be found in our performance data tables and CDP disclosure.

[1] LafargeHolcim's Scope 3 emissions have been assessed according to WBCSD-CSI Scope 3 methodology. For this purpose, we assessed the most significant of our suppliers' emissions due to clinker bought and used in the production process during 2018. We also consider fuel- and energy-related activities (not included in Scope 1 and 2), upstream and downstream transportation and distribution, business travel and employee commuting.

Progress toward target
In 2018, our net CO_2 emissions per tonne of cementitious material decreased to 576 kg CO_2/tonne, a 1 percent reduction from 2017 and equal to a 25 percent reduction compared with 1990 emissions. This exceeds our year-on-year reduction objective and positions us well to deliver our new carbon reduction target of 520 kg CO_2/tonne by 2030.

Our actions

Clinker substitution
It is during the production of clinker, the main component of cement, when most CO_2 emissions associated with cement occur. The majority of these emissions are unavoidable, as they result from the chemical reaction that occurs when the raw material (limestone) calcinates into clinker in the kiln. This decarbonation process is our largest source of CO_2 emissions, accounting for 68 percent of our total Scope 1 emissions in cement production.

Replacing the clinker in our final cement products with alternative mineral components such as pozzolan, slag or fly ash reduces the carbon intensity of the cement. A significant portion of these constituents come from waste or byproducts recovered from other industries. Currently, our products use an average of 28 percent of constituents to replace clinker, resulting in one of the lowest levels of clinker content in the sector.

While we aim to further reduce our clinker factor, the limited availability of mineral components in some markets, or the absence of specific product properties in others, act as limiting factors. In markets where these factors are favorable, our replacement rates have reached 50 percent.

Waste-derived fuels and biomass
Another key way to reduce the carbon intensity of our cement production is to use pretreated waste and low-carbon fuels. These serve as a replacement for fossil fuels that provide the energy needed to operate a cement kiln.

We currently source 18 percent of our energy from alternative fuels, low-carbon fuels and biomass. In some of our operations, we have been able to meet 90 percent of our energy requirements with alternative fuels, but we also acknowledge our potential to increase this rate significantly in the coming years. (See further information on our Geocycle operations on page 31).

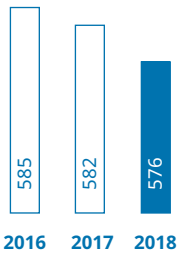
Using these alternative energy sources diverts waste from incineration or landfill, providing a solution to the growing waste disposal problems faced by society, and helping to keep fossil fuels in the ground. At the same time they help to reduce our CO_2 emissions, as most of them emit less CO_2 than traditional fuels. Other sources, such as biomass, are considered carbon neutral.

Energy efficiency
Cement production is an energy-intensive process. Energy costs and security of supply are key business drivers. Improving our energy efficiency reduces the carbon intensity of our products and lowers our production costs.

We have reduced our energy consumption per tonne of clinker to 3,518 megajoules in 2018 (1990: 4,532 megajoules), among the lowest rates in the sector. Since 1990, we have increased our cement production by around 79 percent, while our annual energy consumption has increased by just 18 percent.

Our cement manufacturing facilities alone account for around 85 percent of LafargeHolcim's total energy consumption. Our technical center of expertise – the Cement Excellence Manufacturing team, based in Holderbank, Switzerland – is responsible for monitoring and optimizing all Group cement operations, including energy efficiency.

Specific net CO_2
(kg CO_2/tonne cementitious)



25%
reduction
since 1990

In 2018 we co-processed over 465,000 tonnes of old tires.

Renewable electrical energy and on-site electricity generation
In 2018, we continued to expand our renewable energy portfolio. We invested in or purchased renewable power when it was economically advantageous, and optimized our low-carbon power-producing assets (such as waste heat recovery units) across our production plant portfolio.

We are also investigating opportunities for generating renewable energy by using our land for wind turbines or solar panel farms. For example, ACC in India has started using solar power in the cement manufacturing process at its grinding units at Kudithini and Thondebhavi in Karnataka. We intend to use about 30 megawatts of solar power at these plants, to meet more than half of their annual power requirement. Switching to solar power will reduce CO_2 emissions by 38,000 tonnes a year – the equivalent of planting 45,000 trees and saving 90 million liters of water – by avoiding the consumption of coal-fired electricity. (See also the case study on wind energy on page 29.)

Transport efficiency
When transporting the products we manufacture, we aim to use low-fuel-intensity options, such as rail, wherever possible. Our trading division also has well-established routes to transport intermediate and final products by boat or barge. Nonetheless, road transport remains our principal logistics method.

We have initiatives in place to optimize road transport operations. With our in-vehicle monitoring systems (IVMSs), we monitor critical aspects of driver behavior such as speeding, harsh acceleration and braking, and excessive cornering. In Europe, the IVMS is complemented with a load optimization initiative that aims to minimize and, when possible, avoid empty trips. These measures not only have a significant impact on reducing fuel consumption, but also improve our road safety performance and customer service.

Carbon capture and low-carbon products
Innovation has played, and will continue to play an important role in reducing emissions from the cement and construction sectors. We are continuously exploring new strategies and technologies, such as carbon capture and usage or storage. LafargeHolcim is working on several projects with different partners to test and demonstrate new breakthrough technologies for the future of carbon capture.

We have significantly invested in the development of low-carbon solutions, led by our R&D center in Lyon, France. Thanks to this commitment, today we have a broad portfolio of low-carbon projects – including low-carbon clinker, cement, concrete, and binders – and we are seeking opportunities in carbon sequestration. (For more information on our innovation program and products, please see the “Creating value” chapter on page 18).

Nante de Drance Dam, Switzerland
Construction on the power plant began in 2008 and it has an installed capacity of 900 MW.

Our advocacy: Carbon pricing mechanisms
In implementing our CO_2 reduction plan, we focus on countries where a relevant value is placed on carbon efficiency, such as emissions trading or comparable regulations. For example, in 2018, against the backdrop of the revised Phase 4 of the EU Emissions Trading Scheme, we began a project to optimize our CO_2 emissions performance in Europe, with clear targets, actions and accountabilities.

Increases in carbon pricing can have a significant impact on our company as a large carbon emitter. In the short term, the evolving legislative environment on greenhouse gas emissions could impact around one third of our existing clinker production.

We engage proactively and transparently with governments and other external stakeholders on climate policies and carbon pricing mechanisms. We support the use of carbon pricing as a means to incentivize the uptake of innovative low-carbon solutions and ensure a level playing field across geographies and among industries. We advocate for stable, fair and consistent policy frameworks.

Task Force on Climate-related Financial Disclosures
As a leading business committed to ensuring transparency and action around climate-related risks and opportunities, we support the voluntary recommendations of the Financial Stability Board TCFD.

The identification, assessment and effective management of climate-related risks and opportunities are fully embedded in our risk management process, and subject to continuous improvement.

In the table below we map where the recommended TCFD disclosures can be found in our mainstream reports. We will continue to enhance our disclosures in future reporting cycles.

Additional metrics and targets are detailed in our submissions to CDP. Documents are available on *www.cdp.net*.

Task Force on Climate-related Financial Disclosures alignment

GOVERNANCE	STRATEGY	RISK MANAGEMENT	METRICS AND TARGETS
Disclose the organization's governance around climate related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Board oversight AR page: 67, 96 SR page: 15, 63	**Risk and opportunities** AR page: 71	**CO_2 risk identification** AR page: 66, 71	**Reporting CO_2 metrics** AR page: 46 SR page: 3, 23, 24, 65
Management's role AR page: 67 SR page: 63	**Link to financial planning** AR page: 71	**CO_2 risk management** AR page: 67, 71 SR page: 24, 25	**Details Scope 1, 2 and 3** SR page: 23
	Scenario planning AR page: 71 SR page: 23	**Integration into overall risk** AR page: 98	**CO_2 targets** AR page: 46 SR page: 16, 17, 23

AR – LafargeHolcim Annual Report 2018
SR – LafargeHolcim Sustainability Report 2018

Concrete absorbs CO_2 during its life cycle

In addition to our range of measures taken to reduce our carbon emissions, our final product, concrete, absorbs significant amounts of CO_2 from the atmosphere during its life cycle. This process is called "carbonation" and results from the reaction between the CO_2 present in the air with hydrated cement phases in concrete.

Carbonation is a slow process that can last for many years and takes place not only in concrete surfaces exposed to CO_2 in the air, but also in secondary products such as crushed concrete used as a base course for a road. Recent studies[2] demonstrate that more than 20% of the CO_2 emissions from the manufacturing of clinker can be reabsorbed by concrete structures and secondary concrete products.

The impacts of carbonation are an important parameter to be considered when comparing the carbon performance of different building materials over the life cycle. Calculation models of CO_2 uptake in concrete are complex and involve many different factors controlling the uptake. These can include weather (rain and moisture), surface coatings, surfaces under water and soil, and the quality of concrete. Current regulations and GHG inventories guidelines do not yet consider the effects of carbonation. LafargeHolcim continues to collaborate with industry peers and key stakeholders to incorporate this aspect into existing GHG inventory and life cycle assessment methodologies.

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Ready-mix concrete trucks loading
Concrete can absorb more than 20% of CO_2 emissions from clinker manufacturing.

[2] *CO_2 uptake in cement-containing products: Background and calculation models for IPCC implementation*.

Lafarge Paulding Cement Plant becomes the first LafargeHolcim operation in North America to harness wind energy

In November 2018, LafargeHolcim announced plans to build three wind turbines to help power its cement plant in Paulding, Ohio. Adding the turbines is part of our commitment to improving manufacturing operations, controlling costs and operating sustainably. Construction began in December 2018, in partnership with One Energy, a local wind energy developer and operator. The three turbines are expected to generate more than 12 million kilowatt hours a year, enough to power approximately 1,200 average households,[3] and should eliminate the equivalent of at least 9,000 tonnes of CO_2.

To contribute to the community surrounding the Paulding plant, we are creating three $5,000 Megawatt Scholarships (one per turbine) to be awarded each year the turbines are in operation. The scholarships will be given to local high-school graduates pursuing a two- or four-year degree in a STEM (science, technology, engineering and mathematics) subject.

Supporting SDGs

↙

Paulding, Ohio, USA
Wind energy project inauguration at the cement plant.

[3] According to the U.S. Energy Information Administration.

Harnessing the wind in Morocco

Echoing a sentiment felt across the company, LafargeHolcim in Morocco is convinced that growth and competitiveness rely on reducing costs, as the investment in renewable energy over the last 13 years demonstrates.

The Tétouan plant is the first cement plant in the world to have its own wind farm. Opened in 2005, with two extensions in 2008, the plant's total capacity is now 32 megawatts. The motivation to switch to wind power was driven by a desire to lower CO_2 emissions and reduce energy costs, as wind power is less expensive than energy from the national provider.

During the past few years, fossil fuel-based energy has been substituted by wind power at all nine plants in Morocco. In 2017, the country achieved 60 percent electrical substitution. While the Tétouan plant supplies its own wind energy, the rest was obtained through purchase agreements with local wind energy partners. In 2018, the substitution rate reached 75 percent (8 percent of which was provided by Tétouan's wind farm), reaching a record high of 97 percent in August.

Our current wind energy purchase agreements supply about 70 percent of our annual electrical energy needs, but we plan to increase this to 90 percent by 2020.

Supporting SDGs

Morocco
Tétouan plant wind farm.

The UN Sustainable Development Goals

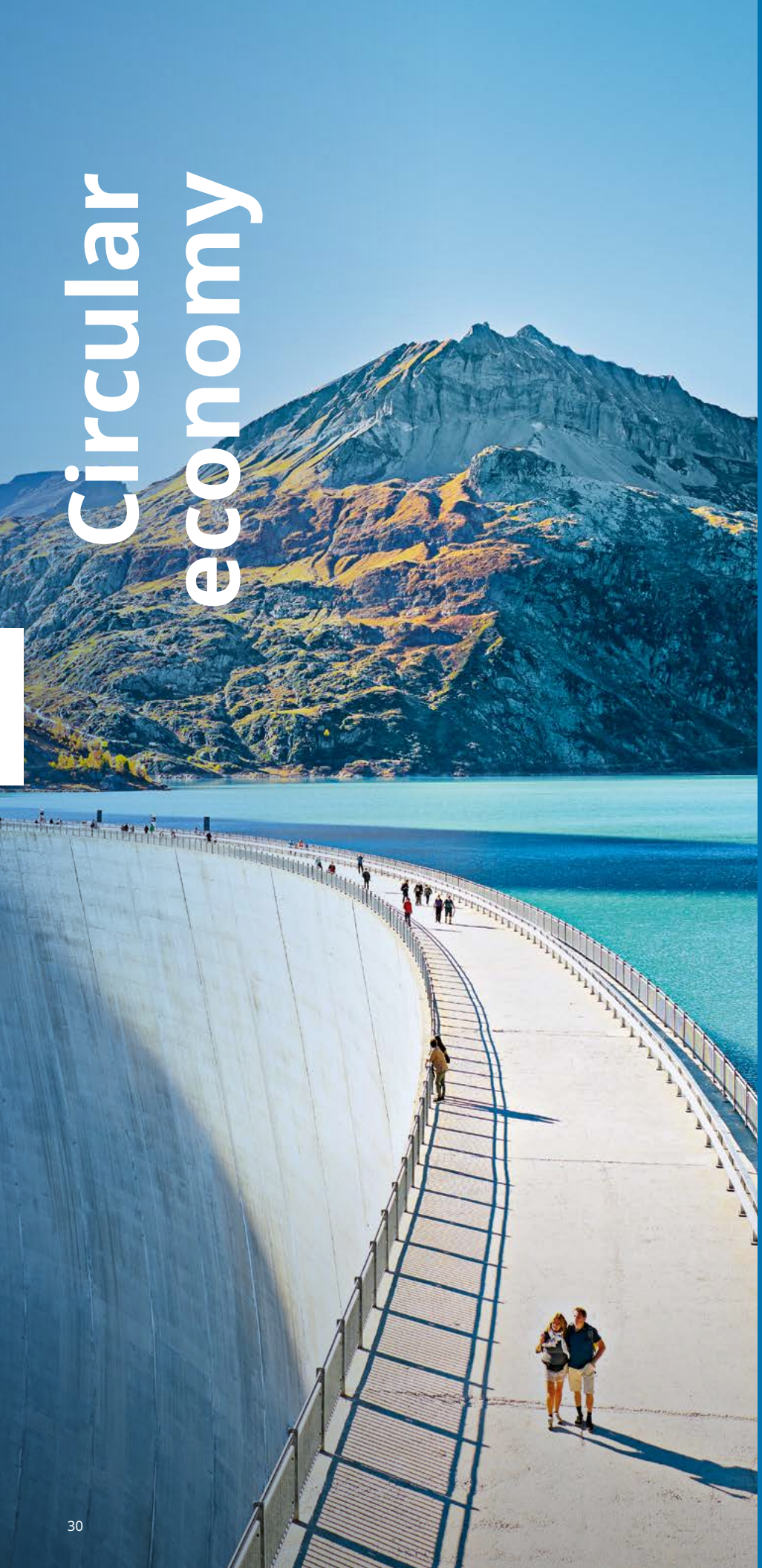
SDG 7: Affordable and clean energy
Our use of waste as an energy source and our use of renewable energy sources contribute to this goal.

SDG 9: Industry, innovation and infrastructure
Our solutions for sustainable and efficient infrastructure and the most advanced R&D capability in the sector contribute to this goal.

SDG 13: Climate action
Our targets to reduce carbon intensity, promotion of sustainable construction, and innovative solutions contribute to this goal.

SDG 17: Partnerships for the goals
Our partnerships with initiatives such as the Energy Efficiency in Buildings Coalition and membership of organizations such as the World Business Council for Sustainable Development and GCCA contribute to this goal.

Circular economy



52 million

tonnes of waste materials reused in our operations

28%

constituents used to replace clinker

Circular economy

52 million tonnes of waste materials reused – a new record.

In 2018, we reused 52 million tonnes of waste materials in our operations. By 2030, we aim to increase that to 80 million tonnes. And in our Aggregates, Ready-Mix Concrete and Asphalt businesses we use around 11 million tonnes of recycled material per year (mostly recycled aggregates) to make our products. At some sites this represents more than 90 percent of the material used.

In our vision for 2050, the built environment is fully recyclable, with maximum recycled content. In line with this, we are exploring ways to close the loop of sustainable sourcing, using and reusing of materials. We approach building from a circular economy perspective, aiming to reuse construction and recycle demolition waste. And, as a global leader in building materials, we can offer recycled solutions (such as aggneo® recycled aggregates) to our customers.

We also focus on managing industrial, agricultural and municipal waste through co-processing in cement kilns and replacing clinker with waste-derived mineral components. This enables recovery of energy and recycling of materials from waste.

Replacing clinker with industrial byproducts

Our operations use the byproducts of other industrial processes, such as fly ash from the power industry and blast furnace slag from the iron and steel industry, to replace clinker in the final cement product. We do this where it is geographically and economically feasible and where these materials are available. We are also exploring increasing the use of other materials as a replacement for clinker, such as the "fines" from construction waste and calcined clay. Currently, the products we market use, on average, 28 percent constituents to replace clinker, a significant proportion of which come from waste or recovered byproducts.

Co-processing

Co-processing is a secure and recognized form of waste management. It fully recovers the energy and recycles mineral content from waste in the cement manufacturing process. We co-process many types of waste, including solid shredded waste from industrial and municipal origin, spent solvents, used tires, waste oils, contaminated soils, industrial and sewage sludges and demolition waste. Increasingly, we are processing non-recyclable plastic and are making a conscious effort to reduce plastic leakage into the ocean. In 2018, the company repurposed an estimated two million tonnes of plastic waste in its plants. In addition, LafargeHolcim launched specific waste management solutions in Mexico, the Philippines, Egypt and Morocco where marine plastic littering is a major concern to help reduce plastic leakage into the ocean. We help selected municipalities improve their solid waste management systems, which is the most effective way to prevent marine litter. In these four target countries we have started to establish collection and recovery systems for waste fractions particularly prone to become marine litter, focusing on the involvement of the informal waste sector, raising awareness and establishing policy dialogues and regulatory frameworks (see case study on page 34).

Through our wholly owned waste management services company Geocycle, we continue to innovate with energy recovery and materials recycling throughout the cement manufacturing process. At Geocycle, we offer safe, ecologically sound waste management solutions, applying the highest international standards – including German development agency GIZ guidelines on co-processing waste and the Basel Convention – for superior governance and performance.

In 2018, we co-processed around 11 million tonnes of waste, providing 18 percent of our thermal energy demand for clinker.

Sustainable construction and solutions

Population growth, rising living standards and greater urbanization offer significant business opportunities for LafargeHolcim. At the same time, these trends bring major challenges for the planet. Issues like climate change and increasing demand for limited resources, such as materials and land, require companies to go beyond "business as usual," innovate their solution portfolio and, ultimately, consider alternative business models.

As a response, we have developed a range of sustainable solutions, which in 2018 represented 11 percent of net sales, including several related to the circular economy and recycling. However, there needs to be increased customer acceptance of these, and the adoption of progressive regulatory and building standards, to drive increasing demand for these sustainable solutions.

As an example, construction and demolition waste (CDW) can be recycled into new structural concrete, if there are strict quality control processes in place. Indeed, it is both ecologically and economically positive. However, virgin aggregates are too cheap, and the general perception of recycled concrete is poor, with both the public and customers believing it is less resilient, more expensive and of lower quality. Another big hurdle is the lack of standards covering concrete recycling. However, with the correct regulatory encouragement, progress is possible. For example, the city of Zürich launched an awareness campaign, backed by technical studies and guidance, and set minimum requirements for recycled concrete in all its construction projects.

The European Union mandate that countries must be capable of recycling at least 70 percent of their CDW by 2020 is a further incentive to drive these sustainable solutions. LafargeHolcim's aggneo® solution is well placed to meet the anticipated growth in demand. Read more about the Geocycle solutions for CDW in Retznei, Austria (see case study on page 32).

Circular economy at work – management of construction and demolition waste

LafargeHolcim continuously develops new business models that address waste challenges. One such case is Geocycle Austria, which is developing innovative solutions for construction and demolition waste (CDW).

The Geocycle Recycling Center in Retznei, Austria processes 130,000 tonnes of CDW every year. Geocycle, in cooperation with the biggest aggregate and concrete partner in Austria, processes this waste and renders it reusable.

Our cement plant in Retznei is setting new benchmarks in recycling and recovery, and the majority of the energy used by the plant is recovered from local pretreated waste. In addition, the waste heat from the kiln is reused by the local community for the heating of buildings. With the Geocycle Recycling Center, the team is also setting a standard in recycling CDW.

By 2020, the European Union has mandated that countries must be capable of recycling at least 70 percent of their CDW waste. Out of the total CDW coming to the Geocycle Recycling Center, 35 percent is co-processed in our cement, while another 35 percent is treated and used as recycled aggregates by construction companies. The remaining unrecyclable 30 percent is used as backfilling material for the cement plant quarry.

While we provide cement for construction through our manufacturing facilities, we also offer a deconstruction and sorting service for CDW, and ensure it is recycled at the Geocycle Recycling Center. This approach truly brings the circular economy to life by closing the CDW loop.

By implementing this solution, Geocycle demonstrates that it can contribute to achieving the EU's ambitious target. The company will continue to give a second life to discarded demolition materials and reduce the CDW going to landfills. This initiative has also been recognized as a circular economy best practice by the European Circular Economy Industry Platform.

Supporting SDG

Retznei, Austria
CDW being prepared.

Advancing sustainability along the value chain of the construction industry – the LafargeHolcim Foundation for Sustainable Construction

The LafargeHolcim Foundation for Sustainable Construction plays an important role in promoting a greater focus on sustainability across the life cycle of structures – from design to construction, use and maintenance, through to removal and recycling. The Foundation enables us to interact with stakeholders along the value chain of our industry and encourage sustainable responses to the technological, environmental, socioeconomic and cultural issues affecting building and construction.

To advance and endorse sustainable construction at national, regional and global levels, our Foundation has created a unique and extensive network of renowned experts. These include some of the world's leading technical universities, which host the Foundation's symposiums and Awards jury meetings. This network connects our Group to the drivers and decision-makers, architects and designers, engineers, urban planners, contractors, NGOs and authorities, in addition to researchers and students of the respective disciplines.

Expert conferences on sustainable construction
The Foundation's activities operate in three-year cycles. Each cycle commences with an international symposium on a contemporary theme of sustainable construction, bringing together construction professionals and specialists to exchange knowledge. The next cycle will begin in 2019 with a symposium on "Re-materializing construction" at the American University in Cairo, Egypt.

LafargeHolcim Awards competition
The Foundation also conducts the world's most significant competition for sustainable design – the LafargeHolcim Awards. In 2018, Global LafargeHolcim Awards were presented to a publicly accessible water infrastructure project in Mexico City, a village complex supporting traditional construction methods in Niger and a community-driven neighborhood engagement project in Detroit, USA. The winners were selected from more than 5,000 entries received from 121 countries. The next Awards will be open for submission from June 2019 until February 2020.

More about the LafargeHolcim Foundation and its activities at: *www.lafargeholcim-foundation.org*

Supporting SDGs

Reinterpreted construction traditions and new techniques using renewable resources created a community center open to all in the village of Dandaji, Niger. The project, by Yasaman Esamili (Iran) and Mariam Kamara (Niger), was honored with a Global LafargeHolcim Award in 2018. (Photo: James Wang)

Keeping plastic out of oceans

At least eight million tonnes of plastics leak into the ocean each year. If significant and timely action is not taken, there may be more plastic than fish in the ocean (by weight) by 2050.

To effectively address the issue of marine littering, it is important to stem this flow through land-based interventions.

Geocycle has launched a project to address the issue of marine littering, with the aim of establishing environmentally and socially sound solutions for reducing plastic leakage into the oceans. In 2018, around two million tonnes of plastic waste have been treated in our cement kilns. We are committed to increase these volumes by actively growing the processing of plastic waste.

Initiated in four urban areas in Egypt, Mexico, Morocco and the Philippines, the project aims to create sustainable systems for collection and recovery of different types of plastic waste that form the main volume of marine litter.

Supporting SDG

Bulacan, Philippines
Material ready for co-processing in cement kiln.

The UN Sustainable Development Goals

SDG 6: Affordable and clean energy
Our water management programs and targets contribute to this goal.

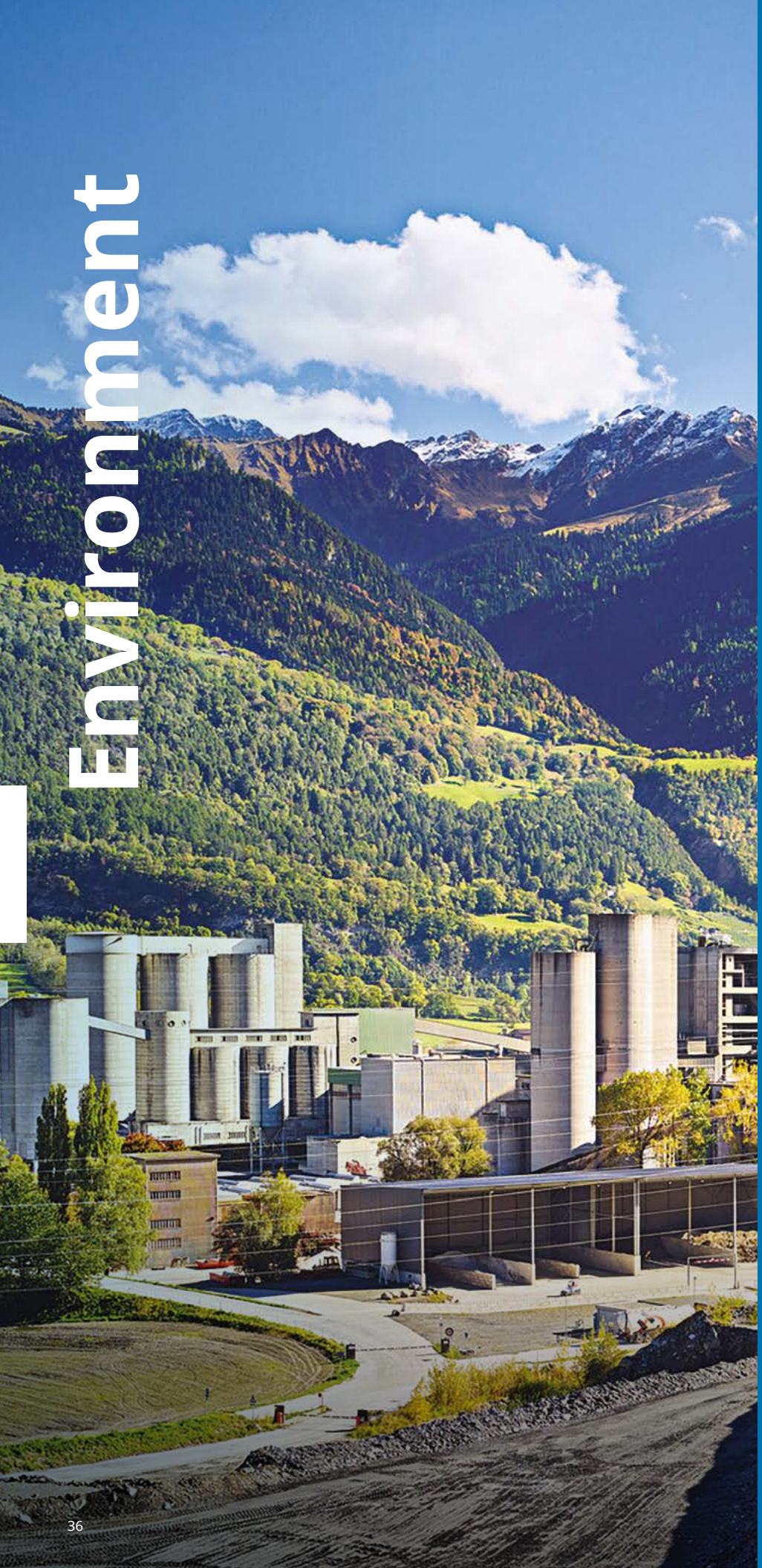
SDG 12: Responsible consumption and production
The use of waste-derived resources as alternative fuel and raw material sources contributes to this goal.

SDG 13: Climate action
Our commitment to demonstrating a positive global change for biodiversity contributes to this goal.

SDG 14: Life below water
Our programs to prevent plastics leaking into the oceans contribute to this goal.

SDG 17: Partnerships for the goals
Our collaboration with academic partners to promote sustainable construction contributes to this goal.

Guayaquil, Ecuador
With our customer at the Santana Lofts site.



Environment

19%

reduction of specific freshwater withdrawal

84%

quarries with high biodiversity importance with biodiversity management plans (BMPs)

Environment

Over the last four years, we have reduced water withdrawal in our cement plants by around 19 percent (73 liters) per tonne of cementitious material.

With our water withdrawal reduction initiative we have created water awareness in our plants and implemented improved measurement methodologies. Over the last four years, we have reduced water withdrawal in our cement plants by around 19 percent (73 liters) per tonne of cementitious material.

In some communities, we already have a net positive water impact, such as those served by Ambuja Cement, where we calculate being six times water positive (see case study on page 38).

Saving water
Although the construction material industry is not a large consumer of water compared to other industries, water is an essential resource in our operations. Both the demand for water and its price are expected to rise under the pressure of population growth, urbanization and increased industrialization.

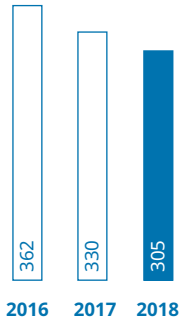
Likewise, lack of access to a reliable supply of water is reaching unprecedented proportions in many areas of the world, and is only likely to worsen. An assessment of LafargeHolcim sites, using the WBCSD Global Water Tool, showed that around 17 percent of our cement sites are located in water-scarce areas.

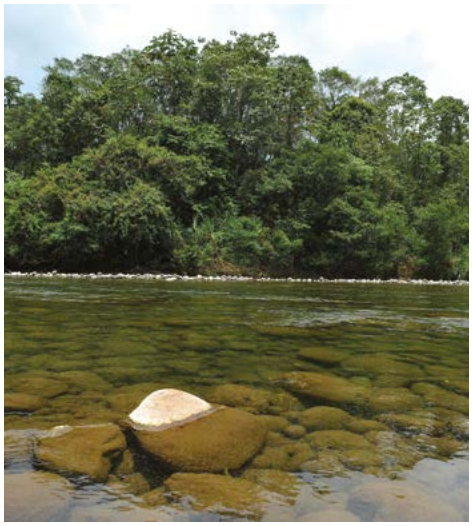
Water is fundamentally a local resource and its sustainable management requires an understanding of the specific context and drivers in each location. At sites located in water-scarce areas, water challenges call for action beyond our own fenceline. This includes:

- measuring our operational water footprint
- reducing freshwater withdrawal and consumption by optimizing site-level water efficiency through water recycling, rainwater harvesting and stormwater management
- assessing water risks
- engaging with stakeholders on sharing water resources more effectively and efficiently, and contributing to watershed-level sustainability by facilitating greater access to water, recharging the groundwater table, protecting and promoting biodiversity, and improving agricultural practices by reducing water use
- providing more water to communities and the environment than we use at sites located in water-scarce areas

See the case study on page 38 on our water stewardship programs.

Specific freshwater withdrawal
(l/tonne cementitious)





Costa Rica
Cartago quarry.

Water stewardship programs

Marking a significant milestone in our sustainability journey, LafargeHolcim's Ambuja Cement in **India** is now six times water positive – an achievement that reinforces the company's commitment to water stewardship for the benefit of local communities.

Ambuja's total water withdrawal (water debit) in 2018 was an estimated 6.7 million m^3, a 2 percent reduction from the previous year. The 41.3 million m^3 of water provided to local communities and the environmental recharge from water projects (water credit) was up by 9 percent. The company is therefore more than six times water positive, with some plants up to 15 times water positive.

Projects contributing to this water credit include the building of check-dams, micro-irrigation schemes and the provision of water to communities. By focusing on rainwater harvesting, drinking water solutions and water use efficiency (both internally and externally), Ambuja is making a positive contribution to nature, as well as improving the livelihoods of thousands of people.

Thanks to the creation of an artificial lake and a water recycling system, LafargeHolcim's Cauldon Cement Plant in the **UK** no longer withdraws freshwater from a nearby river.

The plant used to draw its water from the River Hamps, labeled a UK Site of Special Scientific Interest and Special Area of Conservation, and an EU Special Area of Conservation. Each summer, parts of the river dry up on the surface and become subterranean.

To avoid drawing on freshwater resources for its operations, the plant's rehabilitation plan involved creating a reservoir in the quarry. This artificial lake, which operates on a closed-loop system, is fed by rainwater recovery and recycling of the site's used water.

Other benefits of the lake include:

- lower energy consumption from not pumping water from the river
- a reduced risk of local flooding
- less chance of pollution as the lake can be isolated from the river in the unlikely event of an accident
- the creation of a natural habitat that forms a protective barrier for the fragile ecosystem of the River Hamps
- the creation of footpaths and a bird-watching site.

Supporting SDG

Cauldon, UK
The artificial lake at Cauldon Cement Plant.

Managing biodiversity
As an operating principle, we expect our operations to have rehabilitation plans available for all our quarry sites. In addition, quarries of high biodiversity importance are required to have a Biodiversity Management Plan in place. By the end of 2018, 84 percent of our quarry sites had rehabilitation plans in place.

To help achieve the Group's biodiversity ambitions, our mandatory Quarry Rehabilitation and Biodiversity Directive sets out the framework for managing risks, and for protecting and enhancing biodiversity. All our quarries are expected to comply with the rules and requirements of the Directive by 2020.

In 2018, LafargeHolcim and Fauna & Flora International (FFI), a leading NGO focused on biodiversity, completed an extensive 12-month project in Southeast Asia. As part of the project, designed to mitigate our impacts on biodiversity, FFI conducted a review of BMPs at sites in Indonesia and the Philippines. FFI also organized a stakeholder dialogue on biodiversity in Malaysia, which led to specific recommendations for a BMP. It also contributed to the development of a Group-wide strategy on karst[1] management, and identified opportunities for protecting and enhancing biodiversity at our quarries.

Following the completion of the project, we decided to implement FFI's recommendations across all compulsory standards and procedures for the Group's quarries. We have already integrated a new categorization process into our Biodiversity Management System, and expect to implement other recommendations from FFI in the future.

Based on the new screening criteria, LafargeHolcim has identified 283 quarries as being of a high level of biodiversity importance, predominantly due to their proximity to globally and nationally identified areas of high biodiversity value. Today, 84 percent of these quarries have BMPs in place.

We continue to assess the year-on-year improvements on the biodiversity quality condition of our quarries using the Biodiversity Indicator and Reporting System. For quarries with potential for biodiversity enhancement, we work toward generating a positive impact on biodiversity.

See the case study on page 40 on improving biodiversity through rehabilitation in Belgium and Canada.

Tackling air emissions
Air emissions are a key environmental aspect of cement production. As an operating principle, LafargeHolcim expects that all cement sites measure and manage air emissions.

In 2018, we monitored the dust, NOx and SO_2 emissions from 95 percent of the clinker we produced; 83 percent of this monitoring was continuous. To address the gaps, the most significant of which are in our Middle East Africa region, we have initiated a project to ensure that all our plants will have continuous emissions monitoring equipment installed and annual spot measurements performed by 2020.

The vast majority of LafargeHolcim plants operate within best practice emission ranges and some are among the best in the sector. However, a handful of high-emitting plants, particularly in our Middle East Africa region, have a major impact on total Group dust emissions. Our priority is to improve their performance, and action plans are either in place or being developed.

Without the impact of the Middle East Africa region, Group dust emissions would have decreased by around 18 percent year on year. By continuing the work we have already initiated, we are convinced that we can reduce emissions significantly in the coming years.

Costa Rica
Biodiversity assessment being undertaken.

[1] Karst is a special type of landscape that is formed by the dissolution of soluble rocks, including limestone, gypsum and dolomite. Karst regions contain aquifers that are capable of providing large supplies of water. Natural features of the landscape such as caves and springs are typical of karst regions.

Improving biodiversity through quarry rehabilitation

The LafargeHolcim Milieu quarry is our biggest in **Belgium**, with an annual capacity of ten million tonnes. At the quarry, we undertook a rehabilitation project to create temporary and permanent habitats for rare and protected species, joining forces with Life in Quarries. This group is co-financed by the European Union, the Walloon Region, the quarry sector and a range of partners including Parc naturel des Plaines de l'Escaut and Gembloux Agro-Bio Tech university.

Based on a 2016 biodiversity inventory of the quarry, action plans were agreed by the researchers, LafargeHolcim management and other stakeholders. Alongside the normal extraction activities at Milieu, we created open space around several ponds, and restored grasslands and meadows. Temporary pools and permanent water bodies were created, and seeds to promote meadows and flowering grasslands were sown.

The results have been encouraging, with Milieu proving to be an excellent example of how rare habitats can be created through close collaboration with the scientific community, local stakeholders and government agencies. Some of the ponds are now colonized by protected species: more than 40 bird species, and several species of dragonflies and damselflies, have been observed, and midwife toads have been successfully introduced to the site.

Meanwhile, in **Canada**, Lafarge's Berrymoor Pit, situated 90 kilometers west of Edmonton, has been engaged in a biodiversity and community outreach program for the last decade. With the pit situated along the North Saskatchewan River, a significant wildlife corridor, we recognize the need to balance effective operations with the preservation and protection of this diverse ecosystem. Initially, Lafarge completed a wildlife inventory of the pit, undertaking raptor and raptor nest, nocturnal and amphibian surveys, and using trail cameras. Bald eagles were observed fishing on the river, and an owl banding program was conducted.

Evolving over time, the biodiversity program demonstrates that wildlife can flourish alongside industry. The installation of nest boxes for various species of owls and the American kestrel have been particularly successful, with 53 kestrels raised in 2018 and 32 in 2017. We plan to work with the Peregrine Fund and a number of universities to research American kestrel genetics.

For its biodiversity efforts at Berrymoor Pit, Lafarge received the 2019 Alberta Sand and Gravel Association Award of Excellence. The honor is presented to aggregate producers in the province to recognize outstanding examples of stewardship, community relations and sustainable operations.

Supporting SDG

Berrymoor, Canada
Release of banded saw-whet owl.

Lafarge Malaysia: Investing in reducing dust emissions

For decades, Lafarge Malaysia has maintained a strong commitment to the environment and sustainability. It was one of the first organizations in the country to obtain ISO certification for the quality of its operations. However, its infrastructure was old and, prompted by new regulations imposing strict limits on dust emissions across the cement industry, the company embarked on an RM 80 million (CHF 20 million) investment program.

The project involved replacing the existing electrostatic precipitator dust control processes with state-of-the-art bag filter systems, which capture dust particles and release only filtered air into the environment. The bag filter is cleaned at pre-programmed intervals and the dust particles are recycled into the cement production process. The modernization project presented major engineering challenges, as existing structures and foundations had to be reused, modified or adapted and, in some cases, new chimney stacks installed.

The company is well on track to achieve its objective to reduce dust emissions. For example, dust emissions at the Rawang plant are already below half of the level set by the Malaysian Government, due to come into force in June 2019.

Malaysia
Filter bag installation.

The UN Sustainable Development Goals

SDG 6: Clean water and sanitation
Our water management programs and targets contribute to this goal.

SDG 15: Life on land
Our ongoing biodiversity programs contribute to this goal.

SDG 17: Partnerships for the goals
We have been working closely with nature conservation NGOs at local and global levels to design and implement sustainable biodiversity management practices. This collaboration contributes to this goal.

Community

CHF 47.8 million

Community spend

15 million

People benefiting from our programs over the last four years

Community

8,700 employees spent over 60,000 hours on volunteering programs.

In 2018, LafargeHolcim countries spent CHF 47.8 million on social investments, inclusive business programs, and donations. In addition, around 8,700 employees throughout the Group spent over 60,000 hours on volunteering programs in their local communities. Over the last four years, these activities have benefited an estimated 15 million people directly. This demonstrates that for every Swiss Franc we spend, we manage to create a social impact going far beyond the actual monetary value. Going forward, we will further quantify and measure the shared value created and seek to grow it.

As a principle, we expect every country to have formal stakeholder engagement plans in place covering all our cement sites and our most material aggregate and concrete sites. These plans are developed in collaboration with local stakeholders such as municipal officials and community associations. This requirement is formalized in the LafargeHolcim Communities and Stakeholder Engagement Directive.

Stakeholder engagement
In addition to continuous engagement with the communities that host us, LafargeHolcim engages with a range of stakeholders at all levels of the organization. The matrix on page 44 lists our key stakeholder groups, the issues we engage with them on, and how we engage with them.

Working with communities
We believe that our presence in a community brings many inherent advantages, such as direct employment, tax revenues, infrastructure development and local procurement. We seek to create even more shared value through our social investment and inclusive business programs, which focus on employment creation and skills development, education, infrastructure development, health and sanitation, and environment. Our social investments are based on long-term strategies, implemented in collaboration with specialized partners.

An example of this is the Supérate vocational training program in Ecuador, initiated by the Holcim Ecuador Foundation and Disensa, the LafargeHolcim construction materials franchise store chain in Latin America. The participants in the program are not only trained on technical skills such as masonry and the building of structural elements, but also psychosocial competencies, administration and workplace safety. Graduates from the program enjoy increased employment possibilities in the construction industry, reflecting its commercial and social value. Since its launch, 350 young people have graduated from the Supérate program.

Sepatan Tangerang, Indonesia
Affordable Housing development.

Community
continued

	How we engage	Issues we engage on	How often we engage
Customers	Customer surveys Net promoter score Key account contacts Customer events Local country websites Social media Product and services brochures Contract negotiations	Commercial negotiations Customer satisfaction Sustainable products Product and service innovation Health and safety	Ongoing
Employees	Employee surveys Town hall meetings Newsletters Intranet Social media Performance reviews and objectives setting Team meetings	Health and safety Labor rights Working conditions Local impacts Diversity Company and employee performance	Ongoing
Communities	Community advisory panels Plant open days and tours One-on-one meetings Community forums Social media	Local impacts (environmental and social) Health and safety Creating shared value	Ongoing
Investors and financial institutions	Annual General Meetings Investor roadshows One-on-one meetings and calls Investor surveys Ratings agencies assessments	Business performance Corporate governance Sustainability (climate, environmental impacts, social impacts) Innovation Human rights	Ongoing
Suppliers	Supplier qualification and development process Contract negotiations Supplier audits One-on-one meetings	Business ethics Health and safety Contract performance Local impacts (environmental and social)	Ongoing
Regulators	Meetings Briefings Position papers Industry associations Stakeholder forums	Local impacts Health and safety Circular economy Sustainability (climate, environmental impacts, social impacts) Sustainable construction Corporate governance	As required
Media	Interviews Media releases Briefings Social media Site visits	Business performance Health and safety Sustainability (climate, environmental impacts, social impacts) Sustainable construction Innovation	As required
NGOs/development agencies	One-on-one meetings Annual Assembly Responding to information requests Partnerships	Local impacts (environmental and social) Health and safety Creating shared value	As required
Academia	Seminars and lectures LafargeHolcim Foundation for Sustainable Construction One-on-one meetings Research partnerships Funding of Sustainable Construction Chair	LCA Sustainable construction Innovation Talent pipeline Sustainable procurement Impact valuation	Ongoing

Managing human and labor rights
Our approach to managing human rights is risk based and fully aligned with the UN Guiding Principles on Business and Human Rights.

Our Human Rights Directive outlines our commitment to respecting relevant international standards, including the principles contained within the Universal Declaration on Human Rights, the Organisation for Economic Co-operation and Development's Guidelines for Multinational Enterprises and the International Labour Organization's Fundamental Conventions on Labour Standards. Additionally, we participate in the UN Global Compact (UNGC).

As an operating principle, we expect our operations to adhere to human rights where we operate. We have developed a Human Rights Management System, categorizing countries into low, medium, or high business risk, using the UN Human Development Index and Freedom House's Freedom in the World Index.

All countries identified as high risk (and countries where an incident has occurred) are required to conduct a full Human Rights Impact Assessment (HRIA), while all other countries must conduct a self-assessment.

By the end of 2018, assessments had been conducted in 41 out of 59 countries where we have operational sites, 17 of which were full impact assessments in 25 high-risk countries. Action plans to address potential issues were developed in 20 countries where medium or high risks were identified.

A full HRIA is conducted with a risk-mapping workshop for the full local Executive Committee. This is followed by consultations at sites with a broad range of stakeholders, including employees, contractors, trade unions, community members, local authorities and NGOs.

These consultations involve interviews and focus groups where participants are asked to identify risks and opportunities relating to employment practices (including within contractors and suppliers) and community impacts.

A self-assessment is conducted using a tool that guides representatives of local management through a number of questions that systematically cover potential business-related human rights risks. Based on the answers, the tool prioritizes the topics and indicates where action is or may be required.

All assessments cover the following 14 indicators, as well as any additional issues relevant at a local level.

Employment practices
1 Child labor
2 Forced labor
3 Freedom of association
4 Non-discrimination
5 Working conditions
6 Minimum wage
7 Health and safety
8 Contract workers

Community impact
9 Community impact
10 Land management
11 Security guards
12 Bribery and corruption
13 Support of armed actors
14 Grievance mechanisms

Following an assessment, prioritized recommendations are presented to the country CEO and a detailed local action plan is developed. Where an issue has been identified as medium or high risk, a mandatory remediation plan is enforced.

The most commonly raised issues in assessments relate to working conditions, community impacts and contractor management.

2015 Modern Slavery Act
The UK Government published the Modern Slavery Act in 2015, requiring companies with operations in the UK to publish an anti-slavery statement. Our company in the UK, Aggregate Industries, issues an annual Modern Slavery Transparency Statement on its website: *www.aggregate.com/sustainability/reports-and-policies*

Ste. Genevieve, Missouri, USA
Plant warehouse.

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Ewekoro, Nigeria
Community school.

Responsible sourcing
LafargeHolcim has a short and predominantly local supply chain; more than 90 percent of our approximately 112,000 suppliers are from the local market. With our large geographic footprint, this poses challenges, particularly in countries where business practices are not well regulated.

In 2018, 34 percent (2017: 31 percent) of our active supplier base were identified as potential high environmental, social and governance (ESG) impact, accounting for 55 percent of our annual total spend (2017: 51 percent). The majority of these are contractors (84 percent) and the remainder raw material, energy, equipment and parts and packaging suppliers. By the end of 2018, high ESG impact suppliers, accounting for 62 percent of the total spend covered by high ESG impact suppliers (2017: 53 percent), had been qualified. We will strive to achieve full coverage as soon as possible.

Recognizing the importance of responsibility in our value chain, we have issued a Supplier Code of Conduct, informed by the UNGC principles, and the code is communicated to all suppliers. However, we recognize that the code in itself is not enough. In order to manage potential ESG impacts, LafargeHolcim identifies high ESG impact suppliers and ensures they are qualified to work with us. In addition to standard technical and financial requirements, qualification entails demonstrating that the supplier is compliant with the ESG aspects contained in our Supplier Code of Conduct.

These include the following:

- Decent working conditions
- Health and safety
- Environment regulations and impact management
- No discrimination and freedom of association
- No child or forced labor
- Anti-bribery and corruption

Qualification is initially done through self-assessments predominantly conducted by independent qualification platforms such as Avetta or Damstra, and supplemented with fact finding and on-site audits where issues are flagged.

Strengthening sustainable procurement in Central America

To encourage alignment with the LafargeHolcim Supplier Code of Conduct and Sustainable Procurement Directive, our Central America cluster has developed a program to strengthen supplier competencies in our focus areas of health and safety, climate, circular economy, environment and communities. The program consists of supplier forums and workshops where suppliers are provided with documentation, tools and knowledge to enable them to run a sustainable business, aligned with our Supplier Code of Conduct.

Holcim Costa Rica implemented the program in 2017, in partnership with the Business Alliance for Development. The initial workshop with 24 participating suppliers covered an introduction to sustainability, environmental awareness (waste management, water and energy), and human rights. Following the interest shown by suppliers in these topics, the program continued throughout 2018, focusing on more specific topics including anti-corruption, health and safety, and administrative and financial management for small and medium enterprises.

Holcim El Salvador implemented Sustainable Purchasing Forums in 2016. In the initial forum more than 40 suppliers and contractor companies were given an introduction to the LafargeHolcim Sustainable Procurement Directive. Subsequent forums were conducted in 2017 and 2018. In all, more than 200 people have received training in sustainable procurement. The program additionally included a financial health module in alliance with a leading financial institution.

Holcim Nicaragua developed forums in 2018 attended by 35 strategic suppliers to support them in the development and implementation of our requirements, aligning them with our way of doing business and the benefits for their companies. In 2019, the forums will focus on continuous improvement in health and safety.

These workshops were greatly appreciated by the participants, benefiting them in the implementation and adaptation of their business processes, and helping them to deal with non-conformities. This not only helps them to become better partners to our company but also better companies – positioning them for sustainable growth.

Supporting SDG

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Costa Rica
Supplier development workshop.

Case study: Recognition for community relations

The National Stone, Sand and Gravel Association in the USA recognized LafargeHolcim's Stringtown Quarry in Oklahoma with the Platinum Award, its top honor, for Excellence in Community Relations. The quarry won the award for its highly successful 2017 community outreach campaign, in which it engaged in initiatives that benefit local stakeholders.

Given the small community and reduced tax base, many local social projects that would have normally been addressed by the local government have unfortunately become a lower priority in recent years. The Stringtown Quarry, however, continues to focus on community projects that bring our employees and community together. The flagship project is the "Good Neighbors" volunteer initiative. In September 2017, all mine employees spent a number of Saturday work-shifts completing much-needed repairs to roads, landscape beautification efforts, trail building and various other upgrades throughout town. Over 280 volunteer hours were donated to the Good Neighbors event over the course of two weekends. In addition to volunteer hours, the site gave substantial in-kind donations, including 5,000 tonnes of road base and a small bridge.

Beyond the Good Neighbors program, the Stringtown Quarry was, once again, a key participant in the Atoka County Natural History Day Event. The day focuses on educating more than 500 students on the area's natural history, with a focus on mining, given the critical role mines play in the community. The quarry also regularly hosted students from the local school district, offering tours of the mine, and employees visited elementary school students to introduce them to beginner science, technology, engineering and math topics related to mining.

The quarry firmly believes in transparency and always maintains an open-door policy with its neighbors. This relationship ensures that the community is engaged in how the quarry conducts its business.

Supporting SDG

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Stringtown Quarry, USA
Community day.

El Salvador: Bringing medical care and preventive care to remote communities over the long term

Holcim El Salvador launched a community health program in 1994 to improve communities' access to medical care and support the prevention of diseases.

The Cessa Foundation was initiated with the establishment of a community clinic located 500 meters from El Ronco Cement Plant. From inception, Holcim has provided the facilities, medical staff and equipment, while the Ministry of Health provides free medicine.

In 2006, to expand the reach of the program, a mobile clinic in the form of an ambulance was added in partnership with the Ministry of Health. Since then, the community clinic opens three days a week, while the mobile clinic travels to nearby communities on the other two days.

Over the course of the years, Holcim's Cessa Foundation has added more health initiatives: it launched a permanent awareness campaign against dengue fever, zika and chikungunya, a school health program and specialized health days and formed six health and safety committees to develop a preventive health program.

Holcim El Salvador's healthcare program currently benefits over 8,000 residents in 32 communities. Every year, the clinic offers more than 6,000 free consultations, and at least eight specialized health days are carried out. Furthermore, the school health program monitors the physical development of students (size, weight, nutrition, health status, etc.) in 13 education centers.

Supporting SDG

El Salvador
Cessa Foundation clinic.

The UN Sustainable Development Goals

SDG 1: No poverty
Our social investment and inclusive business programs throughout the world contribute to this goal.

SDG 3: Good health and well-being
Our social investment programs in community healthcare and our health and safety initiatives contribute to this goal.

SDG 4: Quality education
Our social investment education programs contribute to this goal.

SDG 8: Decent work and economic growth
Our social investment programs on decent work and micro-enterprise development contribute to this goal.

SDG 17: Partnerships for the goals
We have partnerships with many organizations at a local level that contribute to this goal.

Innovation

1,300

granted national patents or patent applications

300

researchers within LafargeHolcim

Innovation

Innovating to lead
Innovation has been the lifeblood of LafargeHolcim – with the LafargeHolcim Innovation Center in Lyon, France, as a case in point. The Innovation Center acts as a hub in a network of local laboratories and country-level innovation teams. The innovation organization counts more than 300 researchers within LafargeHolcim. Thanks to this networked approach, customers around the world have benefited from tailormade solutions to build more quickly and efficiently, and even to reduce their impact on the environment. You can find examples of these solutions in the case studies on Thermaflow and AIRIUM on page 53.

We believe that innovation is emerging through the collaboration of a network of actors, outside any single organization. In 2018, we embraced this spirit of open innovation, connecting people and organizations from inside and outside LafargeHolcim to find new solutions and ways of working. Our aim is to find and exploit innovations along our entire value chain, from processes to products, from quarry to worksite. The LH Accelerator illustrates how open innovation is working at LafargeHolcim today (see case study on page 52). In this program we put ten start-ups worldwide together with our own experts, as well as mentors from corporate partners China Communications Construction Company (CCCC) and Sika. LH MAQER was introduced to the digital start-up community at the end of 2018. Through this program we are inviting start-ups, technology providers, universities and players in other industries to exploit the potential at the intersection between heavy industry and the tech sector – with promising first feedback. The project leaders bring passion and fresh perspectives to our business, and in return we offer our experience, our expertise, and one of the world's largest industrial networks as a test bed for their ideas.

Patents
We filed 13 new patent applications in 2018, safeguarding innovation coming both from countries and the Innovation Center. Overall, LafargeHolcim owns about 190 active patent families, representing approximately 1,300 granted national patents or patent applications. About three-quarters of the innovation pipeline is allocated to the Cement and Solutions and Products segments. The main topics are low-carbon binders, ultra-high performance products and mineral thermal insulation.

Affordable housing
We are developing residential construction solutions to address the significant need for affordable housing, particularly in Asia Pacific, Middle East Africa and Latin America. Drawing on the expertise of our global R&D Center in Lyon, France, our solutions help address the enormous and growing challenge of providing decent and sustainable housing, while contributing to the bottom line. In 2018, affordable housing projects were in place or being assessed in 15 LafargeHolcim operating countries.

We continue to develop our "14Trees" joint venture with the UK's CDC Group, by expanding the Durabric low-carbon alternative housing solution. In 2018, together with 14Trees, the "*SmartDiaspora.com*" initiative was launched. The project is aimed at the millions of people living away from their country of origin (diaspora), who send money back to their home country. The objective is to address the huge demand from those who are struggling to build homes in their original countries, benefiting both these prospective customers and the company.

Through SmartDiaspora.com, someone who owns land can select from a one-, two- or three-bedroom home design, team up with a financing partner for a mortgage and get a home built in around 12 to 16 weeks once the formalities are completed. This all happens under the watchful eye of an experienced local project manager, who works with a pre-qualified contractor using high-quality, sustainable construction materials from LafargeHolcim and our partners. Alternatively, if people want to buy building materials for a house their family is building, they can easily do this through SmartDiaspora.com. They can also buy a ready-made house from one of the many properties listed on the platform.

LH Accelerator – building innovation together

If the building materials industry is going to provide solutions to global issues such as climate change and urbanization, innovation is paramount. Together with partners Sika and China Communications Construction Company, we launched the LH Accelerator in 2018. Start-ups and partners from around the world were invited to work collaboratively and to combine the start-ups' new ideas with the proven experience of major players. The ambition was to tackle today's challenges along the entire construction value chain.

Over six months in 2018, the LH Accelerator program at the LafargeHolcim R&D Center near Lyon, France, was the hub for ten young, innovative companies from Europe, Asia, the Americas and Africa to change the way the building materials industry operates. They benefited from access to LafargeHolcim's leading facilities and the guidance of industry experts to take their ideas to the next level.

The program culminated with a "demo day" in November, when the start-ups put forward solutions for areas in which there is a clear need for innovative breakthroughs: design and engineering, materials and logistics, construction equipment, construction services, and demolition and waste management.

Following the program's success, it will be repeated in 2019, with the LH Accelerator once again providing unmatched access to investors and partners in the construction industry.

Find out more about the first cycle of the LH Accelerator at *lh-accelerator.org*.

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Lyon, France LafargeHolcim R&D center.

AIRIUM™ – providing insulation solutions in Algeria

Rising concerns about electricity costs and a new focus on energy savings in Algeria have opened the door to fast-track deployment of AIRIUM insulation technology.

AIRIUM combines building material and insulation into one flowable material that can be poured into any type of cavity, with density adjusted to the given application. It is a local non-fossil fuel-based technology with great insulation properties in both cold and hot conditions. AIRIUM is also fire-resistant, highly durable, recyclable and safe. In Algeria, homeowners and builders using AIRIUM for new constructions or renovating their roof terraces can count on energy savings of more than 30 percent per year.

In addition to the AIRIUM Thermoroof solution for the country's typical flat roof terraces, Lafarge Algeria has also developed AIRIUM Thermofloor for sub-screeds, which offers the perfect blend of strength and insulation, fulfills both leveling and insulation roles, and provides a safe, healthy thermal and acoustic correction layer.

Our AIRIUM R&D taskforce conducted technical training for the local team in December 2017, which was followed by the product launch in May 2018. Following the launch, the market feedback from builders, design professionals, government authorities and end users has been extremely positive. The project has generated strong interest in the Algerian market, with the pipeline of prospective customers increasing daily.

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Algeria AIRIUM project.

Helping our customers save money and stay cool with Thermaflow

The installation of underground transmission lines is a demanding process, as there is no easy escape for heat generated by these expensive, high-voltage cables. Too much power running through a cable can lead to overheating, which can result in a reduction in the cable's capacity and lifespan, the development of hot spots, and ultimately premature cable failure.

To create a stable thermal environment underground, utilities must rely on custom-engineered, thermal-grade concrete for the duct bank encasement and advanced thermal fill materials, with optimal properties for dissipating heat away from the cable.

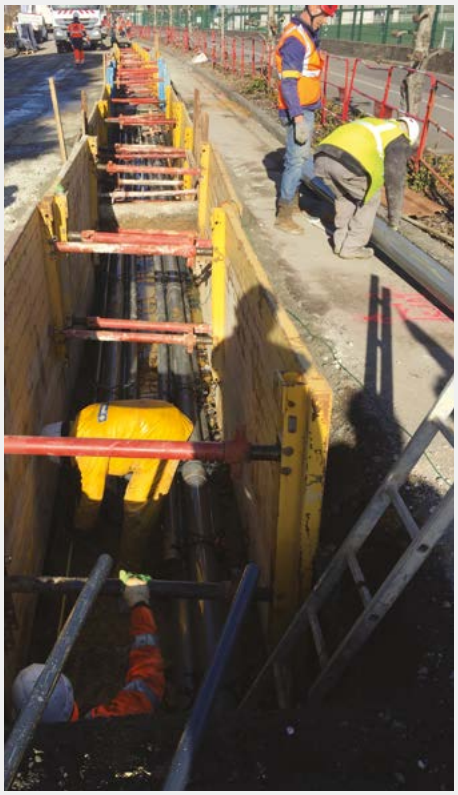
To solve this issue, LafargeHolcim Ready-Mix and our marketing teams, supported by our R&D specialists from the Group's R&D Center in Lyon, France, have developed Thermaflow, a range of thermally conductive concrete mixes that excel at conducting and transferring heat away from the power cables.

Thermaflow enables optimal performance from the conduit, offering potential cost savings through:

- a shallower trench that saves excavation and backfill labor
- a reduction in conduit and cabling (a significant project cost)
- elimination of redesign time if the actual values are different from the upfront assumptions

Thermaflow also makes the cable infrastructure more reliable, as it lessens the risk of overheating and ensuing outage.

Due to its great flowability and small aggregate size, Thermaflow easily fills all of the spaces in tight conduit runs. To ensure the project gets the material performance needed, each Thermaflow mix is engineered using local materials. Thermaflow has been launched in the USA and is in pilot phase in France and the UK. Canada, Australia and Germany are planning to launch it in 2019.



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Thermaflow being poured.

People

75,000
Employees

66
Health and safety audits

People

We live and practice a culture of zero harm.

In 2018, our performance improved significantly, with the number of on-site fatalities (employees and contractors) 82 percent lower than in 2017. Our global Lost Time Injury Frequency Rate (LTIFR) for employees and contractors on-site reached 0.79, an improvement of 13 percent compared to 2017 (0.91). We are very pleased to see that the new strategy, combined with years of dedication and hard work, is starting to have an impact.

One employee and 18 contractors lost their lives in 2018. These deaths are unacceptable. Statistically speaking, compared to 2017 this represents a 39 percent overall improvement, and a 90 percent improvement in employee fatalities (ten in 2017). We counted 17 fatalities with third parties compared to 33 in 2017.

Everyone in our organization, beginning with our Board and Executive Committee, has taken responsibility to ensure that we live and practice a culture of zero harm.

Health and safety (H&S) is our core value. We aim to achieve a zero-harm culture and zero fatalities. Our Ambition "0" strategy focuses on six areas: Safety On-site, Zero-Harm Culture, Systems and Processes, Road Safety, Health and Contractor Partnership. As part of this strategy, we implement standardized global programs in every country where we operate. In 2018, we launched 17 revamped H&S Standards and conducted an organizational transformation called "One Team, One Program" to establish a leaner, more horizontal and locally focused structure.

H&S is promoted through engagement and communication campaigns. In 2018, the theme of our Global H&S Days was "I improve H&S every day at my workplace." Employees were asked to evaluate incidents that could happen or had already occurred at their workplace and describe how to ensure they do not reoccur. The purpose was to cascade our "Key Lessons," which have been published for most on-site fatalities since 2017, reaching all members of the workforce. Additionally, three "best practice challenges" were successfully rolled out, with almost 2,000 entries, 140,000 votes and more than 15,000 participants, demonstrating great commitment from employees at all levels of the organization.

Promoting road safety

In 2018, we continued to make progress with our road safety program, maintaining our focus on transforming driver skills and behaviors. A driver qualification program is being delivered and includes robust in-cab training, with a pass/fail assessment. Regions that have implemented the program have shown significant improvements. For example, our Middle East Africa region qualified over 50 percent of its drivers and in 2018, reduced road fatalities by 47 percent compared to 2017.

In-vehicle monitoring systems (IVMSs) are mandatory and are being installed in all our trucks. IVMSs proactively monitor safe driving performance, and now cover over 50 percent of the kilometers driven globally. In India, our Transport Analytics Center (TAC) played an instrumental role in providing the country with well-structured and systematic analytics for driver and transporter performance. As a result, India reduced road fatalities by 79 percent year-on-year. In 2018, four countries – Zambia, Lebanon, the Philippines and Indonesia, representing 30 percent of global kilometers driven – connected to the TAC.

Ewekoro, Nigeria
Safety check.

Monitoring our worksites
Through the continued application of our Design Safety and Construction Quality Program (DSCQP), we seek to mitigate H&S risks linked to the design and construction of our structures, quarries and slopes. In 2018, we invested CHF 75.6 million based on DSCQP recommendations.

Supporting the health of our workforce
As a continuation of the renewed health program begun in January 2017, we remained focused in 2018 on medical emergency response planning and workplace occupational hygiene programs. Additionally, a health program addressing malaria risks is now fully embedded in the Health Travel process, which includes training and an induction program on arrival.

Auditing our performance
The H&S audit program measures our ability to implement our standards and ensure effective management systems across our company. Over 150 audits have been conducted since the program began in 2016, providing an independent governance process that aligns with Group Internal Audit. Over 900 employees – more than half of them from Operations – participated as auditors, further contributing to knowledge-sharing across facilities, product lines and borders. In 2018, 66 audits were conducted across 34 countries. This was also the first year of the follow-up process implementation: sites with a significant number of findings were revisited one year later for an action-plan follow-up.

Injury rates (2018 only)

Lost Time Injury Frequency Rate and Total Injury Frequency Rate for employees and contractors on-site

Region	LTIFR [1]	TIFR [2]
Asia Pacific	0.49	2.15
Latin America	1.07	2.56
Europe	1.78	5.33
North America	0.54	7.77
Middle East Africa	0.59	2.13
Corporate	0.44	2.21
Group total	**0.79**	**3.22**

Fatalities (number) [3]

Region	Employees	Contractors
Asia Pacific	0	8
Latin America	0	5
Europe	0	2
North America	0	0
Middle East Africa	1	3
Corporate	0	0
Group total	**1**	**18**

Notes
1: Number of lost time injuries per million hours
2: Number of injuries, including fatal injuries, except first aid, per million hours
3: Consolidated to IFRS Scope and GCCA rules

More boots, less pants – a cultural transformation delivering zero harm

LafargeHolcim Mexico embarked on a transformation journey in 2018 with a very simple recipe: more boots (more time on the feet in the field) and less pants (less time sitting in the office). After years of significant efforts in training and the implementation of standards, procedures and engineering controls, the expected step change had not materialized. Results were stagnant, even disappointing, with employees and contractors still being injured at work.

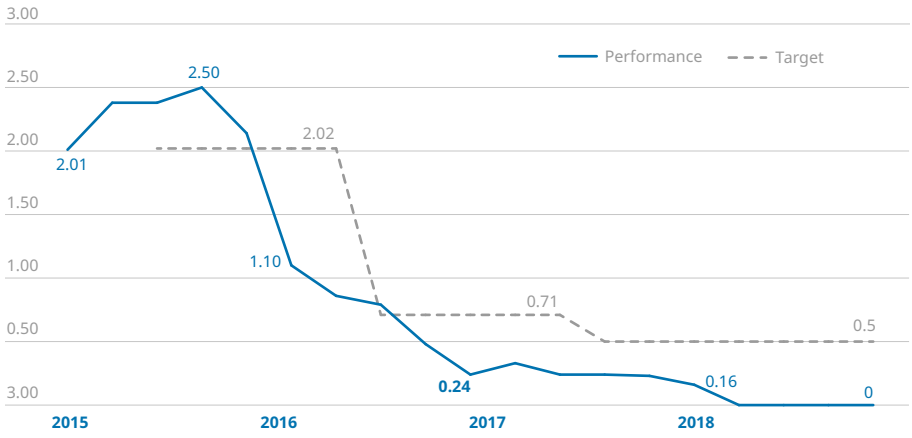
The Mexican team decided to spend quality time in the field engaging and empowering employees on the shop floor. They decided to create a mandatory program for all managers, making sure they would be out at the job sites early in the morning, which is where and when the most relevant decisions affecting health and safety are made.

The program has one simple rule – there must be no office or computer-based work during the first two hours of the day. All managers and supervisors are in the field with the frontline workers at the start of every working day. The program is focused on prevention and trust building, together with a shift from a punitive to a coaching culture. This simple change steadily improved the credibility of the management team by making them involved and visible in the field.

As a result of these initiatives, overall H&S performance has shown rapid improvement, as the LTIFR (employee and contractor on-site) chart demonstrates. The achievement of zero lost time injuries on-site in 15 million hours worked is an incredible achievement by any standard, and is a leading example for the Group.

Supporting SDGs

LTIFR employees and contractors on-site (Mexico)



Training
Our training encompasses a wide range of programs for our employees to build skills in many areas, including business, products and solutions, financial, health and safety, sales, operations and compliance. In 2018, over 2.4 million hours of training were conducted throughout the Group, benefiting more than 50,000 employees.

Performance and talent management
Our employees' performance objectives are fully aligned with our business goals. All of us have clear areas of accountability and understand how our job impacts business results. Regular check-ins take place between employees and their line managers to align execution and to allow managers to observe and develop their teams. Open, timely and constant feedback is key to a strong performance culture.

We completed our global Talent Review and Succession Planning process in 2018. This allowed us to identify talents in our organization and better plan the succession of key roles. It also helped us to make the right development decisions and identify where we need to improve our talent pipeline to ensure we have the right people for the business. During 2018, we doubled our talent bench strength.

Diversity and inclusion
LafargeHolcim believes in and values diversity and promotes a workplace that is inclusive, fair and fosters respect for all employees. In 2018, we:

- monitored the gender balance and inclusion action plans in place to achieve the 2020 targets at country and regional levels
- pushed countries and regions to identify and nominate female employees to the talent pool through the Talent Review and Succession Planning process
- continued our global, multi-functional taskforce to support diversity and inclusion programs
- continued to roll out programs to raise awareness of unconscious bias

Rewards
We simplified our global bonus scheme during the year, and focused the objectives on results that contribute more to the Group goals, including H&S performance. Our aim is to drive performance by ensuring people receive rewards based on their individual contribution to profit and loss. We also redefined the performance metrics of our long-term incentive scheme, aimed at executives, to better reflect the desired sustained performance of our business.

Social dialogue, a key part of our transformation
At LafargeHolcim, we maintain constructive social dialogue with a variety of stakeholders at the relevant level, which improves business performance and contributes to employee engagement. One important forum is the European Works Council (EWC), which enables social dialogue exchange with our company representatives. During 2018, we engaged with the EWC's Health and Safety Working Group to contribute to our Ambition "0" H&S Group Strategy. We also maintained dialogue with industrial global unions, demonstrating continued commitment to global social dialogue and exchange in line with the International Labour Organization conventions.

We work in good faith with stakeholders to resolve human rights and labor rights issues brought to our attention. Read more in the "Managing human rights and labor rights" section on page 45.

Leadership development
We invest in developing current and future leaders. In 2018, we focused our leadership development through the introduction of a successful new program for our senior leaders. We trained our top 200 executives through tailor-made cases based on actual business challenges. The program supports our Strategy 2022 – "Building for Growth" – and will take place every year.

Guayaquil, Ecuador
Employees in control room.

Working for LafargeHolcim

"With a background in chemical engineering and construction, I joined Lafarge Iraq in October 2017. I received three months' training and then joined the Karbala Cement Plant team as Control Room Operator, reporting to the Production Department. It is my responsibility to ensure my team achieves the maximum production rate using the minimum energy and heat consumption. By doing this, we protect our local environment by controlling the gas emissions from the chimney. In the control room, we have a group of safety indicators to monitor that our department and the wider plant are operating safely.

As an international company, Lafarge offers its engineers the opportunity to constantly learn and develop new skills, whether they are experienced or new graduates. In fact, Lafarge provides training to its entire staff across every department, and has helped me in both my professional and personal development – I'm very pleased to work for a company that invests in its staff in this way.

I genuinely believe that Lafarge creates a visible economic and social value for our country, starting with the communities surrounding our operations. At the Karbala Cement Plant where I work, the Group invested significantly in a long rehabilitation process of the plant. We now provide high-quality cement products to our region, which are used in important infrastructure projects such as the Karbala Refinery and the Basra Faw Port.

Lafarge Iraq's people development approach is a leading example, not only in the cement industry, but in the whole country. Developing local teams for long-term employment, with special attention on gender diversity, is very important to me – especially as diversity does not get enough attention in our country yet, particularly in industry.

LafargeHolcim is contributing to reviving the Iraqi industrial sector by rehabilitating cement and ready-mix plants, providing job opportunities. In short, having an internationally recognized leading company like LafargeHolcim in Iraq benefits the country and its people in many ways."

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Karbala, Iraq Muna Abd Ali Abdulateef, Control Room Operator at Karbala Cement Plant.

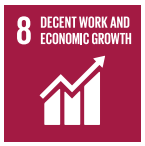
Supporting SDG

The UN Sustainable Development Goals

SDG 3: Good health and well-being
Our health and safety initiatives contribute to this goal.

SDG 4: Quality education
Our employee training and development activities contribute to this goal.

SDG 5: Gender equality
Our diversity and inclusion programs and targets on gender diversity contribute to this goal.



SDG 8: Decent work and economic growth
Our direct hires, working conditions and training activities contribute to this goal.


Holcim

Guayaquil, Ecuador
Employee at the plant.

Governance, performance and assurance

Governance and integrity

Governance
Following the implementation of our country-focused, corporate-light operating model, countries are empowered and accountable to implement local best practices.

At a corporate level, the Head of Sustainability reports directly to the CEO and sustainability topics are regularly discussed at Executive Committee level. Additionally, the Health, Safety and Sustainability Committee supports and advises the Board of Directors on the development and promotion of a healthy and safe environment for employees and contractors, as well as on sustainable development and social responsibility. This includes climate-related matters, which are a regular agenda item.

In 2018, the Health, Safety and Sustainability Committee held four regular meetings. The Head of Health & Safety and the Head of Sustainable Development were present at all meetings. The Chairman of the Board and the CEO attended the meetings of the Health, Safety and Sustainability Committee as guests.

Compliance and integrity
The Group maintains a comprehensive, risk-based compliance program with dedicated resources at local, regional and Group level, with central steering.

Our Code of Business Conduct (CoBC) ensures that directors, officers and employees share the company's commitment to conducting business with transparency and integrity. It provides guidance on how to put this commitment into practice, and helps to ensure that we adhere to the laws and regulations in our operating countries. The CoBC is available in 28 languages and has been issued in all Group companies. In associated companies, or joint ventures where we do not exercise equity or management control, all available means have been used to seek the adoption of the CoBC or at least equivalent standards.

The CoBC is supported by a variety of speak-up channels, including the global "Integrity Line," which enables employees to report any integrity-related concerns. Available in 36 languages, it is a safe and confidential way to report possible CoBC violations or raise compliance-related questions.

In 2018, 801 reports related to the CoBC were received by Group Investigations through the Integrity Line and other channels. By the end of the year, 668 cases had been closed. The remaining 133 cases were still under investigation as at 31 December 2018.

Beyond the CoBC, we have specific directives and programs to deal with anti-bribery, corruption, sanctions and trade restrictions, as well as fair competition, in each case supported by compliance tools and targeted training. In 2018, a total of 13,520 employees completed compliance training modules and a further 14,790 underwent the fair competition training.

Responsible tax
LafargeHolcim is committed to acting with transparency, integrity, and the highest ethical standards and will not tolerate anything that compromises this in our "Approach to Tax."

Our Tax Strategy is built on five pillars:

1. Full compliance and alignment to business strategy: We comply with tax laws in a responsible manner and align our tax strategy with our business strategy.

2. Tax governance: We apply diligent care and judgment to ensure all decisions are well-considered and documented.

3. Tax transparency: We value open and constructive relationships with tax authorities and support efforts to increase public trust in tax systems. We support and work in collaboration with the Organisation for Economic Co-operation and Development (OECD) on the Base Erosion and Profit Shifting (BEPS) project, including full compliance with Country-by-Country reporting. In the interests of transparency, we report on taxes paid per region on an annual basis (see page 68).

4. Tax risks management: We put the relevant processes and controls in place in order to limit financial risks for the Group.

5. Tax contribution: We engage in initiatives to simplify and improve tax regimes to encourage investment and economic growth in all communities where we operate, including by paying taxes locally.

Our "Approach to Tax" statement is available on our website at *www.lafargeholcim.com/Sustainability-reports*.

Transparent engagement
We engage with integrity and in accordance with the highest ethical standards. Our credibility in the communities in which we operate depends upon working together fairly and honestly, and is ensured through internal practices, guidelines and rules, as well as our adherence to external schemes. As an example, LafargeHolcim fully adheres to and complies with the code of conduct associated with the EU Transparency Register, to which we are registered.

Our stakeholders have emphasized the important leadership role that we can play in terms of advocacy and engagement. Our advocacy positions can be found on our website at *www.lafargeholcim.com/Sustainability-reports*.

Performance data tables

(Like for like with 2018 consolidation scope)

Reporting on target areas

	Unit	2016	2017	**2018**	2022 target	2030 target	GRI ref
Products and solutions							
Net sales (note 1)	bn CHF	26.9	27.0	**27.5**			**201-1**
Total raw material consumption – all segments	Mt	537	548	**541**			**301-1**
Clinker produced	Mt	145	147	**151**			**201-1**
Clinker consumed	Mt	144	146	**149**			
Mineral components (slag, fly ash etc.) consumed	Mt	50	52	**56**			
Cement produced	Mt	194	198	**205**			**201-1**
Mineral components processed and sold externally	Mt	4	4	**3**			
Cementitous material produced (note 2)	Mt	199	202	**210**			
Aggregates produced	Mt	250	259	**252**			
Asphalt produced	Mt	11	11	**11**			
RMX produced	M m^3	49	46	**47**			
Clinker factor (average % of clinker in cements)	%	73	72	**72**			
Net sales of sustainable solutions (note 3)	%	-	8	**11**			**201-1**
Producing assets included in the evaluation							
Producing companies	#	61	61	**60**			
Clinker producing sites	#	144	140	**139**			
Grinding and blending sites	#	61	64	**64**			
Aggregates sites	#	493	489	**464**			
Asphalt sites	#	80	84	**82**			
Ready-mix sites	#	1,278	1,270	**1,221**			
Kilns operated	#	194	180	**180**			
Quarries operated	#	714	709	**680**			
Recycling and waste							
Waste-derived resources recycled – all segments (note 4)	Mt	45	49	**52**	60	80	**301-2**
Alternative raw materials substitution rate	%	10.0	10.7	**11.2**			
Non-hazardous waste disposed	Mt	1.5	1.3	**0.9**			**306-2**
Hazardous waste disposed	Mt	0.02	0.02	**0.01**			

Units key

Mt – million tonnes
M GJ – million gigajoules
M m^3 – million cubic meters
M CHF – million Swiss Francs

Note 1: Taken from LafargeHolcim Annual Report, five-year review, page 280.
Note 2: Cementitious material is defined following the CSI definition: Total clinker produced plus mineral components consumed for blending and production of cement substitutes, including clinker sold, excluding clinker bought.
Note 3: Conservative estimate based on the LafargeHolcim iCare Sustainable Solutions questionnaire. See methodology and consolidation section on page 69 for more details.
Note 4: Includes alternative raw material, industrial mineral components (consumed and sold externally), alternative fuels, volume of return concrete recycled, secondary/ recycled aggregates and recycled asphalt.

Reporting on target areas

	Unit	2016	2017	**2018**	2022 target	2030 target	GRI ref
CO_2 and energy							
CEM specific CO_2 emissions – net (kg/tonne cementitious material)	$kgCO_2/t$	585	582	**576**	560	520	**305-4**
CEM CO_2 emissions – Gross (Scope 1) (note 5)	Mt	120	122	**126**			
CEM CO_2 emissions – Net (Scope 1) (note 5)	Mt	115	118	**121**			
CEM CO_2 emissions from raw materials	Mt	78	80	**82**			**305-1**
CEM CO_2 emissions from fossil fuels	Mt	38	38	**39**			
CEM CO_2 emissions from fossil-based waste fuels (Scope 1)	Mt	4	4	**5**			
CEM CO_2 emissions from biomass-based waste fuels (Scope 1)	Mt	0	0	**0**			
CEM CO_2 emissions from electricity consumption (Scope 2)	Mt	8	8	**8**			**305-2**
Other segments CO_2 emissions from fuels (Scope 1)	Mt	7	9	**9**			**305-1**
Other segments CO_2 emissions from electricity (Scope 2)	Mt	0	0	**0**			**305-2**
Absolute gross emissions (Scope 1)	Mt	127	131	**135**			
Absolute emissions (Scope 2)	Mt	8	8	**8**			
CEM energy consumption total	M GJ	596	600	**620**			
CEM thermal energy consumption (note 6)	M GJ	523	527	**545**			
CEM thermal energy consumption fossil fuels	M GJ	437	438	**450**			
CEM thermal energy consumption waste-based fuels	M GJ	57	55	**60**			
CEM thermal energy consumption biomass-based fuels	M GJ	29	34	**35**			
CEM thermal substitution rate	%	17	18	**18**			**302-1**
CEM electrical energy consumption	M GJ	72	73	**75**			
CEM electrical energy renewable	M GJ	6	7	**8**			
CEM electrical energy non-renewable	M GJ	66	66	**67**			
Other segments thermal energy (note 7)	M GJ	81	96	**97**			
Other segments electrical energy	M GJ	1	1	**1**			
Water (note 8)							
CEM specific freshwater withdrawal – liter/tonne cementitious	l/t	362	330	**305**	291	262	
Total water withdrawal – all segments	M m^3	164	157	**154**			
Total freshwater withdrawal	M m^3	138	129	**132**			
Freshwater withdrawal from ground water	M m^3	39	33	**34**			
Freshwater withdrawal from surface water	M m^3	70	75	**79**			**303-1**
Freshwater withdrawal from municipal water or other utilities	M m^3	14	12	**14**			
Freshwater withdrawal from other water sources	M m^3	15	9	**5**			
Non-freshwater withdrawal	M m^3	13	14	**11**			
Rainwater harvested	M m^3	13	14	**11**			
Total water discharge – all segments	M m^3	74	67	**63**			
Water discharge to ground or soil infiltration	M m^3	7	6	**6**			
Water discharge to surface water	M m^3	61	54	**55**			**306-1**
Water discharge to off-site treatment	M m^3	1	1	**1**			
Water discharge to others	M m^3	5	6	**1**			
Total water consumption – all segments	M m^3	90	91	**91**			**303-1**
Sites with recycling systems	#	1,264	1,320	**1,315**			**303-3**

Note 5: Gross CO_2 emissions are the total emissions resulting from the chemical decarbonation of limestone and the emissions resulting from the burning of fossil-based fuels and pre-treated waste-derived fuels. Compared with gross CO_2 emissions, net CO_2 emissions do not include CO_2 from alternative fossil fuels.
Note 6: Includes non-kiln fuels.
Note 7: Includes captive power plants.
Note 8: Excludes captive power plants.

Reporting on target areas

	Unit	2016	2017	**2018**	2022 target	2030 target	GRI ref
Communities							
New beneficiaries in reporting year	M	2.9	2.8	**2.9**	5 million p/a	5 million p/a	
Total beneficiaries in reporting year	M	5.4	6.6	**6.6**			
Community spend	M CHF	57.4	52.8	**47.8**			
Contribution by partners to total community spend	%	20	23	**22**			
Social investment projects	%	67	75	**73**			**201-1**
Donations (cash and in kind)	%	8	7	**7**			
Inclusive business projects	%	9	4	**3**			
Overhead	%	16	14	**17**			

Reporting on implementation of operating principles and health and safety

	Unit	2016	2017	**2018**	Expected performance 2022	Expected performance 2030	GRI ref
Health and safety (note 9)							
Fatalities							
By location							
On-site	#	17	17	**3**	improvement	0	
Off-site	#	28	14	**16**	improvement	0	**403-2**
By personnel category							
Employees	#	3	10	**1**			
Contractors	#	42	21	**18**			
Injury rates							
Lost Time Injury Frequency Rate							
LTIFR Employees (# of LTIs per million hours)	#	1.11	0.94	**0.90**			
LTIFR Contractors on-site (# of LTIs per million hours)	#	1.02	0.89	**0.69**			
LTIFR Employees and contractors on-site (# of LTIs per million hours)	#	1.06	0.91	**0.79**	improvement	0	
Total Injury Frequency Rate							
TIFR Employees (# of injuries per million hours)	#	4.35	3.80	**4.00**			
TIFR Contractors on-site (# of injuries per million hours)	#	3.03	2.61	**2.48**			**403-2**
TIFR Employees and contractors on-site (# of injuries per million hours)	#	3.66	3.20	**3.22**	improvement	improvement	
Occupational Illness Frequency Rate							
OIFR Employees (# of occupational illness per million hours)	#	-	0.06	**0.20**			
OIFR Contractors on-site (# of occupational illness per million hours)	#	-	0.02	**0.03**			
OIFR Employees and contractors on-site (# of occupational illness per million hours)	#	-	0.04	**0.11**	improvement	improvement	
Other							
Workforce represented in health and safety committees	%	96	95	**95**			**403-1**

Note 9: H&S performance indicators for 2016 and 2017 follow the WBCSD-CSI Guidelines for measuring and reporting, and have been restated according to the consolidation scope described in the methodology and consolidation section on page 69. Data for 2018 is reported following the GCCA Sustainability Guidelines for the monitoring and reporting of safety in cement manufacturing, issued November 2018, and is consolidated to the same scope. See the methodology and consolidation section on page 70 for more details.

Reporting on implementation of operating principles and health and safety

	Unit	2016	2017	**2018**	Expected performance 2022	2030	GRI ref
Environmental compliance							
Number of countries reporting major non-compliance cases (note 10)	#	5	6	**9**	0		**307-1**
Fines and penalties paid (CHF)	M CHF	0.3	0.5	**0.4**	0		
Environmental Management Systems							
Cement sites with an ISO 14001 certification	%	81	81	**80**	100		
Cement sites with an EMS equivalent to ISO 14001	%	89	85	**87**			
Biodiversity							
Quarries with rehabilitation plan in place (note 11a)	%	84	73	**84**	100		**304-1** **304-3**
Quarries with high biodiversity importance (note 11b)	#	309	318	**283**			
Quarries with high biodiversity importance with biodiversity management plans in place	%	82	76	**84**	100		
Total rehabilitated area	ha	15,061	14,604	**14,539**			
Air emissions							
% clinker produced with continuous monitoring of dust, NOx and SO_2 emissions	%	77	82	**83**	100		**305-7**
% clinker produced with annual monitoring of dust, NOx and SO_2 emissions	%	93	95	**95**			
Coverage (note 12)							
Dust: Percentage of clinker production	%	99	99	**100**			
NOx: Percentage of clinker production	%	99	98	**98**			
SO_2: Percentage of clinker production	%	99	98	**98**			
VOC: Percentage of clinker production	%	94	86	**90**			
Mercury: Percentage of clinker production	%	88	87	**89**			
Dioxins/furans: Percentage of clinker production	%	81	87	**89**			
Emissions							
Total dust emissions	tonnes	12,336	12,686	**17,624**			
Total NOx emissions	tonnes	206,627	197,595	**192,388**			
Total SO_2 emissions	tonnes	47,002	38,315	**40,173**			
Total VOC emissions	tonnes	6,614	7,663	**7,873**			
Total mercury emissions	tonnes	1.0	1.5	**1.4**			
Total dioxins/furans emissions	gTEQ	3.0	2.2	**2.9**			
Specific emissions							
Specific dust emissions (g/tonne of cementitious materials)	#	63	63	**84**	Improvement		
Specific NOx emissions (g/tonne of cementitious materials)	#	1,053	999	**934**			
Specific SO_2 emissions (g/tonne of cementitious materials)	#	239	194	**195**			
Specific VOC emissions (g/tonne of cementitious materials)	#	36	44	**42**			
Specific mercury emissions (mg/tonne of cementitious materials)	#	8	8	**7**			
Specific dioxins/furans emissions (ng TEQ/tonne of cementitious materials)	#	18	12	**15**			

Note 10: A "major" non-compliance case is any regulatory non-conformity which 1) seriously threatens the quality of environmental compartments (air, water, soil), 2) directly or indirectly endangers human, animal and plant health/life, 3) if made public, would stir public concern and emotion, i.e. would negatively affect the company's image, or 4) results in a significant fine or penalty (monetary or non-monetary sanctions). Aligned with DJSI, we have applied a reporting threshold of CHF 10,000.
Note 11a: The LafargeHolcim Quarry and Rehabilitation Directive was issued in late 2016, and is being rolled out across the Group. This figure refers to the number of quarries compliant with the new directive.
Note 11b: According to new categorizations following FFI recommendations. See page 39.
Note 12: If the emission has not been measured in 2018, the 2017 measurement has been used to estimate the 2018 performance at kiln level.

Reporting on implementation of operating principles and health and safety

	Unit	2016	2017	**2018**	Expected performance 2022	2030	GRI ref
Communities							
Stakeholder engagement plans available and reviewed in last three years – cement and grinding sites	%	59	75	**79**	100		
Human rights assessments conducted – countries – cumulative since 2014	%	49	63	**70**	100		
Income taxes paid by region							
Total Group	M CHF	860	871	**787**			**201-1**
Asia Pacific	M CHF	277	179	**227**			
Europe	M CHF	131	297	**114**			
Latin America	M CHF	196	237	**313**			
Middle East Africa	M CHF	146	124	**96**			
North America	M CHF	110	34	**38**			
Suppliers							
Suppliers from national markets	%	83	87	**90**			**414-1**
Suppliers with supplier code of conduct as part of contractual agreement	%	32	40	**51**			**414-2**
Countries which have identified high ESG impact suppliers	%	96	100	**100**	100		**308-1**
High ESG impact suppliers qualified (% spend) (note 13)	%	52	53	**62**			**308-2** **204-1**
Employees							
By employment contract and age interval							
Full-time employees	%	99	98	**99**			**405-1** **102-8**
Part-time employees	%	1	2	**1**			
Permanent employees	%	94	95	**96**			
Fixed-term contract employees	%	6	5	**4**			
Employees under the age of 30	%	14	14	**14**			
Employees between 30 and 50	%	60	60	**61**			
Employees above 50	%	26	26	**25**			
Gender diversity							
Gender diversity – females management level	%	19	20	**20**			**405-1**
Gender diversity – females non-management level	%	13	12	**11**	Improvement		
Gender diversity – females total	%	15	14	**14**			
Turnover							
Turnover total	%	16	14	**16**	Improvement		**401-1**
Turnover voluntary	%	7	7	**8**			
Hirings	%	8	12	**11**			
Development							
Hours of training per employee (management)	#	35	36	**38**			**404-1**
Hours of training per employee (non-management)	#	26	31	**29**			
Managers who had an annual performance review	%	91	89	**91**			**404-3**
Non-managers who had an annual performance review	%	48	48	**47**			
Social relations							
Entities having strike actions over one week duration	#	6	2	**1**			**MM4**
Entities where employees are covered by collective agreements	%	52	56	**59**			**102-41**
Government relations							
Political donations (note 14)	CHF	63,611	65,462	**54,176**			**415-1**
Countries making political donations	#	2	3	**2**			
Total subsidies	M CHF	96.4	97.9	**93.1**			**201-4**

Note 13: Figures taken from Annual LafargeHolcim Sustainable Procurement Scorecard. The figure is a consolidated view of suppliers of goods and suppliers of services. It reflects the % of total spend of high ESG impact suppliers that had been qualified in terms of the stipulations in the LafargeHolcim Supplier Code of Conduct.
Note 14: 2018 figure excludes PAC contributions in the USA and Canada. These amounted to CHF 101,759.

Methodology and consolidation

Scope of consolidation

To align with Group financial reporting, and in preparation for a transition to integrated reporting, we have changed our consolidation scope to include the entities covered in the Group consolidated financial statements. The list of principal consolidated companies is presented in note 2.4 of the LafargeHolcim Annual Report 2018. The Group consolidates a subsidiary if it has an interest of more than one half of the voting rights or is otherwise able to exercise control over the operations.

Changes in scope of consolidation
The effects of the changes in consolidation are:

- The following entities, which were consolidated at 100 percent in previous reports, are excluded:
  - LafargeHolcim companies in Morocco, Ivory Coast, Guinea, Cameroon, Benin, UAE, Oman and Qatar
- Cement Australia, which was consolidated at 50 percent for environmental indicators and 100 percent for health and safety indicators, is excluded.

Data for 2016 and 2017 have been restated according to the revised consolidation.

Divestments and acquisitions
For business divested during the year, environmental, social and stakeholder engagement data are excluded for the entire year. For health and safety, data are included up to the time of divestment, when respective operations ceased to be under LafargeHolcim control.

When a new site is acquired by LafargeHolcim, its procedures and definitions for non-financial data might not necessarily be in line with our standards. Accordingly, we give the new site time to meet our standards and report performance according to those standards. This should not happen later than the second year after acquisition.

Methods of data collection and reporting methodologies

Economic indicators
Financial performance indicators follow IFRS principles.

- Data on net sales included represent consolidated data from LafargeHolcim Group and are consistent with those reported in the LafargeHolcim Annual Report 2018.
- Data on net sales of sustainable solutions were collected through LafargeHolcim's reporting system and respective protocol – iCare@LH | Sustainable Construction questionnaire. Data are gathered at Country/Group Reporting Unit level, and cover all business segments and their industrial production sites. The Sustainable Construction questionnaire was conducted across 62 entities, representing more than 96 percent of our products and services sales. The Sustainable Construction survey collects data on products and services contributing to greenhouse gas reduction along the construction life cycle, resource efficiency and the circular economy, higher energy efficiency in buildings, affordable housing, richer biodiversity and increased transparency in products.
- Data on supplier assessments were collected through the annual Sustainable Procurement Scorecard.

Environmental indicators
Environmental performance indicators follow the reporting guidelines of the World Business Council for Sustainable Development – Cement Sustainability Initiative (WBCSD-CSI).

In 2018, environmental data were collected through LafargeHolcim's reporting system and respective reporting guidelines – iCare@LH | Environmental questionnaire.

For environmental data, we assess that the reported data this year covers the full scope of cement activities and at least 98 percent for all other product lines.

All sites that were active during the reporting year have been considered eligible for inclusion in our environmental reporting. For sites that were active for less than six months, their impact has been estimated based on their production levels and Group averages.

For environmental data, cement terminals and RMX mobile plants are not considered material, and are therefore excluded from the consolidation.

- **CO_2 and power**: We use the *WBCSD-CSI Cement CO_2 and Energy Protocol version 3.1* to calculate CO_2 emissions between the 1990 baseline and the reporting year. For CO_2, all historical data have been recalculated according to the Protocol, to enable comparison of data over time. Historical data are also restated to reflect changes in consolidation of companies and acquisitions/divestments. The reporting coverage of the CO_2 data is 100 percent. For data not reported in 2018, the last available measurement or the Group average has been used to estimate the 2018 performance. The coverage of energy data per segment is at least at 98 percent. Default CO_2 emissions factors for fuels are taken from the CSI guidelines. Operations can overwrite these default values if more precise values or measurements are available. For electricity, default emissions factors are taken from publicly available International Energy Agency information. Operations can overwrite these default values if more precise values or measurements are available. In 2018, 63 percent of default emissions factors were overwritten with more precise emissions factors. Emissions from captive power plants are included in the performance data table under "Other segments: CO_2 emissions from fuels."

Methodology and consolidation
continued

- **Emissions**: We use the *WBCSD-CSI Guidelines for Emissions Monitoring and Reporting in the Cement Industry Protocol (2012)*. Eighty-one percent of clinker produced in 2018 is covered by measurements of dust, NOx, SO_2, VOC/THC, heavy metals (Hg, Cd, Tl, Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V), PCDD/F. The full production from a kiln is included in this coverage only when emissions of all pollutants (all 17 listed pollutants) are monitored, otherwise the production contribution from the kiln is considered zero. If the emission has not been measured in 2018, the 2017 measurement has been used to estimate the 2018 performance at kiln level.
- **Water**: *The CSI Protocol for Water Reporting* has been used as a reference to measure the water performance of the Group. The coverage of the water data is on average 94 percent, and up to 99 percent for cement activities. Data from captive power plants are excluded.
- **Waste and recycling**: Waste comprises all forms of solid or liquid waste (excluding wastewater) and is defined as hazardous or non-hazardous based on the legislation of the country in which the site operates. Overburden has been excluded from non-hazardous wastes disposed on-site. Data from captive power plants are excluded.
- **Biodiversity and quarries**: A new directive and related standards regarding rehabilitation plans are currently being implemented. Their implementation is not yet complete. For transparency, we have reported only the number of quarries with rehabilitation plans in place that are aligned with the new directive.

Health and safety
Health and safety (H&S) performance indicators for 2016 and 2017 follow the *WBCSD-CSI Safety in the Cement Industry: Guidelines for measuring and reporting*, and have been restated according to the consolidation scope described in the "Scope of consolidation" section above. Data for 2018 are reported in line with the *GCCA Sustainability Guidelines for the monitoring and reporting of safety in cement manufacturing*, issued in November 2018. These guidelines stipulate that road fatalities involving contractors "off company premises and not branded or regular" should be excluded. A regular contract is defined as *"longer than 30 days continuously or collectively on a rolling 12-month period."* As an impact of the GCCA guidelines, four fatalities (three contractors and one third party) that would have been included under the previous CSI guidelines have been excluded in 2018.

H&S data are gathered at site level and further consolidated at Country/Group Reporting Unit level. The data cover all business segments and their industrial production sites, including Corporate and above country regional and service entities.

In 2018, H&S data were collected through LafargeHolcim's reporting system – iCare@LH | H&S Incident management module. Data are segregated according to on-site and off-site incidents, and cover employees, contractors and third parties. The hours worked used to calculate incident rates for employees and contractors on-site are calculated and/or estimated locally by business units.

Social indicators
In 2018, social data were collected through LafargeHolcim's reporting system and respective protocol – iCare@LH | Social questionnaire.

Data are gathered at Country/Group Reporting Unit level, and cover all business segments and their industrial production sites, including Corporate and above country regional and service entities. The 2018 social data are derived from a survey covering 80 entities representing more than 99 percent of the total Group workforce, including majority-owned entities and managed assets.

Among other aspects, the social survey collects data on employees, headcounts and labor relations, and includes questions to verify that child labor is not used.

Stakeholder engagement indicators
In 2018, stakeholder data were collected through LafargeHolcim's reporting system and respective protocol – iCare@LH | Stakeholder questionnaire.

Data are gathered at Country/Group Reporting Unit level and cover all business segments and their industrial production sites.

The 2018 stakeholder data are derived from a survey covering 60 entities representing more than 95 percent of the total Group workforce, including majority-owned entities and managed assets. Among other aspects, the stakeholder survey collects data on corporate social responsibility spending and beneficiaries, volunteering activities, political donations and subsidies, human rights management (other than labor-related human rights), stakeholder engagement activities and community engagement structures.

Reporting cycle
The LafargeHolcim Group will continue to report annually.

Assurance statement

Independent assurance statement by Deloitte LLP to LafargeHolcim on the 2018 Sustainability Report

What we looked at: scope of our work
LafargeHolcim engaged us to perform limited assurance on its Sustainability Report ("the Subject Matter") for the year ended 31 December 2018.

What standards we used: basis of our work and level of assurance
We used the International Standard for Assurance Engagement (ISAE) 3000 (Revised), issued by the International Auditing and Assurance Standards Board to carry out our limited assurance engagement on the Subject Matter. To achieve limited assurance, ISAE 3000 requires that we review the processes and systems used to compile the areas on which we provide limited assurance. This standard requires that we comply with the independence and ethical requirements and to plan and perform our assurance engagement to obtain sufficient and appropriate evidence on which to base our limited assurance conclusion. It does not include detailed testing of source data or the operating effectiveness of processes and internal controls. This is designed to give a similar level of assurance to that obtained in the review of interim financial information. This provides less assurance and is substantially less in scope than a reasonable assurance engagement.

Inherent limitations
The process an organisation adopts to define, gather and report data on its non-financial performance is not subject to the formal processes adopted for financial reporting. Therefore, data of this nature can be subject to variations in definitions, collection and reporting methodology with no consistent, accepted standard. This may result in non-comparable information between organisations and from year to year within an organisation as methodologies develop.

To support clarity in this process, LafargeHolcim use the World Business Council for Sustainable Development – Cement Sustainability Initiative (WBCSD-CSI) Guidelines for CO_2 and energy, emissions, water, and health and safety (up to 2017), the Global Cement and Concrete Association (GCCA) guidelines for health and safety (for 2018), and iCare@LH guidelines for social and stakeholder engagement subject matters when preparing the 2018 Sustainability Report (altogether the 'reporting criteria'). WBCSD-CSI Guidelines are publicly available and iCare@LH guidelines are available upon request from LafargeHolcim. We have carried out our assurance against this criteria and it should be read together with the 2018 Sustainability Report.

What we did: key assurance procedures
To form our conclusions, we undertook the following procedures:

- Interviewed management at LafargeHolcim, including the Sustainable Development team and those with operational responsibility for sustainability governance, management, performance and reporting;
- Determined material quantitative and qualitative indicators and disclosures in the 2018 Sustainability Report, by considering criteria such as the outputs of the company's materiality process; peer reporting; susceptibility of misstatement due to error or fraud; whether a misstatement or control deficiency was noted in the prior-year; indicators or disclosures related to estimates and estimation methods; changes in calculation methods from prior-year;
- For selected material indicators and a sample of related disclosures:
  - o Reviewed and evaluated the criteria for measurement and reporting of each indicator as set out in the Reporting Criteria;
  - o Undertook management interviews and documentation checks to understand and test the reporting boundary, consolidation and validation checks at Group level for complete, accurate and appropriate presentation of the information submitted by business units;
  - o Understood, analysed and tested on a sample basis the key structures, systems, processes procedures and controls relating to the aggregation, validation and reporting of a sample of material indicators disclosed within the 2018 Sustainability Report;
  - o Conducted trend analysis to identify and query anomalies in reported data;
  - o Checked the quantitative and qualitative disclosures in the 2018 Sustainability Report against our understanding of the sustainability governance and management structures and performance over the year; and
  - o Read other information included in the 2018 Sustainability Report to identify any inconsistencies with our understanding of the business' circumstances.
- For Scope 1 and 2 CO_2 emissions:
  - o Interviewed management and those with operational responsibility for sustainability performance at a sample of five Group Reporting Units;[1]
  - o Visited a sample of five sites[2] to understand and review data collection processes and to verify the accuracy of source evidence collected on-site with respect to Scope 1 and 2 CO_2 emissions only; and

[1] Brazil LafargeHolcim, East Canada, Holcim South Germany, ACC, AIUK

[2] Pedro Leopoldo Cement Plant (Brazil), Bath Cement Plant (East Canada), Dotternhausen Cement Plant (Germany), Gagal II Cement Plant (India – ACC), and Cauldon Cement Plant (UK – AIUK).

Assurance statement
continued

- o Performed substantive testing to corroborate stated performance against relevant source evidence (e.g. invoices, meter readings, weighbridge records).

At the level of the representative selection of sites and Group Reporting Units that we selected, the sample represented 21% of Scope 1 emissions (gross) and 12% of Scope 2 emissions.

What we found: our assurance conclusion
Based on our procedures described in this report, nothing has come to our attention that causes us to believe that the Sustainability Report for the year ended 31 December 2018 has not been prepared, in all material respects, in accordance with the reporting criteria.

Our independence and competence in providing assurance to LafargeHolcim
We complied with Deloitte's independence policies, which address and, in certain cases, exceed the requirements of the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants in their role as independent auditors, and in particular preclude us from taking financial, commercial, governance and ownership positions which might affect, or be perceived to affect, our independence and impartiality, and from any involvement in the preparation of the report.

We have confirmed to LafargeHolcim that we have maintained our independence and objectivity throughout the year and in particular that there were no events or prohibited services provided which could impair our independence and objectivity. We have applied the International Standard on Quality Control 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. Our team consisted of a combination of Chartered Accountants with professional assurance qualifications and professionals with a combination of sustainability reporting and subject matter experts including many years' experience in providing sustainability report assurance.

Roles and responsibilities
The Directors are responsible for the preparation of the information and statements contained within the 2018 Sustainability Report. They are responsible for determining the goals and establishing and maintaining appropriate performance management and internal control systems from which the reported information is derived.

Our responsibility is to independently express conclusions on the subject matters as defined within the scope of work above to LafargeHolcim in accordance with our letter of engagement. Our work has been undertaken so that we might state to LafargeHolcim those matters we are required to state to them in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than LafargeHolcim for our work, for this report, or for the conclusions we have formed.

Deloitte LLP
London, United Kingdom
27 March 2019

Global citizenship

Global Reporting Initiative
This report, with additional information on our website, is prepared in accordance with the Global Reporting Initiative (GRI) Standard at comprehensive level. To locate the elements and information contained within the Standard, including disclosures on management approach to economic, environmental and social aspects, use the GRI index at *www.lafargeholcim.com/Sustainability-reports*.

For a detailed explanation of the GRI indicators and for more information on the GRI Gold Community go to *www.globalreporting.org*.

UN Global Compact (UNGC)
With our integrated approach to sustainable development, LafargeHolcim aims to embrace the UNGC principles. We strive to implement the ten principles of the Compact and to use it as a basis for advancing responsible corporate citizenship. At the same time, the Compact provides LafargeHolcim with the opportunity to further push our own ongoing programs and processes in the areas of human rights, labor standards, the environment, and anti-corruption.

In order to demonstrate our commitment, we publish a yearly Communication of Progress (COP). All our COP reports are available on the Global Compact website through the following link: *https://www.unglobalcompact.org/what-is-gc/participants/6028*. This year, our Sustainability Report is our COP for 2018.

This latest report highlights key actions implemented in 2018 against the Compact's principles as well as confirming our sustainability priorities and performance targets.

Recognition and membership

FTSE4Good
LafargeHolcim was again included in the FTSE4Good index in 2018. The FTSE4Good Series is designed to help investors integrate environmental, social, and governance (ESG) factors into their investment decisions. The indexes identify companies that better manage ESG risks and are used as a basis for tracker funds, structured products and as a performance benchmark.

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM
LafargeHolcim was included in the 2018 DJSI European Index, one of only two Europe-based companies in the construction materials sector to be included in the European index.

DJSI are the longest-running global sustainability benchmarks worldwide and are considered by many to be the reference point in sustainability.

CDP SUPPORTER 2018
In the results of the 2018 CDP (formerly the Carbon Disclosure Project) assessment LafargeHolcim received a score of B, above the sector average.

GRI Community 2019
LafargeHolcim is a member of the GRI Community and supports the mission of GRI to empower decision makers everywhere, through GRI Sustainability Reporting Standards and its multi-stakeholder network, to take action toward a more sustainable economy and world.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES
LafargeHolcim has been a supporter of the TCFD since July 2017. The TCFD is developing voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers and other stakeholders.

Global Alliance for Buildings and Construction
LafargeHolcim is a founder member of the Global Alliance for Buildings and Construction. The Alliance is an initiative launched at COP21, as part of the Lima Paris Action Agenda. It aims to mobilize all stakeholders, including member states and non-state actors from the Buildings and Construction sector to scale up climate actions in the sector.

gcca
LafargeHolcim, together with eight other leading companies in the cement and concrete sector, launched the Global Cement & Concrete Association in early 2018. The GCCA is a progressive new association, dedicated to developing and strengthening the sector's contribution to construction.

The association will focus on driving advancements in sustainable construction, working to enhance the cement and concrete industry's contribution to a variety of global social and developmental challenges.

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