# BUILDING FOR TOMORROW

SUSTAINABILITY REPORT 2015





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# APPROACH

Our sustainability strategy, The 2030 Plan, sets out our vision of an innovative, climate-neutral construction sector that embraces the circular economy. It also provides a clear roadmap for us to address our main impacts, set new standards, and lead our industry in helping to address our planet's most pressing issues.



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## SUMMARY OF TARGETS AND **CURRENT PERFORMANCE**

### Below is a summary of our progress against our main sustainable development performance targets.

AREA	TARGETS			2015 PERFORMANCE
	2020	2025	2030	
The 2030 Plan				
INNOVATION				
% turnover from 2030 Solutions – solutions with enhanced sustainability performance	10%	20%	33%	6% of revenues (estimated) Measurement methodology being developed
CLIMATE				
Reduction of $CO_2$ emissions per tonne of cement vs 1990	33% reduction	37% reduction	40% reduction	26% reduction
Avoidance of $\text{CO}_2$ emissions from buildings and infrastructure			10 million tonnes	Reporting methodology being developed
CIRCULAR ECONOMY				
Use of waste-derived resources	>60 million tonnes	>65 million tonnes	80 million tonnes	53.5 million tonnes
Supply of recycled aggregates from construction and demolition waste, and reclaimed asphalt pavement	>12 million tonnes	>18 million tonnes	26 million tonnes	6.5 million tonnes (estimated) Reporting methodology being developed
WATER AND NATURE				
Reduction of specific freshwater withdrawal in cement operations vs 2015	20% reduction	25% reduction	30% reduction	315 l/tonne cement
Implementation of WASH Pledge	Implemented at all sites			Assessments being carried out
Impact on water resources in water-scarce areas			Demonstrate a positive impact	Reporting methodology being developed
Impact on biodiversity			Demonstrate a positive change	Biodiversity indicators reporting methodology being rolled out
PEOPLE AND COMMUNITIES				
Fatalities	Zero onsite	Zero onsite	Zero onsite	15 onsite
		50% reduction offsite	Zero offsite	35 offsite
			Zero fatalities	50 fatalities
LTIFR* (employees and contractors onsite)	<0.5	<0.25	<0.2	1.02 per million hours worked
TIFR** – reduction vs 2015 (employees and contractors onsite)	30% reduction	40% reduction	50% reduction	3.17 per million hours worked
Occupational Disease Rate		<0.5	<0.1	Work in progress to establish robust reporting procedures
Gender diversity (minimum of each gender)	20% at each management level		30% at each management level	Top management: 13% Senior management: 16% Middle management: 19%
Beneficiaries from our affordable housing solutions, our inclusive business initiatives, and our social investments	25 million (cumulative)	50 million (cumulative)	75 million (cumulative)	6.6 million
Participation in collective action to combat bribery and corruption in high-risk countries	3 high-risk countries	10 high-risk countries	All high-risk countries	Work in progress
Other sustainability targets				
AIR EMISSIONS				
Reduction of average specific emissions of dust, NO <sub>x</sub> and SO <sub>2</sub> (g/tonne cement) vs 2015	15% reduction	20% reduction	30% reduction	Dust: 47 g/tonne NO <sub>x</sub> : 1,038 g/tonne SO <sub>2</sub> :179 g/tonne
STAKEHOLDER ENGAGEMENT				
Community engagement plans in place at site level	Cement plants – 80% Aggregates and concrete – 40% at cluster level	Cement plants – 100% Aggregates and concrete – 60% at cluster level	Cement plants – 100% Aggregates and concrete – 60% at cluster level	Cement plants – 62% Aggregates and concrete – 31%

\* Lost Time Injury Frequency Rate.\*\* Total Injury Frequency Rate.

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FOCUS AREAS

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## **CEO STATEMENT**

2015 was a landmark year for sustainable development. With the Paris agreement following the COP21 conference on climate change and the launch of the United Nations Sustainable Development Goals, political leaders have set a framework to address the planet's most critical issues. We have a plan to contribute and play our part.

Sustainability is one of the four pillars in our strategy. It determines the way we operate and defines the solutions that we offer our customers. It also encapsulates our determination to provide leadership within the construction sector and drive transformation. We will do this through the LafargeHolcim 2030 Plan, details of which are included in this report.

## "We have a unique opportunity to drive positive global change."

The overarching ambition of the plan is to transform our business and ensure that by 2030, one third of our revenue comes from products, services, and solutions offering

enhanced sustainability performance. Fundamental to achieving this will be a continued focus on innovation, both inside our fence line and on behalf of customers where our industry-leading commitment to research and development puts us at the forefront of product development.

The United Nations Environmental Program estimates that buildings account for 30% of greenhouse gas emissions, one third of resource consumption and 40% of the world's solid waste. The construction sector has an enormous opportunity to address the impacts of buildings and make a real difference, and we intend to take a leading role.

However, we cannot do this alone. With our 2030 Plan we want to reach beyond the boundaries of our own operations. We are committed to working in partnerships to make the entire construction value chain more innovative, and mindful of its use of resources and impact on nature. We also want to play a role in improving the lives of people and communities by providing solutions to their challenges.

With the dedication of our employees, and the goodwill of our partners and stakeholders, we can achieve our targets. I would like to thank the employees from across the globe who contributed to developing our 2030 Plan and who lie at the heart of our ability to work sustainably all over the world. We are also extremely grateful to our panel of external stakeholders and sustainability experts who worked with us to review, challenge, and enhance the plan.

We have strong foundations and a roadmap to move forward. With the continued support of our employees and stakeholders, we are confident that we can make a valuable contribution.

ERIC OLSEN, CEO



Over **100,000** employees

2,500+

CHF 29.4bn in net sales



See pages 5 and 6 for more details on The 2030 Plan.

## STRATEGY, GOVERNANCE AND INTEGRITY

### The 2030 Plan

We have a long history of strong sustainable development performance. Sustainable development is one of the four strategic pillars of LafargeHolcim, as shown in the diagram below.

Strategic focus	Commercial transformation	Cost leaders	ship Asset lig	ht mindset	Sustainability	
Enablers	People and culture	Health and Safety C	ommunication	Performance management	Finance	

Building on this heritage and commitment, the LafargeHolcim Sustainability Strategy – The 2030 Plan – has been developed in collaboration with a wide range of internal and external stakeholders. It is designed to help us develop and deploy solutions to social and environmental challenges, while continuing to grow our business. To see a list of the stakeholders who participated in a dialogue on The 2030 Plan, please visit our website, www.lafargeholcim.com/ sustainable-development.

The social and environmental challenges facing the world are more critical than ever. The newly adopted United Nations Sustainable Development Goals and the Paris Agreement on Climate (COP21) create new frameworks for action for all – including regulators, companies and citizens.

At LafargeHolcim, we embrace these principles. We are also convinced that sustainability actively supports our business strategy and is a driver for differentiation and growth.

We want to lead on sustainability issues and set new standards. We want to help transform the way our industry works and encourage the whole construction sector to play its part in addressing our planet's biggest issues.

The 2030 Plan sets a vision: the construction sector of tomorrow will be innovative, climate-neutral and circular in its use of resources. It will be respectful of water and nature. It will be diverse, inclusive and enhance the quality of life for all.

At LafargeHolcim, we embrace these principles. We are also convinced that sustainability actively supports our business strategy and is a driver for differentiation and growth.

2030 The 2030 Plan sets a vision for the construction sector of tomorrow.



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The 2030 Plan defines the required next steps for our company to move in that direction along four fields of action – with an overarching aim to generate a third of our revenue from our "2030 Solutions," a portfolio of products and services with enhanced sustainability performance.

Our plan also sets quantitative targets related to our direct and indirect impacts, positive and negative, over the whole lifecycle of our products and services. Importantly, it addresses the positive impacts our operations have beyond the boundaries of our plants. Details of these targets and some of our 2030 Solutions are found throughout this report.

The diagram below outlines the LafargeHolcim 2030 Plan. For more details, visit our website at www.lafargeholcim. com/sustainable-development.

### The 2030 Plan – Building for tomorrow

### We will generate one third of turnover from solutions with enhanced sustainability performance

	Climate	Circular economy	Water and nature	People and communities
In-house	We will reduce net specific CO <sub>2</sub> emissions by 40% per tonne of cement (vs 1990)	We will use 80 million tonnes of waste- derived resources per year	We will reduce specific freshwater withdrawal in cement operations by 30% We will implement The WASH Pledge on all sites	We want zero fatalities We will reduce LTIFR to <0.20 We will reduce TIFR by 50% We will reduce our disease rate to < 0.1 We will have 30% minimum gender diversity at all management levels
Beyond our fence	We will help our customers avoid 10 million tonnes of CO <sub>2</sub> being released from buildings each year through our innovative solutions	We will provide end- of-life solutions for our products and will supply four times more recycled aggregates from CDW/RAP	We will make a positive impact on water in water-scarce areas We will show a positive change for biodiversity	We will develop initiatives to benefit 75 million people We will engage in collective action to combat bribery and corruption in high- risk countries
Innovative solutions	<ul> <li>Low-carbon cement and concrete</li> <li>Insulating concrete</li> <li>Thermal-mass solutions</li> </ul>	<ul> <li>Recycled aggregates</li> <li>Urban mining solutions</li> <li>Waste management services</li> </ul>	<ul> <li>Rainwater harvesting</li> <li>Pervious concrete</li> <li>Stormwater protection</li> <li>Vertical green solutions</li> </ul>	<ul> <li>Affordable housing materials and solutions</li> <li>Affordable sanitation solutions</li> </ul>

Note: all targets are for 2030. Baseline year is 2015 unless stated otherwise.

CDW: Construction and Demolition Waste, RAP: Reclaimed Asphalt Pavement, WASH: Water, Sanitation and Hygiene Implementation at the Workplace, LTIFR: Lost Time Injury Frequency Rate, TIFR: Total Injury Frequency Rate.

### MATERIALITY

Our business risk management process identifies financial and sustainable development risks at both corporate and country levels.

We also conduct material issue reviews to ensure meaningful and relevant sustainability risks and opportunities are correctly weighted and addressed. For this purpose, in 2015 we engaged DNV GL who undertook a process aligned to the GRI G4 reporting guidelines. We included external and internal stakeholders, peer and industry research, and wider sustainability trends to identify and prioritize the most important issues.

Issues considered most material by stakeholders were spread across the topics of environment, social factors and governance, as well as across the company's value chain – from supplier management to sustainable products (at the product use stage). There was consensus among external stakeholders that, given the size and impact of our organization, we must take a leadership position on our most material issues. Stakeholders require us to drive greater performance and standards in these areas, both throughout the industry and across our value chain. The diagram below shows the topline results from the materiality review. For more information on the review, including definitions of the issues, go to www.lafargeholcim.com.



IMPORTANCE TO LAFARGEHOLCIM

APPROACH

### GOVERNANCE

Our commitment to sustainable development is driven by the LafargeHolcim Executive Committee (EXCO) and the LafargeHolcim Board of Directors. Ultimately, day-to-day responsibility for sustainable development rests with every employee. The commitment of line managers and their teams to The 2030 Plan is critical to achieving our sustainability ambitions.

We are in the process of establishing a performance scorecard for the Group addressing the four strategic pillars, including sustainability, which will be reported to the EXCO on a quarterly basis.

In addition, there is a Strategy and Sustainable Development Committee at Board level which oversees these topics.

This report has been reviewed by the heads of functions related to sustainable development and all EXCO members, and signed off by the CEO.

### **BUILDING WITH INTEGRITY**

### Code of Business Conduct and global integrity line

Our Code of Business Conduct (CoBC) ensures that directors, officers and employees share LafargeHolcim's commitment to conducting business with 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 36 languages and has been issued in all countries where the merger has been completed.

The CoBC is supported by a global Integrity Line which is currently available in 57 countries and enables employees to report their integrity-related concerns in 36 languages by telephone or through an online platform. The Integrity Line provides a safe, confidential mechanism for anyone who comes forward in good faith to ask questions or report CoBC violations.

In 2015, 386 reports related to alleged violations of our CoBC were received by Group Compliance through the Integrity Line and other channels, and handed over for investigation. By the end of 2015, 301 cases had been closed with 24 employees leaving the Group as a part of compliance remediation. The remaining 85 cases were still under investigation on 31 December 2015.

### **Compliance training**

Beyond the CoBC, we have specific directives and programs to deal with anti-bribery, conflicts of interest, corruption, and fair competition. The programs include a modular training concept with mandatory e-learning and face-toface training. In 2015, 19,357 employees completed the anti-bribery and corruption e-learning module. In addition, in the annual compliance survey<sup>1</sup>, Group companies reported that 91% of their executive teams were informed with regard to the LafargeHolcim anti-bribery and corruption policies and procedures, and 71% had received formal training.

### **Responsible tax**

LafargeHolcim recognizes the concerns and the calls from civil society for increased transparency on taxes paid. As a general principle, LafargeHolcim pays tax in the jurisdictions where business activities generate profits.

To increase transparency on where the Group pays taxes, we report on taxes paid per region on an annual basis in our Annual Report and Accounts. Furthermore, LafargeHolcim also intends to comply fully with the OECD initiative on country-by-country reporting making detailed information available to tax authorities worldwide as the OECD initiative is implemented.

### Transparent engagement

At all levels, engagement is conducted with integrity and in accordance with the highest ethical standards. Our credibility in the communities where we operate depends upon working together fairly and honestly, and is ensured through internal practices, guidelines and rules and adherence to external schemes. Our stakeholders have emphasized the important leadership role that we have to play in terms of advocacy and engagement. Our advocacy positions on the focus areas of The 2030 Plan are available on our website at www.lafargeholcim.com/reports-publications

### **OUR VALUES**

Our core values and underlying behaviors guide us in how we work at LafargeHolcim. They create the foundation for our new and common culture.



### **HEALTH AND SAFETY**

Health and safety is the overarching value of LafargeHolcim. At LafargeHolcim, we want to do more than prevent accidents, we want to create a healthy and safe environment for our employees, contractors, communities, and customers based on a true safety culture.



### PEOPLE

Stands for openness and inclusion, and for truly caring for and respecting every individual. We seek out diversity and embrace new and different ideas, experiences, and perspectives, and are open to collaboration and sharing. We enable teams and empower individuals to reach their full potential and succeed. We recognize high performance and will address underperformance.



### **CUSTOMERS**

Means we will continue to build an organization and culture that is centered on markets and customers. We understand who our customers are and who our end users are. We listen to them and understand what drives their businesses and what they value in order to be able to anticipate their needs and provide innovative solutions for shared value creation.



### INTEGRITY

Means creating an environment where compliance is a central commitment. We have the courage to make the right decisions based on our ethical principles at all times, even when it means foregoing a business opportunity.





Stands for a passion to achieve our goals and deliver on our targets through rigorous execution with zero harm to people. We strive for continuous improvement and challenge the status quo with innovative solutions that drive lasting results for shareholders.



### **SUSTAINABILITY**

Stands for demonstrating leadership in environmental stewardship and being a responsible role model for future generations. We proactively engage with stakeholders to create shared value with society. And we drive sustainable solutions through the entire value chain.



![](_page_10_Picture_22.jpeg)

APPROACH

FOCUS AREAS

## **MEASURING OUR VALUE**

The Integrated Profit and Loss Statement (IP&L) is a tool to complement traditional financial metrics with an estimate of how LafargeHolcim adds value to society along the triple bottom line (people, profit, and planet). The result, the LafargeHolcim Integrated Profit and Loss Statement, is shown in the diagram below.

The IP&L is not intended to be a definitive statement of financial account, but it is an important tool to track progress against the LafargeHolcim 2030 Plan and to define the order of magnitude of the impact resulting from improvements made by the company.

The IP&L enhances decision-making processes and sustains value creation in the long term by raising awareness of risks and opportunities posed by externalities (through quantification). It allows scenario analysis as to the impacts of externalities to be internalized on the bottom line. The concept of impact assessment needs to be further developed and accordingly, we are working with other leading companies and institutions to further develop this discipline. Furthermore, it increases the level of transparency of our sustainability performance for our stakeholders.

A short animation explaining the IP&L statement can be found on our website www. LafargeHolcim.com, together with a document containing all the assumptions and the calculation values used.

![](_page_11_Figure_6.jpeg)

Year: 2015 Scope: Holcim Global Results in: million CHF \* Not measured for 2015, but reflected, as we intend to measure in future IP&Ls. # No significant incidents in 2015.

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 which 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 confirms that our overall value, taking into account the monetized social and environmental impacts, is significantly higher than the financial retained earnings of the company<sup>2</sup>. In particular, the "stakeholder value" calculation shows that our contribution to local economies through the multiplied effect of salaries, taxes and social investment is significant.

Safety remains one of our greatest challenges, and will remain our number one priority. The human cost of an accident cannot be monetized, but even if only considering the foregone capacity of a person to generate income, the cost is considerable. We place health and safety at the center of everything we do. Our aim is zero harm, and we will continue to act to improve the health of employees, contractors, third parties, and communities.

As expected, given the scale of our operations, CO<sub>2</sub> emissions have a large negative impact, and the development of products and services which help end users to reduce emissions in the "use phase" will be an important lever to mitigate this impact. We are working on developing methodologies to measure CO<sub>2</sub> savings downstream, and we are confident that in future years we will be able to demonstrate a positive contribution from innovative products, services, and applications. The LafargeHolcim 2030 Plan has targets related to carbon efficiency from operations, but also emissions avoided by customers through the use of our innovative 2030 Solutions – solutions with enhanced sustainability performance. We are currently working with the London School of Economics on the cost of climate change, notably the societal cost of carbon, with the primary aim of building more robust IP&Ls in the future.

In this first LafargeHolcim IP&L, we see a higher negative impact resulting from water usage, which is due to the increased footprint in water-scarce areas, which we can begin to offset when we complete the methodology to measure our impacts beyond our boundaries.

While the IP&L indicates some significant challenges for us, it also highlights opportunities. We see significant scope to add value through the implementation of the LafargeHolcim 2030 Plan in the coming years, and notably to reduce our negative environmental impacts through actions in the circular economy, and increasing the use of recovered waste. We consider that the IP&L will assist us to measure the effectiveness of our programs and track improvements of our performance consistently over time.

While the IP&L indicates some significant challenges for us, it also highlights opportunities. We see significant scope to add value through the implementation of the LafargeHolcim 2030 Plan in the coming years, and the IP&L will assist us to measure the effectiveness of our programs.

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2 Taking into account the merger of Lafarge and Holcim as of July 2015, the IP&L has been developed for the company in scope as per IFRS consolidation view. Therefore, the environmental and social indicators have been adjusted to reflect the scope of LafargeHolcim Ltd over the period 2015. We believe this scope is the most appropriate to assess the triple-bottom-line performance of LafargeHolcim throughout the year of the merger.

## **FOCUS AREAS**

From ensuring a safe, healthy and diverse workplace, and engaging with the communities in which we operate, to cutting carbon emissions, transforming waste into resources, and managing water resources sustainably, we are striving to enable positive global change.

![](_page_13_Picture_3.jpeg)

OUR PEOPLE
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![](_page_13_Figure_5.jpeg)

OUR COMMUNITIES
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![](_page_13_Picture_7.jpeg)

**CLIMATE** Page 24

![](_page_13_Picture_9.jpeg)

CIRCULAR ECONOMY
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![](_page_13_Picture_11.jpeg)

WATER AND NATURE
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APPROACH

# DUR PEOPLE

50% reduction in Total Injury Frequency Rate (vs 2015) by 2030

**30%** gender diversity at all management levels by 2030

### The 2030 Plan for our people

Health and safety is our overarching value. By 2030, we want to achieve a zero fatality target, a Lost Time Injury Frequency Rate of 0.2, a 50% reduction in Total Injury Frequency Rate (vs 2015), and an Occupational Disease Rate of 0.1.

We will champion diversity in our sector and we want to promote equality and diversity at LafargeHolcim. We want to achieve a minimum of 30% gender diversity at all management levels around our business by 2030.

We will act for the respect for universal human rights and will roll out our Human Rights program to all countries.

![](_page_14_Picture_11.jpeg)

### OUR PEOPLE KEEPING PEOPLE SAFE

We place health and safety at the center of everything we do. Our aim is zero harm, and we act to improve the health of employees, contractors, third parties, and communities. We believe in visible leadership and personal accountability for health and safety at all levels, and throughout our organization. Since the completion of our merger, we have put in place the foundations required to move towards a world-class safety culture.

These foundations will help us embed the company's Health and Safety Transformational Path, and are designed to further reduce incidents and move toward the ambition of zero harm. In addition, work has commenced on developing a new health program for LafargeHolcim designed to reduce exposure to health risks at all sites.

### **HEALTH AND SAFETY PERFORMANCE**

In 2015, 33 individuals lost their lives while working for LafargeHolcim. Of these, 28 were indirectly employed through contractors or service providers. A further 17 individuals not connected to LafargeHolcim lost their lives, the majority as a result of traffic accidents with vehicles carrying LafargeHolcim products. Every single fatality is deeply regretted.

As a newly merged company, we are making the elimination of risks linked to potential fatal incidents our first priority. Every fatality is reviewed, with the CEO or a member of the Executive Committee present, to ensure that lessons to be learnt are identified and rolled out to every applicable site to minimize the risk of similar accidents occurring elsewhere. *See the table below for a regional breakdown of fatalities.* 

In 2015, LafargeHolcim recorded a Lost Time Injury frequency Rate (LTIFR) for employees and contractors onsite of 1.02, and a Total Injury Frequency Rate (TIFR) of 3.17. *See the table below for a regional breakdown of LTIFR and TIFR.* 

See our annual report, pages 63–65 for more details on our Health and Safety programs.

### Lost Time Injury Frequency Rate and Total Injury Frequency Rate for employees and contractors onsite

Region	LTIFR <sup>3</sup>	TIFR⁴
Asia Pacific	0.60	2.59
India	0.89	2.06
Latin America	1.33	3.37
Europe	2.60	5.00
North America	1.06	8.98
Middle East Africa	0.60	2.36
Corporate	0.29	1.71
Group total	1.02	3.17

### Fatalities (number)

Region	Employees	Contractors	3rd parties
Asia Pacific	2	2	2
India	1	11	3
Latin America	0	2	6
Europe	0	3	0
North America	1	1	0
Middle East Africa	1	8	6
Corporate	0	1	0
Group total	5	28	17

### **OUR PEOPLE**

## **CHAMPIONING DIVERSITY**

We aim to build our company's success with the most talented and diverse employee base possible. We believe that diversity of thought will help create the right business opportunities and deliver strong, sustainable performance.

We are developing a gender-balanced and inclusive work environment where diverse talent can thrive and contribute to superior business results. We aim to achieve 30% minimum of each gender at all management levels by 2030 by developing a regional approach to diversity and inclusion.

This approach will guide consistent action planning at local level that will take into account the upcoming recommendations from the LafargeHolcim Women's Task Force. Actions will include the development of programs with a focus on women in operations, a roll-out of work flexibility options, and global diversity and inclusion training at all management levels (focusing on gender balance awareness and unconscious bias).

We are already moving ahead with gender equality management programs, working with independent partners Economic Dividends for Gender Equality (EDGE) to achieve progressive objectives. By moving ahead on gender diversity we will help to develop a culture of inclusivity and improve diversity generally.

### Diversity performance 2015

	Male	Female	Total	Percentage of women
Top management level (TML)	312	45	357	13%
Senior management level (SML)	2,206	426	2,632	16%
Middle management level (MML)	11,990	2,767	14,757	19%
Total	14,508	3,238	17,746	18%

## **RESPECTING HUMAN RIGHTS**

Our approach to managing human rights is aligned to the internationally recognized UN Guiding Principles on Business and Human Rights. Our methodology is based on country categorization by the UN Human Development Index (HDI) and the Freedom House Index (FHI) according to low-, medium- or high-risk business environments.

The Group has a presence in 90 countries, some of which pose a challenge to managing human rights. As part of The 2030 Plan, we will roll out our Human Rights program to all countries. Central corporate teams will conduct impact assessments alongside local personnel for high-risk countries. Self-assessments conducted by local teams will be deployed in low-risk countries. Progress against action plans will be consistently followed up and reported.

## 18% of women at management level

See page 16 for a case study on EDGE certification in Colombia.

See page 17 for a case study on road safety in the USA.

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### OUR PEOPLE

	Our pathway to 2030				
	TODAY	2020	2025	2030	
Fatalities onsite and offsite	15 fatalities onsite 35 fatalities offsite	Zero onsite fatalities	Zero onsite fatalities 50% reduction offsite	Zero fatalities onsite and offsite	
LTIFR (employees' and contractors onsite)	1.02 per million hours worked	<0.5 per million hours worked	<0.25 per million hours worked	<0.2 per million hours worked	
TIFR (employees' and contractors onsite)	<b>3.17</b> per million hours worked	30% reduction vs 2015	40% reduction vs 2015	50% reduction vs 2015	
Gender diversity	13% women at TML 16% women at SML 19% women at MML	20% gender diversity in all management levels		<b>30%</b> gender diversity in all management levels	

![](_page_17_Picture_3.jpeg)

Eunice Herrera – O&HR Director

"This certification results from our big efforts that began with our joining the global community of organizations. We're committed to providing equal opportunities to both men and women at their workplace and creating an inclusive work environment and culture."

![](_page_17_Picture_6.jpeg)

### **EDGE certification in Colombia**

Recently, Holcim (Colombia) S.A., a company of the LafargeHolcim Group, received EDGE Move's gender equality second-tier certification, after passing an independent audit comprising policies, practices, staff opinions, and an action plan.

Economic Dividends for Gender Equality (EDGE), was launched at the 2011 World Economic Forum, and is the leading global certification methodology in terms of gender equality.

To achieve work-life balance, the company has developed programs including flexible and home working, creating women's and men's celebration days, and parenting leave.

The company has also adjusted processes to ensure women and men have the same opportunities including guaranteeing at least one woman on selection shortlists. In succession pools the company ensures that men and women have the same chances to get a promotion within the country – or to get an expat position in another country of the Group.

The auditing process showed employees believe that both genders have the same chances of being engaged by the company, a fair chance of promotion, and just compensation for their work, and would recommend working for the company to a friend.

As a committed member of this global community, the company will continue to benchmark our initiatives against those of other companies to become a gender equality role model.

### **OUR PEOPLE**

![](_page_18_Picture_2.jpeg)

### Improving road safety in the USA

In support of our focus on road safety, our Aggregates and Construction Materials division in the United States has recently incorporated a Driver Assistance Program across all its sites. The program centers on the internal installation of a palm-sized device on a vehicle's windscreen.

The unit has two cameras, one facing in the direction of travel and the other facing the driver. The recording device is only activated when a significant force is experienced – such as hard braking, swerving, or a collision. The unit uses a continuous recording loop which allows for eight seconds prior and four seconds after the force is experienced to be recorded. The key information captured includes the type of force, and the speed and direction of travel.

The information recorded is uploaded to a central data processing center where the incident is evaluated by experts. If the incident warrants follow-up action, the driver's supervisor is then sent the video clip and a notification. This encourages an opportunity for positive reinforcement and coaching.

The purpose behind the program is the improvement of driver safety performance by proactively addressing the risky behaviors that drivers demonstrate. It is important to note that positive driver reactions also are acknowledged and recognized through this program. All activities related to this program focus on our people and help create an atmosphere that improves driver skills and safety transparently.

Both driver performance and management effectiveness are important metrics. Management effectiveness is measured by the number of times the same incident is repeated. The program has immense value in that it encourages engagement with a group of employees who are otherwise unsupervised for most of the working day.

To date, almost 1,500 units have been installed in the US fleet. Driver performance has demonstrably improved with reductions in key risk areas such as close traveling distance (-32%), speeding (-19%), and cellphone use (-32%).

The installation of the camera device has led to a demonstrable improvement in driver performance

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![](_page_19_Picture_1.jpeg)

We have long recognized the value of engaging with the communities in which we operate. We believe there are opportunities and an obligation to develop affordable solutions and new business models for people at the base of the pyramid.

# 한음역 OUR COMMUNITIES

75m people to live better lives through our programs

Deployment of our Sustainable Procurement Initiative in all countries where we operate by 2030

### The 2030 Plan for our communities

By 2030, we want to help 75 million people live better lives through our affordable housing solutions, our inclusive business initiatives, and our social investments.

We want to work with others to fight bribery and corruption in all the high-risk countries where we operate.

We want to deploy our Sustainable Procurement Initiative in all countries where we operate.

## AFFORDABLE HOUSING SOLUTIONS

Our business expertise can make the most significant contribution to society in the areas of shelter and livelihood.

Affordable housing solutions are our response to the enormous challenge of providing the world's population with decent and sustainable housing at an affordable cost. In 2015, affordable housing projects were in place or under assessment in 24 LafargeHolcim operating countries and benefited an estimated 440,000 people.

Supported by a dedicated corporate team and our global research center, the program is deployed through our marketing and sales teams at local level. In 2015, the program was profitable for the third year running and generated an additional EBITDA of CHF 15 million.

In order to facilitate the delivery of financing solutions for low-income dwellers, we work with an experienced network of over 40 local finance partners to create microfinance solutions. We also leverage partnerships with the likes of the French Development Agency (AFD) and IFC<sup>5</sup> at regional and global level. In 2015, over 16,000 housing microcredits were distributed.

LafargeHolcim provides construction technical assistance for the design of the houses, the definition of the bill of required materials, and their costs. Labor training for masons and builders is ensuring high-quality construction, renovation, or extension of homes. It also contributes to increasing their skills and professionalizing them, thereby enhancing their employment prospects.

Another component of our Affordable Housing program is the development of solutions to the distribution of building materials in small quantities to rural and other hard-to-reach areas such as congested slums.

Last but not least, we continue developing new construction solutions for affordable housing such as Durabric, a low-carbon non-fired earth and cement brick. It reduces construction cost, is more resistant than the traditional clay brick, and contributes to reducing drastically the greenhouse gas emissions generated by the brick manufacturing process.

## **INCLUSIVE BUSINESS MODELS**

As part of our 2030 Plan, we are further developing inclusive business models, providing sustainable solutions to critical social issues. We are looking at initiatives that improve the living conditions of low-income communities while extending access to our products and services. We want to create more mutual value projects – such as our affordable sanitation initiative in India – where we aim to provide 500,000 sanitation units annually by 2025.

We will also further promote development of local micro-enterprises to market products and services that either relate to our core business or supply our facilities with goods and services (such as community-based waste collection and segregation activities or biomass production activities by local farmers). **500,000** sanitation units to be provided annually in India

by 2025

**440,000** number of people that have benefited from our affordable housing solutions program

See page 22 for a case study on affordable housing.

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## SOCIAL INVESTMENTS

Not all social needs can be addressed through market-based solutions. Strategic social investments also remain important. Our social investments aim at improving people's quality of life in a sustainable way, by building capacity, improving health, and providing seed capital for self-sustaining micro-industries.

We focus our social investments on the needs of our communities, and design and implement them in close collaboration with community stakeholders and utilizing our core business knowledge.

Examples of our social investment activities include:

- micro-enterprise development based on community assets and needs
- provision of access to basic infrastructure in collaboration with governments, international organizations and foundations
- continuing programs for community health including HIV and malaria
- providing health clinics or services to surrounding communities in developing countries
- Education, training and schooling

In 2015, Group companies reported spending CHF 56 million on social investments, with an estimated 6.6 million people directly benefiting from these programs. In addition, Group companies reported that over 29,000 employees participated in around 295,200 hours of volunteering activities in local communities in 2015.

## STAKEHOLDER AND COMMUNITY ENGAGEMENT

Locally, operations are encouraged to work alongside communities and implement stakeholder engagement plans. By the end of 2015, countries reported having such plans in place covering 62% of cement plants and 31% of aggregate and concrete (A&C) plants. By 2020, we aim to have community stakeholder plans in place for 80% of cement plants and 40% of A&C plants at a cluster level.

Globally, LafargeHolcim is a member of the Corporate Support Group of the International Committee of the Red Cross (ICRC). The strategic partnership with the ICRC was renewed in 2015, to continue funding humanitarian efforts and sharing expertise. As one of only twelve ICRC "preferred partners", LafargeHolcim helps the ICRC in its vital work on water, sanitation, and construction projects. Through the partnership we improve the lives of millions of victims of armed conflict. This engagement allows us to implement our commitment to sustainable development in conflict-affected areas where both the ICRC and LafargeHolcim operate.

We also engage with a wide range of stakeholders at a corporate level. A list of the stakeholders who contributed to the development of The 2030 Plan is on our website www.lafargeholcim.com/sustainable-development. СНF Over CHF 56m Group spend on social investments

For a breakdown of social investment spending and estimated number of people benefiting, see the performance data table on page 45.

See the performance data table on page 45 for more details on our community engagement activities.

## of cement plants to have community stakeholder plans in place by 2020

See the case study on page 23 on working with the ICRC in Lebanon.

## PROMOTING CLEAN AND FAIR BUSINESS PRACTICES

In The 2030 Plan we have committed to participating in or leading collective action initiatives to fight bribery and corruption in high-risk countries where we operate. Collective action sees like-minded organizations collaborating to address systemic corruption in a specific area or sector. Examples include integrity pacts, standard-setting initiatives, declarations and joint activities.

To achieve this, we will inform, consult, and coordinate between local management and corporate teams to develop a supported and coherent collective action, joining existing collectives or creating new groups of like-minded companies in a particular geography.

Working with others, we will collectively tackle selective issues of common interest – such as extortion by government officials for services common to multiple companies including licensing, permits, police services, and customs clearance.

By 2020, we target to have such initiatives in place in at least three high-risk countries, and covering all high-risk operating countries by 2030.

### ACTING FOR RESPONSIBLE SOURCING IN OUR SUPPLY CHAIN

LafargeHolcim recognizes the importance of responsibility along our value chain. We have developed a Supplier Code of Conduct, informed by the UN Global Compact (UNGC) principles, which is being communicated to all suppliers.

Group companies identify and prioritize suppliers that pose a higher sustainability risk. Those suppliers, together with all new suppliers, are evaluated by an independent third party appropriately to the perceived risk, ranging from selfassessment questionnaires to full audits. Positive engagement action plans are subsequently created to address shortfalls.

Group companies report annually on their supplier assessments in the annual procurement scorecard. By 2020, we target to have 80% of high-risk suppliers assessed, and 100% of high risk active suppliers assessed with consequence management in place and top sub-suppliers with high risk identified and assessed.

ALL high-risk companies to have collective action initiatives by 2030

of high-risk suppliers and top sub-suppliers to be assessed by 2030

See the performance table on page 39.

APPROACH

	Our pathway to 2030			
	TODAY	2020	2025	2030
Beneficiaries from our social programs (cumulative)	6.6 million	25 million	50 million	75 million
Promoting clean and fair business practices	Planning to work with others to fight bribery and corruption in all the high-risk countries where we operate	Leadership role/ participation in collective action initiatives against bribery and corruption in three high-risk countries	Leadership role/ participation in collective action initiatives against bribery and corruption in ten high-risk countries	Leadership role/ participation in collective action initiatives against bribery and corruption in all high-risk countries

![](_page_23_Picture_3.jpeg)

A house in Malawi built with Durabric

## Our 2030 Solutions – facilitating affordable housing with innovative construction solutions

Traditional burnt clay bricks require up to 14 trees as fuel to bake the bricks to build a simple house. With one billion houses built in clay brick globally, billions of trees are cut to produce the required materials. LafargeHolcim has developed Durabric as an alternative in response to a request from the Malawi government. It turned to LafargeHolcim to bring an end to deforestation caused by the use of burnt bricks as the main building material in the country.

Durabric is a way of producing bricks which avoids the baking process. No wood, fire, or kiln is needed. It is made of common soil mixed with cement, sand, and water.

However, each soil type is unique and needs differing ratios of cement to soil. LafargeHolcim developed a simple method to define locally the right mix of ingredients for every soil type, using a smartphone and basic tools – primarily the builder's own hands.

Once the mix is prepared, it is compressed in a mold and laid to cure for around 21 days. The result is Durabric: three times stronger than baked bricks, 20% cheaper per square meter of wall, and emitting ten times less  $CO_2$  in the brick manufacturing process.

In Malawi where the product was introduced, more than three million Durabrics have already been produced, which have been used in around 500 buildings.

The challenge is now to swiftly take this technology to scale. To this end, LafargeHolcim and CDC Group plc, the UK's development finance institution, are establishing a company to produce and promote this affordable lowcarbon construction solution to other developing countries that are affected by deforestation resulting from the use of wood-fired bricks. It includes the provision of brick-making machines as well as onsite technical training and support for brick makers and masons. As a first step in scaling up, a brick production plant is being built in Malawi to increase availability of Durabric.

### Working with the Red Cross in Lebanon

We support the ICRC with an annual contribution of CHF 500,000. LafargeHolcim funds help the ICRC on water, sanitation, and construction projects in the field, contributing to saving hundreds of thousands of lives. In 2015, LafargeHolcim supported the ICRC's project, among others, in Lebanon.

The Syrian conflicts have created more than a million refugees in informal settlements and host communities across Lebanon. Tensions arise over scarce resources and overburdened health and water systems.

With a total budget of CHF 8 million for water and habitat activities in 2015, the ICRC improved the access to essential services and eased tensions between residents and refugees.

The ICRC helped local authorities upgrade water infrastructure for areas hosting refugees, and in Palestinian refugee camps. *For more information on the ICRC, visit their website www.icrc.org.* 

The ICRC has initiated water projects to increase the supply and availability of water in communities hosting large numbers of refugees in northern Lebanon and the Bekaa region. *Photographer: SPAULL, John Copyright: ICRC* 

In 2015, the ICRC assisted 327,000 people through its Water and Habitat program, which was partially funded by LafargeHolcim.

![](_page_24_Figure_10.jpeg)

266,000 people benefiting from improved water, electricity and shelter infrastructure

![](_page_24_Picture_12.jpeg)

19,000 people being treated at healthcare facilities improved by the ICRC

![](_page_24_Picture_14.jpeg)

**39,000** people with improved informal settlements

![](_page_24_Picture_16.jpeg)

**3,000** detainees with ventilation, emergency intervention, and construction of medical centers

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![](_page_25_Picture_1.jpeg)

We're continuing our mission to cut carbon, and helping our customers avoid CO<sub>2</sub> emissions released from buildings and infrastructure.

![](_page_25_Picture_3.jpeg)

40% reduction of net CO<sub>2</sub> per tonne of cement (vs 1990) by 2030

**10Nt** of CO<sub>2</sub> released from customers' buildings and infrastructure to be avoided by 2030

### The 2030 Plan for climate

By 2030, we want to emit 40% less net  $CO_2$  per tonne of cement than we did in 1990 – representing a 19% reduction if we take 2015 as the reference year.

This will help us remain the most CO<sub>2</sub>-efficient global business in our sector. In line with the global climate agreement concluded in Paris at COP21, we commit to revise this target every five years in order to adapt to technical innovations and to the evolution of climate change regulations.

By 2030, every year we want to help our customers avoid 10 million tonnes of  $CO_2$  released from their buildings and infrastructure by using our innovative solutions.

## CLIMATE LEADERSHIP IN NET CO<sub>2</sub> EMISSIONS PER TONNE OF CEMENT

As a result of our past efforts, we are the most carbon-efficient cement company among international groups. In 2015, our cements contained an average of 71% clinker, and net  $CO_2$  emissions per tonne of cement were 573Kg/tonne, a reduction of 26% against the 1990 benchmark.

Our 40% reduction target by 2030 means we are committed to maintain the same improvement rate as in the past 25 years. Maintaining a similar pace in the future is challenging, as we approach the limits in many of the known improvement levers. This is reflected by the stability of our performance over the last three years. However, we remain determined to decrease our emissions per tonne through improving energy efficiency and increasing the use of by-products and waste-derived resources as raw materials and fuels.

- We will further replace clinker in final products, and develop new low CO<sub>2</sub> binders. We have already reduced clinker intensity by 15% since 1990 with alternative mineral components and aim to reduce it up to 5% more in the future. We will also utilize innovative clinker types and new low CO<sub>2</sub> binders with a potential CO<sub>2</sub> reduction of 30–70%.
- We will use more waste-derived fuels, including biomass waste. We currently
  use socially responsible biomass from agricultural waste where biomass use
  does not compete with food production. Since 1990, we have increased our
  use of biomass waste fuels more than six times, and we want to increase this.
   We will also deploy waste treatment solutions and have more than tripled the
  use of alternative fuels since 1990. We aim to double our current offer of waste
  treatment solutions.
- We will further invest in energy efficiency by improving our least energy-efficient production facilities. We have reduced our specific thermal consumption by 22% since 1990 and we want to improve further.
- We will explore new strategies, particularly carbon capture and use techniques (CCU), focusing on the use of CO<sub>2</sub> in building materials production processes – a promising option is "Solidia" cement for precast concrete applications. See the case study on page 27 for further details.

See the graphs below and the performance data table on page 40 for further details.

Total Scope 1 CO<sub>2</sub> emissions

![](_page_26_Figure_9.jpeg)

### Specific CO<sub>2</sub> emissions – net (kg/tonne cementitious material)

![](_page_26_Figure_11.jpeg)

See our case study on Solidia Cement™ on page 27.

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FOCUS AREAS

### CLIMATE

## REDUCING CO<sub>2</sub> EMISSIONS FROM BUILDINGS AND INFRASTRUCTURE

Buildings are responsible for 30-40% of global CO<sub>2</sub> emissions and we strongly believe that we have a critical role to play to help decrease that footprint. Our target of 10 million tonnes avoided CO<sub>2</sub> per year from buildings and infrastructure is a considerable commitment; for comparison, the city of Paris emits about 7 million tonnes CO<sub>2</sub> annually.

We are developing solutions to improve energy efficiency of buildings, enhance their durability, and reduce the material required to achieve the same or better functionality. Additionally, we are creating solutions to repair roads faster or extend road surface durability. We are also developing solutions to maximize CO<sub>2</sub> capture by concrete over its life-cycle.

Our peer-reviewed methodology enables us to conservatively calculate avoided CO<sub>2</sub> emissions during the usage phase of our products and services. This approach will help us further drive innovation towards carbon-neutral construction. Through the LafargeHolcim Foundation we're also nurturing cutting-edge, sustainable construction techniques.

## MANAGING ENERGY

Cement production is energy intensive, with security of supply and efficiency being key business drivers. While we have increased our cement production by around 96% since 1990, in the same period, our annual energy consumption increased by just 29%, while consumption per tonne of clinker reduced from 4,542MJ in 1990 to just 3,533MJ in 2015.

While direct CO<sub>2</sub> emissions (Scope 1) represent the vast majority of our greenhouse gas emitted and are thus our primary focus, we acknowledge our responsibility to act on our total power portfolio. We are therefore optimizing our low-carbon power-producing assets (such as waste heat recovery units) across our production plant portfolio. We are also:

- investing in or purchasing renewable power when it is economically and technically advantageous
- investigating opportunities to generate renewable energy by diversifying our land for windmills or solar panel farms, or using quarries as water reservoirs for hydro power

**573kg/t** net CO<sub>2</sub> emissions per tonne of cement in 2015

*See our case study on coffee farmers in Uganda on page 31.* 

reduction of specific thermal consumption since 1990

For details of energy consumption please see the performance data table on page 41.

### CLIMATE

## **OUR ADVOCACY**

We engage transparently with governments willing to develop climate regulations and advocate for efficient, effective, fair, and consistent regulations. Our positions on climate policy are as follows:

- We support carbon pricing.
- We advocate for a long-term, stable, and reliable environment to encourage investments and support plans to reduce CO<sub>2</sub> emissions further, and to adapt to climate change.
- We advocate for a level playing field between domestic producers and importers, and among industries. This avoids carbon "leakage" during the transition period in which different carbon costs apply from one jurisdiction to another.
- We advocate comparable and coordinated efforts among countries, and consistent and equally enforced monitoring and reporting rules for carbon emissions.
- We advocate a greater share of renewable energy in countries' power-generation mix.
- We advocate higher energy efficiency standards in buildings.
- In countries where CO<sub>2</sub> emission rights are allocated to production installations, we advocate in favor of allocation methodologies which avoid structural over allocation.

### Our pathway to 2030

	TODAY	2020	2025	2030
Reduction in specific CO <sub>2</sub> emissions	26% reduction vs 1990	33%	37%	40%

![](_page_28_Picture_13.jpeg)

A precast hollowcore being manufactured with Solidia Cement™

### Our 2030 Solutions – Solidia Cement™

Solidia Cement<sup>™</sup>, developed through a successful partnership between Solidia Technologies and LafargeHolcim, is a new binder made from similar raw materials to Ordinary Portland Cement (OPC) and can be produced in existing traditional cement rotary kilns. It is produced at lower temperatures and through a different chemical composition, demanding less limestone, that generates around 30% less CO<sub>2</sub> during production.

Used to make precast concrete, Solidia Cement<sup>™</sup> hardens through the addition and absorption of CO<sub>2</sub> ("carbonation") in a patented curing process that reduces the overall carbon footprint by up to 70%. Produced at traditional precast concrete manufacturing facilities, Solidia Concrete<sup>™</sup> is higher performing and reaches full strength in less than 24 hours, compared to 28 days for precast OPC concrete. The product saves energy and time.

LafargeHolcim has collaborated with Solidia Technologies since 2013 to industrialize this technology. LafargeHolcim researchers and technical experts worked with Solidia to demonstrate the feasibility of commercial-scale production in a conventional cement plant, and a joint group of Lafarge and Solidia scientists validated the reduced carbon footprint and commercial viability of Solidia Cement<sup>™</sup> during two full-scale production trials at the LafargeHolcim Whitehall cement plant in the US and the LafargeHolcim plant in Pécs, Hungary.

Solidia Cement is currently being tested in North America and Europe, with positive results.

In partnership with Solidia Cement<sup>™</sup>, LafargeHolcim will bring the product to the global market to offer the complete solution of sustainable cement and CO<sub>2</sub>-cured concrete.

APPROACH

### CLIMATE

![](_page_29_Picture_2.jpeg)

### LafargeHolcim Foundation for Sustainable Construction

LafargeHolcim is a global pioneer seeking and promoting intensive collaboration across all facets of the construction industry to achieve greater sustainability. This allows new developments, such as innovative materials, to be adopted rapidly in construction. LafargeHolcim also aims to increase the sustainability of construction in social, environmental, and economic terms. In this way, the Group is meeting its responsibilities for the future of the planet and of the global community.

A key pillar in this endeavor is the LafargeHolcim Foundation for Sustainable Construction. Established in 2003, the Foundation is expanding and enriching its network of leading experts and technical universities around the world. It acts as a link between the Group and other players along the value chain of the construction industry, including architects, engineers, urban planners, contractors, NGOs, and authorities.

The Foundation has established itself as a globally significant information hub for sustainable construction through its three main activities: organizing symposia for academic expert discussions, producing technical publications, and conducting the LafargeHolcim Awards – the world's most prestigious competition for sustainable building design.

In addition, the vast catalog of planned and executed building projects on the website of the Foundation provides a knowledge platform on sustainable construction for all stakeholders. The Foundation offers support for Group initiatives also by providing experts for events held by country operations, and collaborates with corporate functions, including Sustainable Development.

In 2015, the 4th Global LafargeHolcim Awards were presented to projects in Colombia, Sri Lanka (pictured above), and the United States. More about the LafargeHolcim Foundation and its activities at: www.lafargeholcim-foundation.org. The 5th International LafargeHolcim Awards for projects and future-oriented concepts in sustainable construction closes for submissions in March 2017: www.lafargeholcimawards.org.

We will create more value by transforming waste into resources for our production processes.

![](_page_30_Picture_3.jpeg)

# OCIRCULAR ECONOMY

80m tonnes of resources derived from waste used in our operations by 2030

### The 2030 Plan for circular economy

By 2030, we want to use 80 million tonnes of resources derived from waste in our operations each year, including biomass waste.

We will achieve four times our current volume of recycled aggregates from reclaimed asphalt pavement, and construction and demolition waste by 2030.

APPROACH

## TRANSFORMING WASTE INTO RESOURCES

Using waste-derived alternative fuels and resources contributes significantly to LafargeHolcim's sustainable development and economic performance. As a long-time sustainability leader, the company recognized that there was an alternative way to produce heat and provide some of the raw materials required for cement manufacture.

By fully recovering energy and material in the cement kiln combustion process, we mitigate against volatile energy costs, improve energy security, and reduce production costs.

In 2015, 15.1% of LafargeHolcim's thermal energy demand in clinker production was covered by alternative fuels. With The 2030 Plan, we will continue to reduce our dependency on natural resources and fossil fuels by transforming waste into resources across our production processes. This will also enable us to bring efficiencies to society and the environment through sustainable waste management solutions – while reducing waste landfilling and incineration.

In the coming years, our Geocycle operations will further deploy our waste treatment services globally, building on our experience, and applying strict environmental and safety standards. We will also further deploy installations for co-processing waste-derived fuels and raw materials in cement production. These can include shredding installations for solid waste, handling, dosing and feeding systems, and physical and chemical pre-treatment processes.

We are also increasing biomass production initiatives, such as creating partnerships with local farmers and communities. These relationships enable us to increase our use of residues (e.g. coffee husks) from agriculture and forestry, while providing a sustainable livelihood to families and communities. In 2015, 5.3% of LafargeHolcim's alternative fuels came from biomass residues.

In 2015, our cement contained an average of 71% clinker. By 2030, we intend to reduce that to around 65%. We will achieve this by using even more industrial mineral components and mineral waste such as blast-furnace slag, fly ash from coal-fired power plants, artificial gypsum, and other by-products.

of LafargeHolcim's thermal energy demand in clinker production covered by alternative fuels in 2015

65% clinker content in cement by 2030

See the case study on page 33 on the use of municipal waste in Belgrade.

See the case study on page 31 on sourcing biomass from coffee husks in Uganda.

See the performance data table on page 41 for further data.

### **CIRCULAR ECONOMY**

## PROVIDING END-OF-LIFE SOLUTIONS FOR OUR PRODUCTS

In a context of increasing scarcity of natural resources, our cities will be the "quarries" of tomorrow. Recycling construction and demolition waste improves the lifecycle performance of buildings and increases resource efficiency.

We currently supply around 6.5 million tonnes of recycled aggregates (RA), mostly coming from reclaimed asphalt pavement and from construction and demolition waste. By 2030, we want to supply four times that amount – an ambitious target.

To do this we will accelerate our RA business model in urban areas, using building and demolition waste to deliver high quality RA to local construction customers. Raising the bar in quality is crucial to enhancing recycling rates.

We will also closely monitor the increasing scarcity of sand in various regions of the globe and develop alternatives – focusing on processing waste-derived materials.

### Our pathway to 2030

	TODAY	2020	2025	2030	
Waste-derived resources used in our operations	54 million tonnes/year	>60 million tonnes/year	>65 million tonnes/year	80 million tonnes/year	
Recycled aggregates supplied	6.5 million tonnes	>12 million tonnes	>18 million	26 million	-

![](_page_32_Picture_9.jpeg)

### Our 2030 Solutions – Hima coffee development project, Uganda

The LafargeHolcim Hima plant in western Uganda uses biomass for around 55% of its thermal energy needs. A significant portion of this biomass comes from coffee husks – a by-product from the local coffee industry. Coffee husks are available in large quantities as coffee accounts for more than 50% of Uganda's total exports.

Much of the coffee husk waste was previously sent to landfill. Today, it is used in our Hima plant, replacing fuel oil (transported by road tanker from Kenya, more than 1,500km away).

The Hima Coffee Development Project now secures sustainable access to renewable energy while benefiting local coffee-producing communities with economic growth and poverty alleviation. Hima has distributed around 16.7 million coffee seedlings to farmers since 2012. More than 50,000 small-scale farmers are benefiting, with resulting income expected to total approximately CHF 30 million by 2020.

The project increases both family incomes and husk supply for clean, renewable energy for the Hima plant. The husks contribute to achieving our 2030 Plan target to use 80 million tonnes of waste-derived resources by 2030 and reduce our  $CO_2$  emissions per tonne of cement.

APPROACH

### **CIRCULAR ECONOMY**

A Geocycle employee examining waste for co-processing in the cement kiln

![](_page_33_Picture_3.jpeg)

### Our 2030 Solutions – using municipal waste in Belgrade

The LafargeHolcim Beocin plant, near Belgrade, Serbia, aims to replace most of its traditional heat sources with alternative fuels made of industrial wastes, tires, biomass, and solid shredded wastes from municipal solid wastes. The plant has invested significantly to transform the sorted material into alternative fuels. The use of these sources of alternative fuel helps secure the site's long-term energy supply while contributing to local economic development, through the creation of local jobs.

Two years ago, LafargeHolcim took the initiative to set up a partnership with the city of Belgrade to divert "recyclables" from the landfill located on the right bank of the Danube River, about 15km from the downtown city.

In September 2015, the new sorting line, sited on the landfill, was commissioned. From an annual input of 500,000 tonnes of municipal solid waste, the sorting line extracts 6,000 tonnes of material which can be recycled with high economic value to the city, and a further 40,000 tonnes whose energy value will be recovered in the cement kiln of our Beocin plant. In addition to the environmental benefits, the project is employing approximately 20 people.

![](_page_34_Picture_1.jpeg)

We are acutely aware of how precious water is, which motivates us to manage water resources efficiently, equitably, and sustainably.

# ♦ WATER AND NATURE

**30%** reduction of freshwater withdrawal for cement production by 2030

### The 2030 Plan for water and nature

By 2030, we want to reduce the amount of freshwater we withdraw per tonne of cement by 30% (vs 2015).

We want to make a positive impact on water resources in areas where it is scarce.

We want to demonstrate a global positive change to biodiversity in our mining sites by 2030.

We want to make sure that all employees and contractors can access safe water, sanitation, and hygiene on all our sites by 2020.

APPROACH

FOCUS AREAS

## REDUCING FRESHWATER WITHDRAWAL

Around one third of our cement production is in water-scarce areas, and without access to water, production activities would simply have to cease. Beyond our commitment to sustainability, we thus have a strong business motivation to manage water sources effectively.

In 2015, we withdrew 315 liters of freshwater per tonne of cement produced and consumed a total of 123 million m<sup>3</sup>.

Our plan is to reduce freshwater withdrawal by harvesting rainwater, reusing water, and using freshwater resources as efficiently as possible within operations.

## SHOWING A POSITIVE IMPACT ON WATER RESOURCES IN WATER-SCARCE AREAS

Our concern for water goes beyond our operational boundaries because it is an increasingly important stakeholder issue. We will thus work towards more efficient, equitable, and sustainable water resources management in water-scarce areas by making available more water (and of better quality) to communities and nature than we withdraw.

Using a methodology reviewed by the Swiss Development Agency, the Positive Water Index for each site will be assessed through a Water Credit/ Water Debit approach.

### THE WATER CREDIT/DEBIT APPROACH

This approach will consider both quantitative and qualitative dimensions.

Building on previous experiences, different categories of projects enhancing water sustainability will be deployed. These include:

- watershed protection and restoration: recharge of natural water sources; construction of check dams to intercept run-offs; and reforestation
- water access and sanitation: improvement of access to safe water through well construction and development of sanitation solutions
- water for productive use: use of treated wastewater for water-efficient irrigation and agricultural practices

We will build our actions on the existing knowledge of local communities and partners, and will conduct public education, awareness, and training programs with stakeholders.

**Total water consumption** (million m<sup>3</sup>) – all segments

![](_page_35_Figure_17.jpeg)

See the graph above and the performance data table on page 42 for data on our water performance.

See the case study on page 37 on water provision in India.

# SAFE WATER, SANITATION AND HYGIENE AT THE WORKPLACE

The World Business Council for Sustainable Development WASH Pledge aims to secure appropriate access to safe drinking water, sanitation and hygiene for all employees and contractors in the workplace. LafargeHolcim has plans in place to be fully compliant by 2020.

## **POSITIVE CHANGE FOR BIODIVERSITY**

Obtaining and renewing permits is an important operational issue for LafargeHolcim. The company has a strong record in this area and measures site biodiversity with a methodology developed with recognized conservation partners.

Using this methodology, we assess the overall biodiversity condition of a defined site consisting of one or more different habitat types. The results are expressed as a Site Condition Class (ranked 1-10) taking into account:

- the extent of habitat types
- the ecological condition of these habitats, including enhancements and threats
- the uniqueness and ecological importance of each habitat in the regional context

Every site in a selected region or country can be aggregated into a regional/ national index. We can also produce a global picture to understand increasing or decreasing biodiversity in our mining sites.

To ensure a positive change for biodiversity, we will further deploy professional biodiversity management practices and integrate them into our rehabilitation/ restoration. Furthermore, we also engage in partnerships with international or local organizations, that support us with their expertise.

## Quarries with high biodiversity value (number)

![](_page_36_Figure_13.jpeg)

See the graph above and the performance data table on page 41 for data on our biodiversity performance. APPROACH

## MANAGING OTHER ENVIRONMENTAL IMPACTS

As part of its environmental governance, the company also manages and reduces dust,  $NO_x$  and  $SO_2$  emissions. The monitoring and control of all atmospheric emissions is considered an important topic and is a regular activity in plant operations.

A number of emission-related investment projects have been completed or are ongoing, such as a dust filter upgrade in Cameroon and a plant upgrade for regulatory compliance in the USA, which will help to further improve the emission performance. Additionally, staff training is ongoing to continuously improve the Group emission performance – and we have set internal targets to further reduce our dust, NO<sub>x</sub> and SO<sub>2</sub> emissions.

The development of a number of corporate SD-related directives and standards is ongoing, including, among others, the definition of a LafargeHolcim Emission Monitoring and Reporting standard.

	TODAY	2020	2025	2030
Freshwater withdrawal	<b>315</b> liters per tonne of cement of freshwater withdrawal	20% reduction in specific freshwater withdrawal in cement operations vs 2015	25% reduction in specific freshwater withdrawal in cement operations vs 2015	30% reduction in specific freshwater withdrawal in cement operations vs 2015
Compliance with WASH Pledge	Determination of level of compliance with WASH Pledge at all LafargeHolcim sites	WASH Pledge signed and all sites compliant with WASH Pledge	All sites compliant with WASH Pledge	All sites compliant with WASH Pledge
Biodiversity	Biodiversity baseline assessment being carried out (ongoing)	All our active quarries to have a Biodiversity Management System (BMS) in place	Biodiversity Management Plan of quarries with medium–high biodiversity sensitivity to be externally reviewed/validated	Show a global positive change on biodiversity

### Our pathway to 2030

![](_page_38_Picture_2.jpeg)

### Water management in India

One of the major issues facing rural India is access to quality water for cultivation, rearing of animals and domestic use. Available water is frequently of poor quality, causing widespread health problems. Poor water management can lead to water wastage, severely impacting rural village communities.

Access to water has been one of the priority issues facing many villages in India. Hence, since inception, the Foundation of the LafargeHolcim company in India, Ambuja Cements (ACF), undertakes water management as one of their focus programmes to be implemented across several states in India, to create a positive impact on the environment, groundwater resources, agriculture and allied livelihood activities.

The program has an emphasis on community action, including water harvesting, conservation and attitudinal change among communities.

The focus of the program has been on creating an infrastructure for water conservation, such as check dams and roof rainwater harvesting structures. ACF also works on reviving traditional water management resources such as ponds, and converting mine pits into reservoirs.

These efforts have helped increase water storage capacity and recharged the groundwater in many villages. Extensive work for salinity mitigation has been carried out at Kodinar in Gujarat. In Rajasthan, AFC has supported innovative underground dyke systems. These subsurface structures provide water for irrigation beyond the annual monsoons.

AFC collaborates with various state Governments, local NGOs and academic institutions to implement state-specific water conservation programs. The work has also been assessed by Det Norske Veritas (DNV GL) as a part of their Ambuja Cements water accounting study. Ambuja Cements has been accredited by DNV GL as four times water positive.

For more information please visit www. ambujacementfoundation.org.

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## PERFORMANCE AND ASSURANCE

We track and publish our performance across a wide range of measures, including economic and governance, environmental, health and safety, social performance and stakeholder engagement. An outline of our reporting methodology is complemented by an evaluation of our progress.

![](_page_39_Picture_3.jpeg)

**PERFORMANCE DATA TABLES** *Page 39* 

**METHODOLOGY AND ASSURANCE** *Page 46* 

**ASSURANCE STATEMENT** *Page 47* 

**COMMUNICATION ON PROGRESS** *Page 49* 

## **PERFORMANCE DATA TABLES**

### **ECONOMIC AND GOVERNANCE**

Sales Note 1	GRI G4	2015
Net sales (CHF billion)		29.4
Cement (million tonnes)		255.7
Aggregates (million tonnes)	G4-ECT	292.2
Ready-mix concrete (million m³)		56.8
Suppliers and contractors Note 2		
Screening		
Suppliers identified as "High Risk" (for sustainability criteria aligned with the LafargeHolcim Supplier Code of Conduct) (%)		7.5
"High Risk" local suppliers screened	_	
H&S criteria (%)		45
Environmental criteria (%)		34
Human rights and labor criteria (%)		33
Bribery and corruption criteria (%)	LA14	34
Local contractors screened	EN32 HR10	
H&S criteria (%)	SO9	84
Environmental criteria (%)		63
Human rights and labor criteria (%)		62
Bribery and corruption criteria (%)		56
National market suppliers		
Entities with a policy to favor national market suppliers (%)	EC9	20
Suppliers from national markets (%)		74
Government relations		
Political donations (CHF)	500	294,344
Countries making political donations		5

Countries making political donations	506	5
Average subsidies from national governments (grants, tax relief and other financial benefits) (CHF million)		15.1
Entities receiving subsidies	EC4	12

### Notes to the performance data table

Note 1 Taken from the LafargeHolcim Annual Report 2015 – key figures page 150 in the Management Discussion and Analysis section.

Note 2 Measured using the Sustainable Procurement Initiative Scorecard. The Scorecard was completed by 44 entities. Coverage will increase in future years as the Scorecard gets further deployed.

APPROACH

### **ENVIRONMENTAL**

Cement and grinding plants         285         282         283           Aggregates         596         572         544           Aggregates         596         572         544           Aggregates         596         572         544           Materials         586         572         544           Materials consumption - all segments (million tonnes)         FN2         562.5         662.6         653.0           Waste and recycling         52.3         53.3         53.3         53.3         53.3           Monhaardow waste         FN2         645.2         189         344.2         189         149         140         116
Aggregates         596         572         544           Ready-mix concrete         1,537         1,465         1,422           Atternative raw materials substitution rate - cement production (%)         11.6         11.4         11.3           Total raw material consumption - all segments (million tonnes) <i>Note 4</i> 626.3         642.6         630.1           Waste derived resources - all segments (million tonnes) <i>Note 4</i> 52.3         53.3         53.3           Waste derived row material consumption - all segments (million tonnes) <i>Note 4</i> 642.6         630.1           Waste derived (nones) <i>Note 5</i> 52.3         53.3         53.3           Recovered (ktonnes) <i>Note 5</i> 91         10         11         11         4         4         116           Disposed (ktonnes) <i>Note 5</i> 91         10         11         11         115         156           Cog emissions cement operations - gross (million tonnes)         FN15         149         154         159         155           Total CO2 emissions cement operations - gross (grotonne)         FN15         158         590         592           Total CO2 emissions cement operations - net (grotonne)         FN15         159         164         165           Total CO2 emissions cement operations
Ready-mix concrete         1,537         1,465         1,424           Materials         Alternative raw materials substitution rate - cement production (%)         11.6         11.4         11.2           Total raw material consumption - all segments (million tonnes)         Keedee         626.3         642.6         630.1           Waste and recycling         Nore 4         11.6         11.4         11.2         11.2           Waste and recycling waste         Recovered (ktonnes) Nore 5         452         189         344         388         271         560           Non-hazardous waste         452         189         344         388         271         560           Recovered (ktonnes) Nore 5         11.4
Materials         Internative raw materials substitution rate - cement production (%)         Int         Int.6         Int.4         Int.1           Charl arw material consumption - all segments (million tonnes)         Ker         62.3         632.6
Alternative raw materials substitution rate - cement production (%)         II.6         II.4         II.5           Total raw material consumption - all segments (million tonnes)         Kee A         52.3         53.3         632.1         642.6         630.1           Waste derived resources - all segments (million tonnes)         Kee A         52.3         53.3         53.5           Waste derived resources - all segments (million tonnes)         Kee A         53.3         53.3         53.5           Waste derived (ktonnes)         Kee A         53.8         53.3         53.3         53.3           Non-hazardous waste         Recovered (ktonnes)         Kee A         388         271         556.7           Hazardous waste         Recovered (ktonnes)         Mee A         11.6         11.4         11.4         4         11.6         11.4         4         11.6         11.4         11.6         11.4         11.5         11.6         13.4         12.5         11.6         11.4         11.5         11.6         11.4         11.5         11.6         11.4         11.5         11.6         11.4         11.5         11.6         11.4         11.5         11.6         11.6         11.6         11.5         11.6         11.6         11.6         11.
Total raw material consumption - all segments (million tonnes)         EN2         626.3         642.6         630.1           Waste derived resources - all segments (million tonnes)         Nore 4         52.3         53.3         53.5           Waste and recycling          52.3         53.3         53.5           Waste and recycling          52.3         53.3         53.5           Waste and recycling          452         18.9         34.2           Disposed (ktonnes) Nore 6          452         18.9         34.2           Recovered (ktonnes) Nore 6          10         11         14         4         16           C02 emissions cement operations - gross (million tonnes)         EN15         154         159         155           Total C02 emissions cement operations - net (kg/tonne)         EN16         154         155           Total Scope 1 emissions cement operations - net (kg/tonne)         EN15         159         164         165           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 2 emissions (million tonnes)         EN16         <
Waste derived resources - all segments (million tonnes) Note 4         52.3         53.3         53.5           Waste and recycling
Waste and recycling           Non-hazardous waste         452         189         343           Recovered (ktonnes) Note 6         388         271         556           Hazardous waste         91         10         11           Recovered (ktonnes) Note 6         114         4         16           Disposed (ktonnes) Note 6         114         4         16           C02 emissions cement operations - gross (million tonnes)         EN18         154         159         155           Specific C02 emissions cement operations - net (million tonnes)         EN18         571         571         571           Specific C02 emissions cement operations - net (kg/tonne)         EN18         571         571         572           Specific C02 emissions cement operations - net (kg/tonne)         EN16         115         164         165           Total Scope 2 emissions (million tonnes)         EN16         115         16         16           Total Scope 3 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (million tonnes)         EN16         15         16         16           Total S
Non-hazardous waste         Image: Control of
Recovered (ktonnes) Note 5         452         1199         344           Disposed (ktonnes) Note 5         388         271         560           Recovered (ktonnes) Note 5         91         10         111           Disposed (ktonnes) Note 5         91         10         111           Disposed (ktonnes) Note 5         91         10         111           Disposed (ktonnes) Note 5         114         154         159           Total C02 emissions cement operations - gross (kg/tonne)         EN18         588         590         592           Specific C02 emissions cement operations - net (kg/tonne)         EN18         588         590         592           Specific C02 emissions cement operations - net (kg/tonne)         EN18         588         590         592           Specific C02 emissions (ement, aggregates, ready-mix and own-power generation)         EN17         571         571         571           Total Scope 2 emissions (million tonnes)         EN17         10         -         400           Other atmospheric emissions (million tonnes)         EN17         -         -         400           Otal Scope 2 emissions (g/tonne of cementitious material)         67         54         474           Total Ponosins (g/tonne of cementitious material)         <
Disposed (ktonnes) Note 6         BN23         388         271         560           Hazardous waste         91         00         11         4         4         162         771         560           Recovered (ktonnes) Note 5         114         4         162         771         751         772         771         772         771         571         572         571         573         574         164         165         16         16         16         16         16         16         16         16         16         16         16         16         16         16         <
Hazardous waste         EN23           Recovered (ktonnes). Note 5         91         10         11           Disposed (ktonnes). Note 6         114         4         16           CO2 emissions cement operations – gross (million tonnes)         EN15         154         159         155           Total CO2 emissions cement operations – net (million tonnes)         EN18         588         590         592           Specific CO2 emissions cement operations – net (kg/tonne)         EN18         588         590         592           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation)         EN16         159         164         165           Cotal Scope 2 emissions (million tonnes)         EN16         159         164         165           Total Scope 2 emissions (million tonnes)         EN17         -         -         44           Other atmospheric emissions (million tonnes)         EN17         -         -         44           Other atmospheric emissions (g/tonne of cementitious material)         67         54         447           Total emissions (g/tonne of cementitious material)         10,38         10,38         10,38           Total emissions (g/tonne of cementitious material)         10,39         241         223         2241         236
Recovered (ktonnes) Note 5         91         10         111           Disposed (ktonnes) Note 6         14         4         16           CO2 emissions Note 7         154         159         155           Total CO2 emissions cement operations - gross (million tonnes)         EN15         154         159         155           Specific CO2 emissions cement operations - net (Million tonnes)         EN18         588         590         592           Specific CO2 emissions cement operations - net (Kg/tonne)         EN18         588         590         592           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation)         EN15         159         164         165           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 1 emissions (million tonnes)         EN16         15         16         16           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (fornon of cementitious material)         7         -         40           Other atmospheric emissions (tonne/year)         10,79         1,038         12,698           Nox         EN21         EN24         224         235           Specif
Disposed (ktonnes) Note 6         14         4         16           CO2 emissions Note 7         Total CO2 emissions cement operations - gross (million tonnes)         EN15         154         159         155           Total CO2 emissions cement operations - gross (kg/tonne)         EN18         588         590         592           Specific CO2 emissions cement operations - gross (kg/tonne)         EN18         571         571         571           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation) (million tonnes)         EN16         15         16         166           Total Scope 2 emissions (million tonnes)         EN16         15         16         166         16
C02 emissions Nute 7           Total CO2 emissions cement operations - gross (million tonnes)         EN15         154         159         155           Total CO2 emissions cement operations - net (million tonnes)         EN18         588         590         592           Specific CO2 emissions cement operations - net (kg/tonne)         EN18         588         590         592           Specific CO2 emissions cement operations - net (kg/tonne)         EN18         571         571         577           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation)         EN15         159         164         165           Total Scope 2 emissions (million tonnes)         EN17         -         -         400           Total Scope 3 emissions (million tonnes)         EN17         -         -         400           Other atmospheric emissions (unneof cementitious material)         571         571         571         571           Specific emissions (g/tonne of cementitious material)         502         -         -         400           Nox         EN21         EN24         229         226         1,079         1,078         1,038           Specific emissions (g/tonne of cementitious material)         502         -         -         234         189         176
Total CO2 emissions cement operations - gross (million tonnes)         EN15         154         159         155           Total CO2 emissions cement operations - net (million tonnes)         EN18         588         590         592           Specific CO2 emissions cement operations - net (kg/tonne)         EN18         571         571         571           Specific CO2 emissions (cement, aggregates, ready-mix and own-power generation)         EN15         1164         1165           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation)         EN16         15         16         16           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (million tonnes)         EN17         -         40           Other atmospheric emissions (million tonnes)         EN17         -         40           Other atmospheric emissions (million tonnes)         EN17         -         40           Dust         EN17         -         -         40           Klins reporting         EN17         1,7,464         14,388         12,696           Specific emissions (dynne of cementitious material)         1,079         1,078         1,038           Total emissions (dynne of cementitious material)         234         189<
EN15         12         13         14         154         155           Specific CO2 emissions cement operations - gross (kg/tonne)         EN18         588         590         592           Specific CO2 emissions cement operations - net (kg/tonne)         EN18         588         590         592           Total CO2 emissions cement operations - net (kg/tonne)         EN18         571         571         577           Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation)         EN15         164         165           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (million tonnes)         EN17         -         -         40           Other atmospheric emissions (million tonnes)         EN17         -         -         40           Other atmospheric emissions (million tonnes)         EN17         -         -         40           Ots         Klins reporting         502         -         -         40           Nox         -         -         -         -         40           Specific emissions (g/tonne of cementitious material)         -         -         -         -           Total emissions (g/tonne of cementitious material)         - </td
Specific CO2 emissions cement operations - gross (kg/tonne)         EN18         588         590         593           Specific CO2 emissions cement operations - net (kg/tonne)         EN18         571         571         573         57
EN13         EN13         EN13           Specific C02 emissions cement operations - net (kg/tonne)         EN13         571         572         524         473         573         573         573         573         573         573         572         572         572
Total Scope 1 emissions (cement, aggregates, ready-mix and own-power generation) (million tonnes)         EN15         159         164         165           Total Scope 2 emissions (million tonnes)         EN16         15         16         16           Total Scope 3 emissions (million tonnes)         EN17         -         -         40           Other atmospheric emissions (million tonnes)         EN17         -         -         40           Other atmospheric emissions (g/tonne of cementitious material)         EN17         -         -         40           Specific emissions (g/tonne of cementitious material)         67         54         47           Total emissions (g/tonne of cementitious material)         -         -         40           Specific emissions (g/tonne of cementitious material)         -         -         40           Specific emissions (g/tonne of cementitious material)         -         -         47,036           Specific emissions (g/tonne of cementitious material)         -         -         -         -           Specific emissions (g/tonne of cementitious material)         -         -         -         -         -           Specific emissions (g/tonne of cementitious material)         -         -         -         -         -         -         - <t< td=""></t<>
Kills         EN16         15         16         16           Total Scope 2 emissions (million tonnes)         EN17         -         -         40           Other atmospheric emissions Note 8         EN17         -         -         40           Other atmospheric emissions Note 8         EN17         -         -         40           Dust         EN16         67         54         47           Specific emissions (g/tonne of cementitious material)         67         54         47           Total emissions (g/tonne of cementitious material)         17,464         14,388         12,698           NOx         Ensistions (g/tonne of cementitious material)         1,079         1,078         1,038           Total emissions (g/tonne of cementitious material)         1,079         1,078         1,038           Specific emissions (g/tonne of cementitious material)         235         241         236           Specific emissions (g/tonne of cementitious material)         235         241         236           Specific emissions (g/tonne of cementitious material)         234         189         179           Total emissions (g/tonne of cementitious material)         234         189         179           Total emissions (g/tonne cementitious material)         32
Total Scope 3 emissions (million tonnes)         EN17         .
Other atmospheric emissions Note 8           Dust           Kilns reporting         248         242         237           Specific emissions (g/tonne of cementitious material)         67         54         47           Total emissions (tonne/year)         17,464         14,388         12,698           NOx         244         229         226           Specific emissions (g/tonne of cementitious material)         10,79         1,078         1,038           Total emissions (g/tonne of cementitious material)         281,985         289,680         278,061           So2         201         235         241         236           Kilns reporting         234         189         179           Specific emissions (g/tonne of cementitious material)         234         189         179           Total emissions (g/tonne of cementitious material)         234         189         179           VOC         174         167         165         32         29 <th< td=""></th<>
Dust         248         242         237           Specific emissions (g/tonne of cementitious material)         67         54         47           Total emissions (tonne/year)         17,464         14,388         12,698           NO <sub>x</sub> 17,464         14,388         12,698           Specific emissions (g/tonne of cementitious material)         1,079         1,078         1,038           Total emissions (g/tonne of cementitious material)         1,079         1,078         1,038           Specific emissions (g/tonne of cementitious material)         281,985         289,680         278,061           Specific emissions (g/tonne of cementitious material)         234         189         179           Total emissions (tonne/year)         61,054         50,731         47,799           VOC         174         167         165           Specific emissions (g/tonne cementitious material)         22         29         29           VOC         174         167         165           Specific emissions (g/tonne cementitious material)         32         29         29           Total emissions (tonne/year)         8,338         7,889         7,838           Mercury         174         167         165
Kilns reporting       248       242       237         Specific emissions (g/tonne of cementitious material)       67       54       47         Total emissions (tonne/year)       17,464       14,388       12,698         NO <sub>X</sub> 244       229       226         Kilns reporting       244       229       226         Specific emissions (g/tonne of cementitious material)       1,079       1,078       1,038         Total emissions (tonne/year)       281,985       289,680       278,061         So2       235       241       236         Kilns reporting       235       241       236         Specific emissions (g/tonne of cementitious material)       235       241       236         Total emissions (tonne/year)       61,054       50,731       47,799         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       1174       167       165         Specific emissions (g/tonne/year)       8,338       7,889       7,838         VOC       8,338       7,889       7,838       7,839       7,838         Mercury       10       10       10       10       10         Mercury       10
Specific emissions (g/tonne of cementitious material)       67       54       47         Total emissions (tonne/year)       17,464       14,388       12,698         NOx       244       229       226         Specific emissions (g/tonne of cementitious material)       1,079       1,078       1,038         Total emissions (tonne/year)       281,985       289,680       278,061         So2       235       241       236         Kilns reporting       234       189       179         Total emissions (tonne/year)       61,054       50,731       47,799         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       174       167       165         Specific emissions (g/tonne cementitious material)       232       29       29         VOC       174       167       165       32       29       29         Kilns reporting       32       29
Total emissions (tonne/year)       17,464       14,388       12,698         NOx       244       229       226         Specific emissions (g/tonne of cementitious material)       1,079       1,078       1,038         Total emissions (tonne/year)       281,985       289,680       278,061         Specific emissions (g/tonne of cementitious material)       235       241       236         Total emissions (tonne/year)       234       189       179         Specific emissions (g/tonne of cementitious material)       234       189       179         Total emissions (tonne/year)       61,054       50,731       47,799         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       32       29       29       29         VOC       32       29
NOx         Image: Nox
Kilns reporting       244       229       226         Specific emissions (g/tonne of cementitious material)       1,079       1,078       1,038         SO2       281,985       289,680       278,061         Kilns reporting       235       241       236         Specific emissions (g/tonne of cementitious material)       235       241       236         Total emissions (tonne/year)       61,054       50,731       47,799         VOC       61,054       50,731       47,799         Kilns reporting       50,610       50,731       47,799         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (g/tonne cementitious material)       32       29       29         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       8,338       7,889       7,838
Specific emissions (g/tonne of cementitious material)       1,079       1,078       1,038         Total emissions (tonne/year)       281,985       289,680       278,061         So2       235       241       236         Specific emissions (g/tonne of cementitious material)       235       241       236         Total emissions (tonne/year)       61,054       50,731       47,799         VOC       11,074       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       100       100       100       100
Total emissions (tonne/year)       281,985       289,680       278,061         SO2       235       241       236         Kilns reporting       234       189       179         Specific emissions (tonne/year)       61,054       50,731       47,799         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       174       167       165         Mercury       174       167       165
SO2       235       241       236         Kilns reporting       234       189       179         Specific emissions (g/tonne of cementitious material)       61,054       50,731       47,799         VOC       61,054       50,731       47,799         Kilns reporting       174       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       174       167       165         Vithen unit       174       167       165
Kilns reporting       235       241       236         Specific emissions (g/tonne of cementitious material)       234       189       175         Total emissions (tonne/year)       61,054       50,731       47,795         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       172       167       165
Specific emissions (g/tonne of cementitious material)       234       189       175         Total emissions (tonne/year)       61,054       50,731       47,795         VOC       174       167       165         Specific emissions (g/tonne cementitious material)       32       29       29         Total emissions (tonne/year)       8,338       7,889       7,838         Mercury       172       167       165
Total emissions (tonne/year)         EN21         61,054         50,731         47,795           VOC         Kilns reporting         174         167         165           Specific emissions (g/tonne cementitious material)         32         29         29           Total emissions (tonne/year)         8,338         7,889         7,838
VOC     FN21       Kilns reporting     174     167     165       Specific emissions (g/tonne cementitious material)     32     29     25       Total emissions (tonne/year)     8,338     7,889     7,838
Kilns reporting174167165Specific emissions (g/tonne cementitious material)322929Total emissions (tonne/year)8,3387,8897,889Mercury
Specific emissions (g/tonne cementitious material)     32     29     29       Total emissions (tonne/year)     8,338     7,889     7,838
Total emissions (tonne/year) 8,338 7,889 7,838
Mercury
Kiins reporting 170 164 170
Specific emissions (mg/tonne of cementitious material) 13 12 9
Total emissions (tonne/year)         3.4         3.2         2.4
Dioxins/furans
Kilns reporting         170         163         158
Specific emissions (ng TEQ/tonne of cementitious material)202324

### Notes to the performance data table

Note 3 See the Methodology section on page 46 to see the scope of consolidation.

- Note 4 Includes alternative raw material, mineral components sold externally, alternative fuels.
- Note 5 Including recycling and downcycling.
- Note 6 Including incineration and landfilling.
- Note 7 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. Compared with Gross CO<sub>2</sub> emissions, net CO<sub>2</sub> emissions don't include CO<sub>2</sub> from alternative fossil fuels.
- Note 8 Based on the measured value, the absolute emissions are extrapolated to the total quantity of clinker produced by the Group. We will publish emissions per tonne of clinker on our website in a CSI indicators table. Atmospheric emissions are only measured for cement plants.

### ENVIRONMENTAL (CONTINUED)

Other atmospheric emissions	GRI G4	2013	2014	2015
Clinker produced with continuous monitoring of dust, NO <sub>x</sub> and SO <sub>2</sub> emissions (%)	51104	85	84	85
Clinker produced with monitoring of dust, NO <sub>x</sub> and SO <sub>2</sub> emissions (%)	EN21	92	92	91
Energy				
Total energy consumption				
Electrical and thermal – all segments (million GJ)		762	783	785
CEM – electrical and thermal (million GJ)		748	771	773
AGG – electrical and thermal (million GJ)	EN3	11	10	9
RMX – electrical and thermal (million GJ)		3	3	2
Total power consumption – all segments (GWh)		26,055	26,565	26,896
Total fuel consumption – all segments (million GJ)		668	689	688
Specific thermal energy consumption				
Clinker production (MJ/tonne clinker)		3,532	3,533	3,533
Cement production (MJ/tonne cementitious material)	EN5	2,516	2,518	2,529
Specific power consumption cement (kWh/tonne cement)		93	94	95
Thermal energy mix of clinker production (%)				
Coal		41.0	41.2	39.1
Petcoke		25.7	26.1	28.0
Heavy fuels		5.3	4.9	4.4
Gas	EN3	14.2	12.5	12.0
Other traditional fossil fuels		0.5	1.1	1.4
Alternative fossil fuels (excl. biomass)		8.6	9.4	9.8
Biomass		4.7	4.8	5.3
Clinker factor (average % of clinker in cementitious material)		71	71	71
Biodiversity Note 9				
Quarries (number of active quarries)		-	913	855
Rehabilitation plan in place (%) <i>Note 10</i>		-	85	88
Rehabilitated area (ha) Note 11	5142	-	16,562.3	21,866.7
High biodiversity value	EIN I Z	-	243	268
High biodiversity value with biodiversity management plans in place		-	209	215
High biodiversity value with biodiversity management plans in place (%)		-	86	80

### Notes to the performance data table

Note 9 We are unable to report for 2013 as there is only data available for one legacy company.

Note 10 The specific requirements for rehabilitation plans are defined in legacy reference documents and directives. These include requirements such as providing a comprehensive description of site features after the completion of mining operations; coordinating rehabilitation works with the quarrying operations; controlling the costs of quarry rehabilitation; communicating within the company and with others including local authorities, government agencies, landlords and associations, about the post-closure use of the site.

Note 11 The biodiversity value has been defined following legacy definitions and assessment methodologies. It includes the quarries adjacent (within 500m) to or within a legally protected area on international or national level, such as IUCN I–VI, Ramsar, Important Bird Areas, Natura 2000 or World Heritage Site, or priority areas for conservation of threatened species.

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### **ENVIRONMENTAL** (CONTINUED)

Water Note 12	GRI G4	2013	2014	2015
Water withdrawal			I	
Cement (million m³)		94	89	94
Aggregates (million m³)		89	96	84
RMX (million m <sup>3</sup> )		16	16	15
From ground water – all segments (million m³)		58	54	54
From surface water – all segments (million m³)		101	98	89
From municipal water supplies or other water utilities (million m³)		19	18	18
From rainwater harvested (million m³)		9	20	21
From other water sources (million m³)	EN8	12	10	11
Specific freshwater withdrawal cement (l/tonne)		-	-	315
Specific freshwater withdrawal aggregates (l/tonne)		-	-	255
Specific freshwater withdrawal RMX (l/m³)		-	-	250
Water consumption				
Specific water consumption cement (l/tonne)		-	-	229
Specific water consumption aggregates (l/tonne)		-	_	174
Specific water consumption RMX (l/m³)		-	-	236
Total water consumption – all segments (million m³)		152	133	123
Water discharge				
Total – all segments (million m³)		47	68	70
To surface water (million m³)	EN22	32	56	55
For offsite treatment (million m³)		2	1	1
To others (million m³)		13	10	14
Sites equipped with a water recycling system (%)	EN10	78	78	76
Management systems Note 13				
Cement				
Sites with an EMS equivalent to ISO 14001 (%)		-	-	72
Sites with an EMS certified acc. to ISO 14001 (%)		-	-	71
Aggregates				
Sites with an EMS equivalent to ISO 14001 (%)		-	-	81
Sites with an EMS certified acc. to ISO 14001 (%)		-	-	26
RMX				
Sites with an EMS equivalent to ISO 14001 (%)		-	-	34
Sites with an EMS certified acc. to ISO 14001 (%)		-	-	20
Environmental investments and compliance				
Environmental investments (CHF million)		-	-	74
Provisions for site restoration and other environmental liabilities (CHF million) Note 14	EN31	-	-	996
Countries reporting severe non-compliance cases Notes 15 & 16		-	-	10
Severe environmental non-compliance cases reported Note 15	EN29	_		18
Associated fines and penalties (CHF) Note 15		-	-	56,171

### Notes to the performance data table

Note 12 Figure only given for 2015 for specific water withdrawal and consumption, as we did not have sufficient coverage and data quality for 2013 and 2014.

- Note 13 As the legacy companies had differing management systems we are only able to report 2015 figures.
- Note 14 As per the LafargeHolcim Annual Report page 238 Note 29.
- Note 15 Taken from the Annual Compliance Survey completed by 66 entities.
- Note 16 A "severe" 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.

	GRI G4		2013		2014	2015
Fatalities		Legacy Lafarge	Legacy Holcim	Legacy Lafarge	Legacy Holcim	LafargeHolcim
Personnel category						
Employees		3	7	3	5	5
Contractors		11	23	13	22	28
Third parties		12	17	8	20	17
Total Group	146	26	47	24	47	50
Location	LAO					
Onsite		6	20	7	22	15
Offsite transport		20	24	11	23	32
Offsite at someone else's site		-	3	6	2	3
Lost time injuries Note 17						
Personnel category						
Employees (LTIs)		72	191	72	217	239
Contractors onsite (LTIs)	146	51	161	39	170	261
Employees (LTIFR) Note 18	LAO	0.54	1.3	0.55	1.6	1.01
Contractors onsite (LTIFR) Note 19		0.44	1.2	0.56	1.3	1.03
Employees and contractors onsite (LTIFR)		0.49	1.3	0.55	1.5	1.02
Total Injury Frequency Rate						
Employees (TIFR)		NR*	5.7	NR	4.8	3.52
Contractors onsite (TIFR)	LA6	NR	5.0	NR	4.1	2.84
Employees and contractors onsite (TIFR)						3.17
Health						
Group companies with a program in place for public health issues (%)		NR	86	43	88	75

\* Not reported

### Notes to the performance data table

Note 17 LTIFR in Legacy Lafarge includes fatalities.

Note 18 For Legacy Holcim: LTIFR employees includes subcontracted personnel (according to internal definitions).

Note 19 For Legacy Holcim "contractors onsite" refers to third-party service providers onsite (according to internal definitions).

### SOCIAL

Workforce	GRI G4	2015
Group employees by region Note 20		
Asia Pacific		36,199
Latin America		11,707
Europe		23,950
North America	G4-10	11,265
Middle East Africa		16,123
Service and trading companies		1,712
Total Group		100,956
Group employees by employment contract and age		
Full-time employees (%)		98
Part-time employees (%)	64.10	2
Permanent employees (%)	G4-10	92
Fixed-term contract employees (%)		8
Employees under the age of 30 (%)		16
Employees between 30 and 50 (%)	LA12	61
Employees above 50 (%)		24
Employee turnover		
Employee turnover by type		
Overall employee turnover rate (%)		18
Voluntary employee turnover rate (%)		6
Hirings (%)		11
Dismissal (%)	LA1	2.5
Retirements (%)		1.4
Redundancies (%)		3.1
Deaths (%)		0.2
Employee turnover by region		
Asia Pacific (%)		19
Latin America (%)		18
Europe (%)		14
North America (%)	LA1	31
Middle East Africa (%)		11
Service and trading companies (%)		13
Diversity		
Female workforce Note 20		
Top management level (%)		13
Senior management level (%)		16
Middle management level (%)	LA12	19
Non-management level (%)	G4-10	14
Women in total workforce (%)		13
Specific requirements		
Entities with a recruitment and/or career development plan aimed at a specific population (%)		72
of which, entities with a specific program for women (%)		57
of which, entities with a specific program for disabled workers (%)		40
Employee satisfaction		
Countries/entities conducting employees satisfaction survey (%)		53
Social dialogue		
Entities having strike actions (exceeding one week's duration)	MM4	2
Entities where employees are covered by collective agreements (%)	G4-11	74
Entities with workforce represented in H&S committees (%)	LA5	94
Individual development		
Annual performance review		
Managers (%)		92
Non-managers (%)	LA11	50

### Notes to the performance data table

Note 20 Calculated using the consolidation scope for the LafargeHolcim Annual Report 2015

### **STAKEHOLDER ENGAGEMENT**

CSR spend	GRI G4	2015
Total (CHF million)		59.7
Overhead (%)		12
Social investment projects (%)	EC1	70
Donations (cash and in kind) (%)		13
Inclusive business projects (%)		5
Beneficiaries		
Total number (million people)		6.6
Social investment projects (million people)		5.1
Education projects (%)		7
Community development (%)		36
Infrastructure (%)		26
Health (%)		10
Water (%)		12
Other (%)	EC1	9
Donations (million people)	-	0.8
Cash (%)	-	53
In kind (%)		47
Inclusive business projects (million people)		0.7
Low income housing (%)	-	62
Sanitation (%)		34
Other (%)	-	4
Community engagement plan		
Total sites with community engagement plan in place (%)		35
Cement and grinding sites (%)	SO1	62
Aggregates and RMX sites (%)		31

Aggregates and RMX sites (%)

APPROACH

## **METHODOLOGY AND ASSURANCE**

### **SCOPE OF CONSOLIDATION**

LafargeHolcim strives to be a leader in transparency and to have a positive impact in the communities where it operates. Achieving this goal requires us to maximize the reach that our sustainability practices have, starting from our assets and including not only those where we have financial control, but also those where we have operational and/or management control.

Therefore, LafargeHolcim reporting aims to cover all business units and their industrial production sites under the Group's operational/ management control approach.

Companies under LafargeHolcim's operational control are:

- All companies where LafargeHolcim owns more than 50% of equities, or has management control, are consolidated at 100%
- Companies where LafargeHolcim has control over operations (i.e. branded companies) are consolidated at 100%
- In addition, companies where LafargeHolcim has a Joint Venture at 50% are consolidated at 50%

This includes legacy Lafarge companies in China, Bangladesh, Morocco, Benin and the Gulf Cooperation Council states.

The joint venture of Cement Australia has been weighted at 50% for environmental indicators, whereas it has been consolidated at 100% for H&S indicators; for social and stakeholder engagement, Cement Australia data is excluded. Huaxin data is excluded for all data consolidation.

Despite the challenges of the merger, for environmental data we assess that the reported data this year cover the full scope of cement activities and approximately 90% of the aggregates and RMX plants.

For environmental data, asphalt operations are excluded.

All historical data related to environment have been recalculated to enable comparison of data over time. Historical data are also restated to reflect changes in consolidation of companies and acquisitions/divestments. For Health and Safety data we have reported legacy company performance for 2013 and 2014, following legacy definitions, and consolidated data for 2015 following new LafargeHolcim definitions. For social and stakeholder data we have reported consolidated data only for 2015 due to differences in legacy company definitions.

For business divested during the year, environmental, social and stakeholders engagement data are excluded for the entire year; for H&S, data are included up to the time of divestment for partially divested companies, and excluded for fully divested companies.<sup>6</sup>

### METHODS OF DATA COLLECTION AND REPORTING METHODOLOGIES

### **Economic performance**

Data on sales included represent consolidated data from LagargeHolcim Group plants and entities covering all of the Group's operations, and are consistent with those reported in the LafargeHolcim Annual Report 2015. Data on supplier assessments was collected through the Procurement Scorecard. Data on political donations and subsidies were collected in the annual stakeholder engagement survey.

### **Environmental performance**

For 2015, environmental data were collected through legacy reporting systems protocols and tools by business units. We use the CSI Revised Protocol Version 3 to calculate CO<sub>2</sub> emissions between the 1990 baseline and the reporting year.

Annual concentration measurements for Mercury, Dioxin and Furan as well as VOC cover 69% of the clinker produced in 2015. If the emission has not been measured in 2015, the last available measurement has been used to estimate the 2015 performance at kiln level. Measurements older than three years represent 11% of the clinker produced in 2015.

The CSI water protocol has been used as a reference to measure the water performance of the Group. In case of inconsistency in the water balance at site level, the water consumption has been recalculated based on the water withdrawal and water discharge for each aggregate site and the water discharge has been recalculated based on the water withdrawal and water consumption for each cement site.

For alternative fuel tonnages, if data were not available there has been an estimation based on energy consumed and the calorific value of each fuel (Group average) at site level.

### Health and safety (H&S)

H&S data are collected for all operations via monthly reporting and an annual survey, which has been revalidated by our regular business process system. Data are segregated according to onsite and offsite incidents, and cover employees, contractors and third parties. This is consistent with the WBCSD CSI Guidelines for Reporting.

The "hours worked" used to calculate safety data for contractors are estimated locally by sites and entities. The Group is working to deploy robust systems to homogeneously and accurately measure this for future reports.

### Social performance

The 2015 social data are derived from a survey covering 74 entities representing 83% of the total Group workforce and include majority owned entities and managed assets. Among other aspects, the social survey collects data on employees, headcounts and human rights and includes questions to verify that neither child labor nor forced or compulsory labor is used.

### Stakeholder engagement

The 2015 stakeholder engagement data are derived from a survey covering 71 entities representing 94% of the total relevant Group workforce and include majority owned entities and managed assets. Among other aspects, the stakeholder survey collects data on CSR 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**

Both legacy companies produced a sustainability report on an annual basis. The LafargeHolcim Group will continue to report annually.

## **ASSURANCE STATEMENT**

### INDEPENDENT ASSURANCE REPORT ON A SELECTION OF SUSTAINABILITY INFORMATION

### To the Executive Committee,

Further to the request made by LafargeHolcim, we present our report on a selection of sustainability information established for the year ended on 31 December 2015, presented in the Sustainability Report, consisting in selected environmental and safety indicators<sup>7</sup> ("the Environmental and Safety Indicators") and social and stakeholder engagement data collection processes<sup>8</sup> ("the Social and Stakeholder Engagement Data Collection Processes").

### **Responsibility of the company**

It is the responsibility of the Sustainable Development Department to establish the Environmental and Safety Indicators and to implement the Social and Stakeholder Engagement Data Collection Processes in accordance with the protocols used by the company.

### Independence and quality control

Our independence is defined by regulatory requirements and the Code of Ethics of our profession. In addition, we have implemented a quality control system, including documented policies and procedures to ensure compliance with ethical standards, professional standards and applicable laws and regulations.

### **Our Responsibility**

It is our role, based on our work:

To attest that the Social and Stakeholder Engagement Data Collection Processes were implemented as described in the "Methodology and Assurance" section on page 46 under the subheadings "Social performance" and "Stakeholder engagement" and in accordance with the 2015 Group social and stakeholder engagement questionnaires and definitions.

To express a limited assurance conclusion, that the Environmental and Safety Indicators, have been established, in all material aspects, in accordance with the reporting criteria applicable in 2015 (the "Reporting Criteria"), consisting in external standards elaborated by the World Business Council for Sustainable Development – Cement Sustainability Initiative (WBCSD-CSI) available on the WBCSD web site completed with Group specific procedures, a summary of which is provided in the "Methodology and Assurance" section on page 46 under the sub-headings "Environmental performance" and "Health and Safety" or in notes underneath the data tables on pages 40 to 43.

1. Review of the Social and Stakeholder Engagement Data Collection Processes

We undertook interviews with the people responsible for the collection and preparation of the Information at the headquarters of the Group in Holderbank, Switzerland and in Paris, France and at the country level for a selection of entities, in order to:

- Assess the suitability of the questionnaires and definitions used in the surveys, in relation to their relevance, completeness, reliability, neutrality, and understandability;
- Verify the implementation of the process for the collection and compilation of the Information.

Based on this work, we confirm that we have no comment on the fact that the Social and Stakeholder Engagement Data Collection Processes were implemented as described in the "Methodology and Assurance" section on page 46 under the sub-headings "Social performance" and "Stakeholder engagement" and in accordance with the 2015 Group social and stakeholder engagement questionnaires and definitions.

### 2. Limited assurance on a selection of Environmental and Safety Indicators

We conducted the work described below in accordance with the international standard ISAE 3000<sup>9</sup> (International Standard on Assurance Engagements).

### Nature and scope of the work

We undertook interviews with people responsible for the preparation of the Environment and Safety Indicators in the Sustainable Development, Health & Safety, and HR Departments, in charge of the data collection process and, if applicable, the people responsible for internal control processes and risk management, in order to:

 Assess the suitability of the Reporting Criteria for reporting, in relation to their relevance, completeness, reliability, neutrality, and understandability, taking into consideration, if relevant, industry standards;

- Verify the implementation of the process for the collection, compilation, processing and control for completeness and consistency of the Environment and Safety Indicators and identify the procedures for internal control and risk management related to the preparation of the Environment and Safety Indicators.

#### 7 Environmental and Safety Indicators:

- Materials: Alternative raw materials substitution rate cement production, total raw material consumption all segments
- Waste and recycling: Non-hazardous waste (recovered, disposed) and Hazardous waste (recovered, disposed)
- CO<sub>2</sub> emissions: total CO<sub>2</sub> emissions (gross, net), Specific CO<sub>2</sub> emissions (gross, net), Total Scope 1 emissions, Total Scope 2 emissions
   Other atmospheric emissions (total and specific): Dust, NOx, SO<sub>2</sub>, VOC, Mercury, Dioxins/Furans; and clinker produced with continuous monitoring of dust, NOx and SO<sub>2</sub> emissions
- Energy: Electrical and thermal all segments (GJ), total power consumption, total fuel consumption, specific thermal energy consumption (clinker production, cement production), specific power consumption cement, Thermal energy mix of clinker production
- Clinker factor

8

- Biodiversity: Quarries, Rehabilitation plans in place
- Water: water withdrawal by segments (Cement, Aggregates, RMX)
   Management Systems: Cement, Aggregates, RMX
- Fatalities: by personnel category
- Lost time Injuries: by personnel category, fatalities frequency rate, lost time injury frequency rate (employees, contractors)
- Total Injury Frequency Rate: employees, contractors.
- Social and Stakeholder Engagement Data Collection Processes covering:
- Group employees per employment contract and age, Employee turnover, Women in total workforce, Employee satisfaction, Social dialogue, and Individual development
- CSR Spend, Beneficiaries, and Community engagement plan.

9 ISAE 3000: "Assurance Engagements other than audits or reviews of historical information", International Federation of Accountants.

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We determined the nature and extent of our tests and inspections based on the nature and importance of the Environment and Safety Indicators, in relation to the characteristics of the Company, its social and environmental issues, its strategy in relation to sustainable development and industry best practices:

- At the Group level, we consulted documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions, etc.), we implemented analytical procedures on the quantitative information and verified, on a test basis, the calculations and the compilation of the information, and also verified their coherence and consistency with the other information presented in the sustainability report.
- At the level of the representative selection of sites and entities that we selected<sup>10</sup>, based on their activity, their contribution to the consolidated indicators, their location and a risk analysis, we undertook interviews to verify the correct application of the procedures and undertook detailed tests on the basis of samples, consisting in verifying the calculations made and linking them with supporting documentation. The sample selected therefore represented on average 21% of the hours worked used for the calculation of safety indicators and between 7% and 17% of the environmental information<sup>11</sup>.

We consider that the sample methods and sizes of the samples that we considered by exercising our professional judgment allow us to express a limited assurance conclusion; an assurance of a higher level would have required more extensive verification work. Due to the necessary use of sampling techniques and other limitations inherent in the functioning of any information and internal control system, the risk of non-detection of a significant anomaly in the Environment and Safety Indicators cannot be entirely eliminated.

### Conclusion

Based on our work, we have not identified any significant misstatement that causes us to believe that the Environment and Safety Indicators, taken together, have not been fairly presented, in compliance with the Reporting Criteria.

### Observations

Without qualifying our conclusion above, we draw your attention to the following points:

- For the data collection and preparation of the Environment and Safety Indicators, separate tools and reporting criteria were used on the two legacy perimeters. Differences were identified in the requirements or definitions of the two reporting criteria. notably on the use of standard or measured lower heating values or carbon emission factors for fuels, or the criteria for a quarry rehabilitation plan to be recognised by the Group.
- The estimation methods applied locally to assess the hours worked by contractors, used for the calculation of the lost time injury frequency rate, were not homogeneous in the audited entities and the level and traceability of internal controls are not yet adapted to the complexity of the data collection.

Paris-La Défense, the 10th June 2016

![](_page_49_Picture_12.jpeg)

### Independent Verifier **ERNST & YOUNG et Associés**

Partner, Sustainable Development **Christophe Schmeitzky** 

Partner **Bruno Perrin** 

Four cement plants: Bulacan (Philippines), Lichtenburg (South Africa), Richmond (Canada), Wadi 2 (India); and five entities: ACC India (Cement and RMX), Aggregate Industries UK (Aggregates), South Africa (all segments), the Philippines (all segments), Western Canada (all segments).
 On average 17% of production (cement, aggregates, RMX), 8% of waste, 13% of gross CO<sub>2</sub> emissions, 12% of other atmospheric emissions, 13% of

energy consumption, 16% of quarries, 7% of water withdrawal.

## **COMMUNICATION ON PROGRESS**

### **GLOBAL REPORTING INITIATIVE**

This PDF report, with additional information on our website, is prepared in accordance with the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines at comprehensive level.

To locate the elements and information contained within the Guidelines, including disclosures on management approach to economic, environmental and social aspects, use the GRI index at www.lafargeholcim.com/sustainable-development

LafargeHolcim, along with organizations from over 50 countries, is a member of the GRI Gold Community.

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

![](_page_50_Picture_7.jpeg)

### **UN GLOBAL COMPACT (UNGC)**

With our integrated approach to sustainable development, LafargeHolcim aims to embrace the UNGC principles. We strive to implement the 10 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. Examples of this are our Supplier Code of Conduct and Sustainable Procurement Initiative.

Our sustainability report and our annual communication on progress (COP) to the UNGC outlines LafargeHolcim's continued commitment to the Compact's philosophy, intent and principles. This latest report highlights key actions implemented in 2015 against the Compact's principles as well as confirming our sustainability priorities and performance targets.

For more information on the UN Global Compact, visit www.unglobalcompact.org

![](_page_50_Picture_12.jpeg)

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