

Strength. Performance. Passion.



Corporate Sustainable Development Report 2005 Holcim Ltd



Holcim is a worldwide leading supplier of cement and aggregates as well as downstream activities such as ready-mix concrete and asphalt, including services. The Group is present in more than 70 countries on all continents.



## This report documents the Group's continuing commitment to sustainable development

Covering the Group's cement, aggregates and readymix concrete businesses, this third Holcim Corporate Sustainable Development Report focuses on key facts and figures, highlights local initiatives across the triple bottom line (economic, environmental and social) and complements our Annual Report 2005.

It measures our performance against existing and new targets, and evaluates strategies and activities

affecting the economic, environmental and social performance of all Group businesses. Each chapter features a double page case study and includes progress reports and performance data for 2004 and 2005.

Additional information, case studies and Group company sustainability reports about local performance and activities are available in our Annual Report 2005 and on our website at: www.holcim.com/sustainable

## Strategic memberships and cooperations

Holcim is a co-founder of the World Business Council for Sustainable Development's Cement Sustainability Initiative, supports the UN Global Compact, and has formed a strategic alliance with the German Technical Cooperation (GTZ).

## **External recognition**

We are the acknowledged "leader of the industry" in the Dow Jones Sustainability Index 2006 and again included in the FTSE4Good and Ethibel Sustainability Index – Excellence.



## Cover

Concrete Substrates for Accelerated Coral Restoration is an initiative from the Philippines, one of more than 3,000 entries from 118 countries submitted in 2005 for the first Holcim Awards competition for sustainable construction projects. By using concrete elements designed to provide the optimum conditions for coral reef rejuvenation, the project contributes to the regeneration of marine ecosystems. For more information visit: www.holcimfoundation.org

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## Improved performance through leadership and the commitment of our employees

Dear stakeholder

## Living up to our SD commitment

Since our last report, Holcim has further integrated sustainable development (SD) into daily business. We are committed to meeting our sustainability targets and, with the support of partners and stakeholders, addressing the key challenges we face.

The Group is growing rapidly. New acquisitions, such as our investments in Aggregate Industries and in India in 2005, have extended our product portfolio and increased our understanding of sustainability challenges and opportunities. We ensure that all new Group members share our commitment to SD.

Our focus on priority issues, highlighted in this report, aims to ensure quality of information and performance improvements.

## **Delivering on targets**

We are on track to achieve our SD targets. We have communicated the Group Code of Conduct throughout the organization; operational managers are now responsible for assuring compliance.

The safety of our people is paramount. We launched a new initiative, Passion for Safety, which led to measurable progress in 2005. We are committed to reducing the lost time injury frequency rate by at least 30% per year in each Group company from 2006 to 2009, using 2004 as a reference, until we achieve a rate of less than two.

In terms of environmental performance, we are on track to reduce global average net specific CO2 emissions by 20% by 2010, with 1990 as the base year, reported according to the WBCSD/WRI Cement CO2 Protocol. By the end of 2005, specific net CO2 emissions per tonne of cement had been reduced by 14.7%. Lowering the clinker factor significantly contributed to this result. KPMG has reviewed and provided independent assurance over our 2004 and 2005 CO2 emissions data.

As the Group expands, we continue to decrease atmospheric emissions, a goal that requires ongoing investment to upgrade plant equipment. To continue to improve, we have set a Group emission reduction target for key substances: to reduce NOx, SO2 and dust by 20% by 2010, compared to 2004 levels.

As an ongoing active member of the WBCSD Cement Sustainability Initiative, we are committed to the targets set in its 2005 progress report.

## First Holcim Foundation awards cycle

The first Holcim Awards competition conducted by the Holcim Foundation for Sustainable Construction attracted more than 3,000 submissions from 118 countries. 46 projects shared in prize money of CHF 2.5 million in the global and preceding regional phases of the awards cycle. The competition encourages sustainable responses to key issues related to building and construction.

## Creating value with partners and stakeholders

We recognize the importance of identifying, meeting with and listening to our stakeholders. Most Group companies host stakeholder dialogues and cooperate with external organizations. We continue to be involved in the communities in which we operate with project work and in-kind support.

Holcim remains committed to the UN Global Compact, and communicates annually on progress according to the Compact's ten principles. The alliance with the German Technical Cooperation (GTZ) is proceeding well. Our jointly produced guidelines for responsible co-processing of waste materials in cement kilns will be launched in July 2006.

This report has been prepared in accordance with the 2002 Global Reporting Initiative Guidelines. It represents a balanced and reasonable presentation of our organization's economic, environmental and social performance.

## **Recognition – internal and external**

Our commitments have led to improved performance. The best evidence for this is the awards for sustainable development received by our companies.

We are proud that Holcim was acknowledged "leader of the industry" in the Dow Jones Sustainability Index 2006 and again included in the FTSE4Good and Ethibel Indexes.

We thank our Holcim employees for living up to our commitment to sustainable development, both inside and outside the company, as well as our customers, partners and other stakeholders for their valuable contributions.

Rolf Soiron, Chairman of the Board of Directors

n. Aman

Markus Akermann, Chief Executive Officer



## telephone osoo

Salford City Council





"Our new sporting village had to be able to withstand the inclement weather. Charcon was contracted to design a sustainable drainage system."

Mark Boardman, project engineer for Urban Visions, Salford City Council, UK

## Learning from Aggregate Industries' experience

Aggregate Industries provides us with many opportunities to learn from their experience to deliver sustainable products to market. Building customer confidence in such alternatives is a long-term undertaking and requires close collaboration with stakeholders sharing a passion for sustainable construction. Aggregate Industries' Charcon division, for example, offers a wide range of sustainable drainage systems to improve water quality in sensitive locations, using recycled plastics to decrease the need for new materials.

Many conventional surface water drainage systems cannot manage heavy volumes of runoff, and their failures can lead to flooding or pollution. Using the sustainable drainage systems concept in development planning aims to minimize or prevent these problems. In 2005, Charcon provided sustainable products and specialist advice to Salford City Council on Manchester's outskirts for the development of a car park drainage and filtration system at a sporting village. Part of a UK government social initiative, the design concept posed an early challenge for the multidisciplinary team. It would need to incorporate sustainable construction materials while keeping an eye on costs.

The criteria for selection were also based on site-specific factors, including ground permeability, site sensitivity and the need for controlled release or re-use of water. The drains also needed to be able to control runoff from a once in a hundred years rainfall. The answer was a unique Charcon product, Permavoid<sup>™</sup>, a geocellular interlocking box structure (strong but light, made of recycled plastic). This product and technique fitted perfectly with the sporting village's vision of a sustainable community.



## Group key facts

The integration of SD into our vision and strategy helps us achieve our business objectives.

Our key sustainability challenges continue to be safety at work and reducing CO<sub>2</sub> and other atmospheric emissions.



"Aggregate Industries has combined several of its latest product technologies to offer a wide range of sustainable drainage systems that help with environmentally sound stormwater management and flood control", says **Phil Tomlinson**, national sales manager for Charcon's sustainable drainage systems product range.



A main benefit of sustainable drainage systems is improved water quality in sensitive locations. The approach mimics nature, enabling natural biodegradation of hydrocarbons and dilution of other potential contaminants.

Sustainability is a key element in Salford City Council's values. Project engineer **Mark Boardman** consulted Charcon to find a sustainable drainage system solution for its new sporting village, inaugurated in March 2006.



The system maximizes water storage at minimum depth and is suitable for any application where a traditional aggregate sub-base could be used. It saves on virgin materials by using recycled plastic.

## Integrating sustainability in core strategy

"To promote sustainable construction, Holcim is keenly focused on first implementing sustainability actions at home. It's good to know that they take care when producing cement."

Klaus Töpfer, former Director-General UNEP and member of the Advisory Board of the Holcim Foundation, Germany

In our Annual Report 2005:

- <sup>1</sup> Our key success factors, page 14.
- <sup>2</sup> Information on Business Risk Management, page 19.

Working across the triple bottom line (economic, environmental and social) means embedding SD in our vision, strategy and management systems, turning challenges into opportunities, innovating, and ensuring strong corporate governance and organizational structures.

## Vision and strategy

Holcim aspires to be the most respected and attractive company in our industry, creating value for all stake-holders.

To achieve this goal as well as to secure our license to operate on a long-term basis, we embed the principles of SD – value creation, sustainable environmental performance and corporate social responsibility – in our core business strategy (see below).

Creating value gives us the capital, technology and resources needed to make sustainable development happen.<sup>1</sup>



Working within the triple bottom line

The model also demonstrates that environmental and social issues are well-entrenched in management systems and practices.

## Sustainability priorities

Business Risk Management, a corporate function reporting to the CEO, supports Group companies by identifying sustainability challenges as well as potential risks and opportunities.<sup>2</sup>

To maintain a deep understanding of the range of issues we face, Group companies maintain a systematic dialogue with stakeholders (see page 31). The issues identified at Group and Group company levels define our priorities and include:

- Occupational health and safety to improve our performance
- Climate and energy to reduce our emissions and ecological footprint
- Community involvement to maintain our license to operate
- Stakeholder relations to work with a variety of stakeholders
- Sustainable construction to assure a more efficient and sustainable use of our products

Strategic choices and innovation potential We see opportunities to influence the various stages of the construction value chain and are committed to developing and implementing more innovative and sustainable products, processes and services. The Group's ongoing innovation strategy in this area promotes eco-efficient cementitious products with minimum environmental footprints during production and use. Learning from the experiences of new Group companies also strengthens our understanding of sustainability opportunities.

The case study at the beginning of this chapter describes how we can learn from Aggregate Industries.

## Sustainable construction

The Holcim Foundation for Sustainable Construction aims to be a catalyst for sustainability in the construction industry by supporting innovative solutions worldwide. To achieve this goal, the foundation conducts an international sustainable construction competition (Holcim Awards) and an academic symposium (Holcim Forum), provides financial support for research and construction projects (Seed Funding) and promotes collaboration through publications and exhibitions.

In collaboration with five leading technical universities, the foundation developed "target issues" for sustainable construction as criteria for its activities. These provide the framework for evaluating submissions in the Holcim Awards and include: innovation and transferability, ethical standards and social equity, ecological quality and energy conservation, economic performance and compatibility, and contextual response and aesthetic impact.

The promotion of sustainable construction among our stakeholders – architects, engineers, planners, building developers and others – resulted in more than 3,000 submissions from 118 countries. Independent expert juries awarded prizes to 46 outstanding projects worldwide.

The Holcim Awards provide prize money of CHF 2.5 million for each three-year competition cycle. The first global Holcim Awards were jointly presented to an urban improvement project, which included social innovations, in a large shanty town

## Corporate governance and management systems

We have improved our internal control mechanisms over the past few years to manage the increasing requirements of corporate governance, including, for example, the separation of the functions of chairman of the Board of Directors and CEO and the introduction of a standard registered share.<sup>3</sup>

in Caracas, Venezuela, and a project to place a railway station underground to recover land for a new urban area combining structural and landscape aspects in Stuttgart, Germany.

The foundation's Advisory Board, made up of renowned personalities from politics, science and business, share a devotion to sustainable development. They ensure alignment of the foundation's mission with its activities and also act as ambassadors in the wider community.

The foundation conducts symposia on sustainable construction to encourage discussion and debate on innovation and progress. At the first Holcim Forum, on the topic of "Basic Needs," 120 experts from 35 countries deepened the dialogue, strengthened partnerships and achieved tangible results. The next Holcim Forum will be held in April 2007 in China on the theme of "Urban\_Trans\_Formation – challenging the 21st Century".

For more information visit: www.holcimfoundation.org



In our Annual Report 2005:

<sup>3</sup> Information on corporate governance, page 18/page 62.

The San Rafael-Unido, Urban Integration Project: an urban improvement project that included social innovations in a large shanty town in Caracas, Venezuela, was a joint winner of the Global Holcim Awards Gold. On our website:

<sup>1</sup> Holcim Code of Conduct.

In our Annual Report 2005:

- <sup>2</sup> Organizational chart, page 21.
- <sup>3</sup> Description of our training and learning approach, page 34.

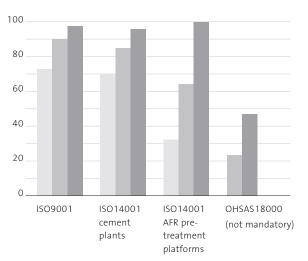
Code of Conduct

In 2004, the Holcim Code of Conduct was published as an integral part of our mission statement. It establishes a common framework and direction for the conduct of daily business. Covering all aspects of our operations – from fair competition, bribery and corruption, to gifts, donations and conflicts of interest – the code applies to all Group employees, contractors and operations where Holcim exercises management control. Its message is clear: violations will not be tolerated. Non-compliance may lead to disciplinary sanctions, including termination of employment.<sup>1</sup>

## **Management systems**

Holcim maintains a strong operational framework, in which all Group management systems are embedded. Its strength lies in our "local management, global standards" approach, ensuring flexibility to meet local needs within the parameters of a global mandate.

All Group companies were requested to implement ISO9001 and ISO14001 by the end of 2004. Although a moving target because of ongoing acquisitions by the Group, implementation of ISO9001 and ISO14001certified management systems is progressing well.



## Implementation of ISO-certified management systems

2004 2005 2006 forecast

We forecast that more than 90% of Group companies will have achieved the target by year-end 2006 (see graph). Certifying to OHSAS18000 also reinforces the safety message.

## **Organizational strength**

Our reputation as an industry leader in sustainability is based on compliance with internal and external standards as well as a commitment to deliver on targets.

In September 2004, our SD organization was streamlined at Group level.<sup>2</sup> Functional responsibility for sustainable development was united under Executive Committee member Benoît-H. Koch, covering both Corporate Industrial Ecology and CSR/SD Coordination. To reinforce compliance, OH&S reports directly to Executive Committee member Thomas Knöpfel.

An SD Steering Committee as a subcommittee of the Executive Committee (including CEO Markus Akermann, Executive Committee members Benoît-H. Koch and Thomas Knöpfel, and respective functional heads) supports executive and Board decision-making processes.

## Growing internal awareness

Creating an SD culture is as much about growing awareness among all employees as aligning business strategies. SD issues are regularly included on the agenda of the Board, Executive Committee, and the annual Management Meeting for all Group company CEOs. We use a suite of SD forums for the environmental, alternative fuels and raw materials (AFR), CSR, OH&S and communications ambassadors of our message, and maintain close links with other corporate training and management events.<sup>3</sup>



## Progress toward targets

The following table is a status report on our advancement toward the goals set in our previous reports. Our priority over the next two years is to ensure that Group companies and new acquisitions embrace these existing measures. Two new targets have been added, in the areas of atmospheric emissions and occupational health and safety.

- <sup>4</sup> Many of these are "moving targets" due to the continued dynamic growth of the Holcim Group.
- <sup>5</sup> 2005 data covered 44 Group companies.

## Progress toward targets<sup>₄</sup>

Management systems         Develop and implement ISO3001 and 14001-certified management systems at all cement plants 2004         >>>>>>>>>>>>>>>>>>>>>>>>>>>>	Area	Target	Year	Status 2005	Page
Extend environmental reporting to concrete and aggregate operations2006V233C02 and resources utilization Reduce global average specific net C02 emissions (kg net C02/tonne cementitious materials) by 20%.331Environmental impactsReduce global average specific nitrogen oxides, sulfur dioxide and dust emissions (g pollutant/tome)14.0%240Environmental impactsReduce global average specific nitrogen oxides, sulfur dioxide and dust emissions (g pollutant/tome)14.0%240Social performancecementitious materials) by 20%, using 2004 as reference2010New231Social performancenetograde our corporate social responsibility approach into business plans2003334%360Coccupational health and surper ORASS management systems comply with Group standard2005>>>313Sippler relationsIntegrate our corporate social responsibility approach into business plans2006New311Sippler relationsIntegrate our corporate social responsibility approach into business plans to is achieved2009New314Sippler relationsIntegrate our corporate social responsibility approach into business plans2006New314Sippler relationsIntegrate our corporate social responsibility approach into business plans2006New314Sippler relationsIntegrate corporate social responsibility approach into business plans2006New314Sippler relationsUse the colos set out in the carbon dioxide protocol to define and make public corporate2006New324Co2 emiss	Environmental performance				
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	>> ongoing; √ achieved				

"ArCli trains Acehnese women to become entrepreneurs by making concrete blocks and roofing. They will play an important role in reconstructing Aceh."

Ibu Emi, trainer at the Architectural Clinic (ArCli), Indonesia

## **Reconstruction of Aceh, Indonesia**

With a chronic housing deficit of some 130,000 dwellings on the Indonesian island province of Aceh, as well as 80,000 houses destroyed by the tsunami disaster in late 2004, construction and rebuilding are urgent priorities for the Indonesian Reconstruction Agency. And the agency wants to ensure that the local economy benefits from this activity.

In line with this objective, Holcim Indonesia, the German Technical Cooperation (GTZ) and the Indonesian Institute of Architects formed an alliance to support the use of sustainable building materials and alternative construction methods oriented toward self-help housing development in Banda Aceh, the provincial capital.

The building sector is the engine to restart the economic development of Aceh. The partnership established the Architectural Clinic (ArCli) as a stakeholder resource center. Taking into account local conditions such as the environmental and social impact of using timber for reconstruction, ArCli demonstrates hands-on, high quality sustainable construction methods for home-owners and self-builders, contractors, concrete product manufactures and others along the value chain. Concrete blocks have proved themselves the most sustainable solution.

Holcim Indonesia is supporting the various initiatives with a reconstruction fund. By the end of 2005, CHF 1.25 million was spent – of which CHF 300,000 was dedicated to ArCli.

An important outcome has been the implementation of more cooperations between ArCli and other organizations, such as UN-Habitat, the United Nations Environment Programme (UNEP) and the International Labour Organization.





Ibu Emi's heart was touched when she saw the many people who lost their houses due to the tsunami. As an Acehnese woman who recently graduated from high school, she decided to help and became a trainer for ArCli.



The Holcim partnership was introduced to stakeholders at a Green Conference in Banda Aceh, hosted by Greenpeace and UNEP. Criteria for sustainable building materials and methods were debated and determined in workshops convened by ArCli. A subsequent exhibition demonstrated the range of materials and available suppliers.

## Group key facts

CHF 4,434 million distributed to employees and governments.

80% of our purchases are locally sourced.

Our portfolio offers customers a variety of products, of which 60% are composite cements made with mineral components.



ArCli communicates its message through a comic book called "My Dream House". Says **Bruno Dercon**, housing policy adviser at UN-Habitat: "The comic has great potential to be understood by people of all ages. We plan on printing 30,000 copies for dissemination in Aceh, as it fulfils the requirements of UN-Habitat to initiate and inspire self-help reconstruction groups throughout the province."



Workshops concentrate on sustainable housing solutions, training concepts for building material production, curricula and marketing strategies.

# The economic case for sustainable development

"Recycling on an industrial scale makes sense on economic and environmental grounds. We view Holcim as a leader in its peer group due to a long-term and consistent strategy of increasing its use of alternative fuels and raw materials."

Mike Bridges, building and construction analyst, Dresdner Kleinwort Wasserstein, UK

Reporting on our economic impacts helps us to examine wider societal benefits and costs that arise from our activities. We aim to build sustainable relationships with customers and suppliers, thus enhancing responsibility along the supply chain.

## **Economic impacts**

The solid financial position of Holcim and our commitment to SD go hand-in-hand. Strong operational performance and continuous growth generate shareholder value. At the same time, our business activities have a direct economic impact and benefit the communities in which we operate. We create jobs, pay salaries and invest in human capital. We pay taxes in the country of operation that fund public services and infrastructure. We generate employment for suppliers and provide products that satisfy our customers' needs (see value creation chart at chapter-end).

Indirect benefits are more difficult to measure. Nevertheless, we are confident that the presence of Holcim significantly contributes to the economic health of a region, through both upstream and downstream employment along the value chain, as well as income generation.

## **Customer relations**

In 2005, the net value of our global sales was CHF 18.5 billion (2004: 13.2). Holcim aims to be the preferred brand for cement, aggregates and other construction materials and services in all markets. We regularly measure customer satisfaction and loyalty. In 2005, we conducted the cement industry's firstever, worldwide standardized brand equity survey, with more than 12,000 interviews in 31 countries. In five key markets Holcim assessed the positive influence of our CSR and SD programs on the brands.

To support ISO9001 certification, Group companies monitor customer perception. The methods for obtaining and using this information may include formal customer surveys: 66% of Group companies reported conducting such surveys, and 85% of these monitored customer satisfaction.

Product stewardship is a key focus of our customer relations; 55% of Group companies have a specific policy covering customer use of products and services (product information and labeling).

## Sustainable products

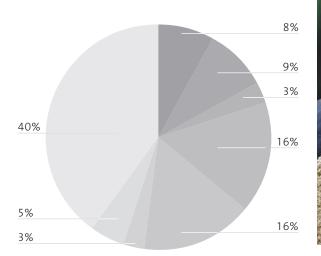
We promote the use of sustainable, eco-efficient products such as composite cements containing mineral components (see graph). These mineral components are cement constituents that are not derived from clinker production. They include blast furnace slag from steel manufacture, fly ash from coal-fired power generation, and natural pozzolan and limestone. In 2005, 60% of cement types produced by Holcim contained significant amounts of these materials.

By adding mineral components we are able to differentiate our products and offer customers tailor-made solutions with specific properties such as increased durability and workability. New products like selfcompacting concrete perform even better in combination with composite cements. Mineral components help to lower the CO<sub>2</sub> content in the final product. Their increased use is reflected in our declining clinker factor, which we reduced to 74.7% in 2005. This is an improvement of 2.3% in one year (see environmental performance chapter, p. 26).

## Cement types produced by Holcim\* in 2005

Slag cement	8%
Pozzolan cement	9%
Fly ash cement	3%
Limestone cement	16%
Multiple blend cement	16%
Mineral components and	
other cementitious materials	3%
Masonry cement, oilwell cement,	
white cement, special binder	5%
Ordinary Portland cement	40%

\* Principal companies only.



## Product portfolio management

Holcim Germany is taking advantage of its government's Kyoto/EU CO2 emissions reduction commitments by increasing the use of blast furnace slag in composite cements. Composite cements with 20% to 40% slag (by weight) are standard binders for many concrete applications. The company formulated a new product portfolio strategy that would see slag cement production increase to two-thirds of the overall product mix by 2008, leading to a 40% increase in slag use in just four years. Security of supply is critical to achieving this goal, as is entrenching the product in the market. A joint venture partnership with a major steel producer, with specific quality requirements, is a key success factor in this sustainability initiative.



On our website:

<sup>1</sup> Information about our low-cost housing initiatives. Accessing the low-cost housing market Appropriate housing is a prerequisite for a family's security and improved quality of life. The current estimated housing deficit worldwide confirms the need for housing solutions that benefit low-income communities while creating new markets for business.

Building on the success of the Mi Casa initiative of Holcim Apasco in Mexico, we intend to provide lowcost housing solutions for low-income segments of society elsewhere in Latin America and also in Asia. Examples include working with a microfinance provider in Sri Lanka and initiating pilot projects in Brazil, Colombia, El Salvador and Venezuela.'

Masons training: a key for low-cost housing initiatives

Training and capacity building of self-builders and clients is key to ensuring the proper application of cement products and the quality of the building. The Holcim Philippines Mason Training Program consists of a certified seven-day training course, a masonry skills competition at regional and national level, and an award recognizing outstanding masons. Since 2003, some 800 masons have been trained in ten regions throughout the country, and the certification rate has increased from 33% to 97%. For an investment of CHF 80,000, the program enables Holcim to engage and improve relationships with key stakeholders while at the same time helping masons improve their skills and incomeearning opportunities.



The challenge is to grow these initiatives to a size large enough to begin to cope with the huge housing deficit. The case study at the beginning of this chapter outlines our contribution to the reconstruction project in Indonesia following the tsunami disaster in December 2004.

## Supplier relations

The total cost of all goods, materials and services Holcim purchased in 2005 was CHF 10.1 billion (2004: 7.1). We estimate that around 80%, or CHF 7.1 billion (2004: 5.3), were made in the country of operation, generating indirect benefits through employment, business for smaller companies, and revenues for governments. More than 85% of contracts are paid in accordance with agreed terms.

Our Group procurement policy and supplier qualification program include social accountability criteria and ISO14001 certification.

By the end of 2005, 61% of global suppliers had been screened according to a self-assessment questionnaire. All committed to respect social accountability standards. The remaining global suppliers will be assessed in 2006.

In 2005, 61% of Group companies reported that they had screened suppliers on quality assurance (e.g. ISO9001), 61% on environmental management (e.g. ISO14001), 77% on health and safety (e.g. OHSAS18000), 43% on employment standards and 37% according to UN Global Compact principles. All contracts must include a clause securing the health and safety of all personnel.

To stimulate corporate markets for green power, Holcim joined the Green Power Market Development Group Europe, an initiative of the World Resources Institute and Business for Social Responsibility. Diversifying our corporate energy use with renewable resources helps reduce climate impacts, and we are working toward launching a series of green power projects (e.g. wind, solar, geothermal, biomass).

## Economic performance data

## **Economic impacts**

## Value creation for Holcim and key stakeholders

choracity					
2003	in %	2004 1	in %	2005	in %
12,600		13,215		18,468	
-6,812		-7,115		-10,143	
-1,446		-1,444		-1,339	
4,342	100%	4,656	100%	6,986	100%
-2,405	55%	-2,481	53%	-3,569	51%
-510	12%	-510	11%	-865	12%
-441	10%	-464	10%	-564	8%
-495	12%	-545	12%	-734	11%
491	11%	656	14%	1,254	18%
	2003 12,600 -6,812 -1,446 4,342 -2,405 -510 -441 -495	2003       in %         12,600       -6,812         -6,812       -1,446         4,342       100%         -2,405       55%         -510       12%         -441       10%         -495       12%	2003       in %       2004 '         12,600       13,215         -6,812       -7,115         -1,446       -1,444         4,342       100%       4,656         -2,405       55%       -2,481         -510       12%       -510         -441       10%       -464         -495       12%       -545	2003       in %       2004 ''       in %         12,600       13,215       -7,115         -6,812       -7,115       -1,444         -1,446       -1,444       -1,444         4,342       100%       4,656       100%         -2,405       55%       -2,481       53%         -510       12%       -510       11%         -441       10%       -464       10%         -495       12%       -545       12%	2003       in %       2004 '       in %       2005         12,600       13,215       18,468         -6,812       -7,115       -10,143         -1,446       -1,444       -1,339         4,342       100%       4,656       100%       6,986         -2,405       55%       -2,481       53%       -3,569         -510       12%       -510       11%       -865         -441       10%       -464       10%       -564         -495       12%       -545       12%       -734

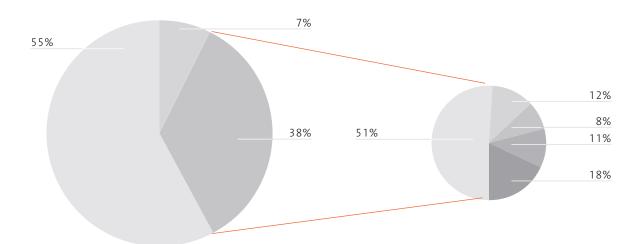
<sup>1</sup> Restated in line with new and revised International Financial Reporting Standards, effective January 1, 2005.

Value creation for Holcim and key stakeholders

as percentage of net sales in 2005	
Input factor (cost of all goods, materials	
and services purchased)	55%
Depreciation and amortization	7%
Benefit to employees, governments,	
shareholders and creditors	38%

Benefits to employees, governments, shareholders and creditors

Benefit to employees	51%
Benefit to governments (taxes)	12%
Benefit to shareholders (incl. minorities)	8%
Benefit to creditors	11%
Retained in business	18%



"When the project started, we hoped that this solution would work. In 2005, 30,000 tonnes of fly ash were sent to the cement plant instead of being left as a burden for the future."

Ludovic Zelici, technical director, Govora power plant, Romania

## Reducing CO2 emissions in Romania

After acquiring three cement plants in Romania between 1997 and 2000 (Turda, Campulung and Alesd), Holcim gave high priority to the refurbishment and improvement of plant ecoefficiency and to projects which reduce CO2 emissions. We seized the opportunity for CO2 reduction through the production of composite cements based on the use of fly ash, a waste of coal-fired power stations.

Holcim Romania developed and implemented the project as part of the Joint Implementation flexible market mechanism of the Kyoto Protocol, under the supervision and with the financial support of the government of the Netherlands, and with the approval and support of the Romanian government.

The project posed some significant challenges. Fly ash is usually wet-discharged in Romania and slurry-pumped for landfilling close to the power plant. Yet for cement production fly ash should be dry-discharged. Investments were made at the cement plants for fly ash use and also at the power plant; dry discharging saves energy and water. Now the Govora power plant supplies two of three Holcim locations.

The project will result in a reduction of around 1.3 million tonnes of CO2 between 2004 and 2012 (given that the use of fly ash will reduce the clinker factor). Monitoring of results for the first year (2004) showed a reduction of 133,000 tonnes of CO2, exceeding expectations by 33%. In addition, over 30,000 tonnes of fly ash were recovered instead of being landfilled. By the time the refurbishment, productivity and energy efficiency projects have been completed at the end of 2006, more than CHF 55 million will have been invested, an important contribution to environmental protection and CO2 reduction in Romania.







Holcim project manager **Oana Dicu** is pleased with progress to date: "Winning the Dutch government tender with a project that reduces our CO2 emissions while offering a solution to a power plant's waste problem is one of the most challenging, yet rewarding, experiences I have had."



Stakeholder involvement from the beginning was a key success factor for the project and has led to positive results. Both local authorities and communities close to the cement and power plants have welcomed the cleaner environment resulting from the project.

## Group key facts

Climate and energy are the most significant environmental issues for Holcim; in 2005, our net specific CO2 emissions had decreased by 14.7% relative to 1990.

Our thermal substitution rate of 12.8% saved 1.7 million tonnes of coal and used 2.5 million tonnes of waste in 2005.

We have set a new reduction target for atmospheric emissions of key substances: NOx, SO2 and dust.



In the context of this project periodic verification of CO2 emission reductions is undertaken by an independent third party. KPMG Sustainability B.V. verified emission reductions for the year 2004 according to the Kyoto Protocol and the Marrakech Accords.



Apart from bringing stateof-the-art technology in cement production to Romania, the project also enabled the introduction of a composite cement using fly ash, an industry-first for Romania.

# Eco-efficiency: ensuring continuous improvement

"The road to sustainable development is long and often unpredictable. Holcim shows with this report to be firmly in the driver's seat, steering the industry toward a cleaner environment."

Anders Wijkman, member European Parliament and president of Globe EU 1

## On our website:

- <sup>1</sup> Information on Holcim and Globe.
- <sup>2</sup> Holcim Environmental Policy.
- <sup>3</sup> Our climate positions.
- <sup>4</sup> The full KPMG assurance report, and our response.

The following sections on climate and energy, co-processing waste materials, other atmospheric emissions and other environmental impacts describe our efforts to improve environmental performance across our cement operations.<sup>2</sup> Information about aggregates and ready-mix concrete is included for the first time.

## Climate and energy

Climate and energy are the most significant environmental issues for Holcim. Our strategy to reduce CO2 emissions hinges on product development (including composite cements), thermal energy efficiency (improving process technology), optimization of fuel composition (including use of waste as fuel) and reduction/prevention of cement kiln dust generation.

We actively contribute to the development of international policies and mechanisms and strive to develop sound knowledge of emerging issues.

The start of the European Union's Emissions Trading System (EUETS) in 2005 provided us with an opportunity to participate in a market-based mechanism. While we acknowledge this period as a time of "learning by doing", we seek improvements in the next commitment period (2008–2012) and beyond based on the principles of eco-efficiency. A sectoral benchmarking approach advocated by Holcim is one such system.<sup>3</sup>

Holcim is a global company, so the Kyoto Protocol's Clean Development Mechanism provides us with the opportunity to offset our developed country emissions through the transfer of capital and technology to developing countries. This is environmentally beneficial and can be financially attractive, providing a solid business incentive for early action.

## **Reporting CO2 emissions**

We are on target to reduce our global average net specific CO2 emissions by 20% by 2010, with 1990 as the base year, reported according to the WBCSD/WRI Cement CO2 Protocol (see data section).

KPMG provided independent assurance over the four key indicators of direct CO<sub>2</sub> emissions in the 2004 and 2005 CO<sub>2</sub> inventory of our global cement operations. Our commitment to external data assurance is also in line with the CSI objective to seek third party assurance of all members' CO<sub>2</sub> data, to ensure comparability and transparency within the sector.<sup>4</sup>

## Mineral components and clinker factor

Substituting clinker in cement with appropriate secondary materials, such as blast furnace slag or fly ash, reduces both the fuel and raw materials required per tonne of cement produced. Lowering the clinker factor is one of the best, technically proven approaches for reducing process CO2 emissions and is a key factor in the CO2 reduction strategy of Holcim.

The Romanian case study at the beginning of this chapter describes how the use of mineral components enabled us to use Joint Implementation, one of the flexible market mechanisms of the Kyoto Protocol.

## Co-processing waste materials

Holcim advocates co-processing of waste in clinker production. We are convinced of the sustainable development benefits of alternative fuels and raw materials (AFR) use. The economic imperative to decrease fossil fuel use and costs is matched by the environmental and societal benefits of lower global CO2 emissions, better waste management and fewer uncontrolled landfills. Our AFR policy guides our behavior.<sup>5</sup>

## Safe and efficient handling of contaminated pet food

An unlikely yet value-creating source of alternative fuel, from a business as well as societal point of view, is contaminated pet food. During 2005, pet food manufacturers in both Venezuela and Thailand had contamination problems to solve, thereby providing Holcim with the opportunity to demonstrate the safe and efficient handling of this material to national authorities, as well as to the manufacturers themselves. In Venezuela, 8,000 tonnes of pet food was classified as hazardous waste, requiring disposal. In Thailand, more than 13,000 tonnes was voluntarily recalled by the manufacturer. A letter of intent required Group company Siam City Cement to take responsibility for co-processing according to all environmental and safety regulations, and to assist third party inspectors and auditors to confirm as such. Holcim was able to demonstrate the environmental benefits of co-processing, with each tonne of pet food replacing 1.2 tonnes of traditional fossil fuel.



Our acknowledged leadership position and expertise in AFR means that we are involved in helping develop public policies on waste management and environmental regulations, particularly in developing countries. The Holcim cooperation with GTZ has been a key strategic tool to achieve this. The guidelines developed by this alliance, which will be launched in July 2006, encourage the private sector to develop techniques and know-how regarding co-processing as well as to engage the public sector to apply and maintain environmental standards and OH&S regulations.<sup>6</sup>

## Other atmospheric emissions

Monitoring and decreasing atmospheric emissions remain Group priorities. Continuous investment to upgrade plant equipment as well as ongoing maintenance and training are required by our emissions monitoring and reporting (EMR) standard. At the end of 2005, the EMR standard was implemented at 89.2% of kiln stacks for an investment, to date, of more than CHF 36 million. Future investments are expected to total an additional CHF 14 million. We make knowledge gained through this work available to local test houses and regulators.

The EMR standard is designed to assure high quality emissions monitoring and reporting at all facilities. We are conducting a detailed review of our NOx, SO2 and dust emissions data to help refine and improve global data collection processes during 2006.

To encourage continuous improvement, we have set a Group emission reduction target.

## New target

We will reduce global average specific nitrogen oxides (NOx), sulfur dioxide (SO2) and dust emissions (g pollutant/tonne cementitious materials) by 20% by 2010, compared to 2004 levels. On our website:

<sup>5</sup> Our AFR policy.

<sup>6</sup> Additional information on Holcim and GTZ. On our website:

## <sup>1</sup> Environmental and social impact assessment information.

<sup>2</sup> Information on biodiversity, conservation and rehabilitation initiatives.

## Other environmental impacts

Quarry management and rehabilitation Holcim plans its raw materials extraction and management according to a defined process that incorporates careful management of impacts at each stage of quarry operation.<sup>1</sup> Quarry rehabilitation guidelines have been developed and implemented for all cement-related quarries (see data section). Around half of our Group companies report biodiversity issues that require management. Our guidelines help us deal with such issues in consultation with a variety of stakeholders over the lifetime of a quarry. Rehabilitation activities have resulted in many conservation and restoration projects. Previous quarry sites now host habitats such as wetlands, forests and natural grasslands, in several cases providing shelter for rare or endangered species.<sup>2</sup>

## Water

Cement production requires water for cooling heavy equipment and exhaust gases and for preparing slurry in wet process kilns, which consume more water than modern dry cement plants.

Most water evaporates during the process. Any that remains is emitted as process effluent, and can be affected by the presence of solids, altered pH, or high temperatures. Installation of closed loop water cycles or settling ponds helps us use water resources more efficiently.

Group companies invest in improved water management practices and are installing water meters to monitor water use and improve water efficiency. For more information see data section.

## Solid by-products

The main solid by-product of cement manufacture is cement kiln dust (CKD), a powder captured from kiln exhaust gases. Most CKD is returned to the kiln system, thus improving our eco-efficiency. CKD that cannot be returned to the kiln system can be recycled into the finished cement, sold, or landfilled. In 2005, 20 Holcim cement plants generated CKD that was not returned to the process (2004: 22). A total of 0.68 million tonnes of dust were disposed (2004: 0.79), representing 7.3 kg/t clinker (2004: 8.8). We are pleased with this continuing downward trend, mainly due to process modifications and new product formulations to increase its re-use.

## **Environmental compliance**

Cement plants report regulatory non-compliance in cases that threaten air, water or soil quality, that can directly or indirectly endanger human, animal or plant health, could affect the company's reputation, or may result in a significant fine or penalty.

Holcim seeks to ensure that all its operations are fully environmentally compliant. In 2005, 24 noncompliance cases were reported by 18 cement plants (2004: 40 cases by 22 plants). The majority of cases related to permit limits being exceeded in amounts that did not threaten the environment or health. The associated fines and penalties paid totaled CHF 165,000 (2004: 158,500), with two major cases contributing CHF 137,500.

## **Environmental investments**

The Group is committed to ongoing investment to ensure that our operations are as environmentally sound as possible. In 2005, the Group invested CHF 104 million (2004: 78) to improve the environmental sustainability of production facilities in all areas. We maintain appropriate provisions with respect to environmental liabilities, based on legal and contractual obligations. Provisions for site restoration and other environmental liabilities amounted to CHF 388 million (2004: 249). Aggregates and ready-mix concrete performance

This report is our first to include aggregates and ready-mix concrete environmental performance data, a target for 2006 we had set for ourselves.

**Aggregate quarries** provide similar challenges as limestone operations, including noise, blast vibration, ground and surface water issues and visual impact. In 2005, nine of our 337 quarries reported noncompliance with laws or regulations, and total fines amounted to CHF 83,500. Dust control and water management are key issues for **ready-mix concrete plants**. The reduction of fugitive dust emissions is possible for many sources: for example, bag filters for cement unloading. In 2005, 21 of our 864 ready-mix concrete plants reported non-compliance, with total fines amounting to CHF 90,500.

More and more Group companies are making use of recycled concrete to save virgin aggregates. Figures for total quantities recycled will be included in the next report. The following example suggests what is possible.

## Recognized quarry rehabilitation activities

Holcim Aridos, an affiliate of Holcim Spain, manufactures and distributes aggregates for the construction industry. National and European awards for quarry rehabilitation have recognized its commitment to sustainable development over the years.

In 2005, two aggregates facilities of Holcim Aridos received a national prize from the national trade association for its results at quarries and gravel plants. The Isabel quarry in Malaga, one of the winners, was then selected to represent Spain in the environment restoration category at the European trade association's sustainable development awards, where it won first prize.



## Recycling concrete

By recycling concrete, our Canadian Group company St. Lawrence Cement offers its customers – including government, municipalities and private owners – an alternative to virgin aggregates. Recycling takes place on construction sites as well as in construction yards.

For example, as part of the company's contract at Lester B. Pearson International Airport in Toronto, St. Lawrence Cement recycled and crushed 450,000 tonnes of concrete rubble for use as road base material in the preparation of new aprons.



## Environmental performance data

On our website:

Notes on exclusions and the restatement of historical CO2 data.

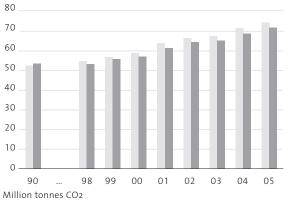
## Climate and energy

		2003	2004	2005
Absolute gross emissions*	Million tonnes CO2	67.3	71.8	74.5
Absolute net emissions*	Million tonnes CO2	65.0	69.3	71.9
Specific gross emissions*	kg CO2/tonne cementitious			
	materials	677	673	658
Specific net emissions*	kg CO2/tonne cementitious			
	materials	654	650	635
*				

\* 2004 and 2005 data are covered by the KPMG assurance statement.

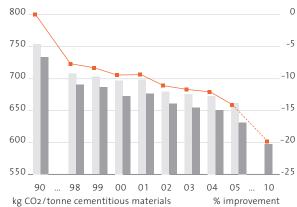
## Absolute gross and net direct CO2 emissions

Absolute gross CO2	
Absolute net CO2	



Specific gross and net direct CO<sub>2</sub> emissions

Specific gross CO2	
Specific net CO2	
<ul> <li>Improvement rate specific net CO2</li> </ul>	

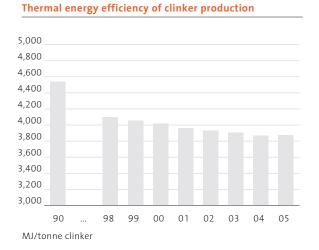


Despite a 59% increase in our global cement production between 1990 and 2005, our increase in absolute net CO2 emissions was only 35%, due to improvements in energy and process efficiency, the growing amount of waste-derived fuel used in kilns, and increasing use of mineral components.'

In 2005, we consumed 145.6 million tonnes of natural raw materials (2004: 140.5) and 16 million tonnes of alternative materials (2004: 13.8) to produce 113.3 million tonnes of cement (2004: 106.8). We are on track to meet our target. On a worldwide level, our specific CO<sub>2</sub> emissions have improved 2.3% since 2004. At year-end our global average specific net CO<sub>2</sub> emissions had decreased by 14.7%, relative to 1990.

Indirect CO2 emissions due to purchased electricity totaled 5.5 million tonnes in 2005 (2004: 5.1).

In 2005, we used 347,371 TJ of thermal energy worldwide (2004: 335,308) and 12,173 GWh of electricity (2004:11,552).

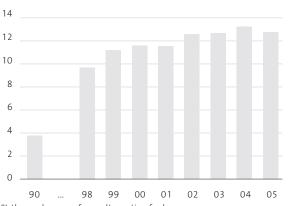


Energy efficiency declined slightly. However, new expansion projects planned in North America, Europe and Asia will significantly improve this result.

## Thermal energy mix for 2005

Thermal energy mix for 2005	
Coal	41%
Petcoke	23%
Heavy fuel	4%
Natural gas	15%
Shale and lignite	4%
Alternative fossil fuels	10%
Alternative biomass fuels	3%
3% 10% 4% 15% 4%	41%

## Thermal substitution rate by alternative fuels

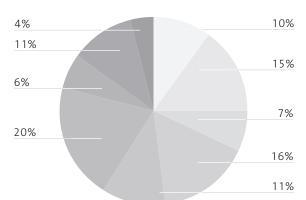


% thermal energy from alternative fuels In 2005, we consumed less biomass than in previous

years. This is due to supply issues in Europe, where government subsidies are redirecting biomass to the power industry.

## Waste types used as alternative fuels

Waste oil	10%
Used tires	15%
Plastics	7%
Solvents	16%
Prepared solid substitute fuels	11%
Other fossil-based wastes	20%
Animal meal	6%
Agricultural waste/charcoal	11%
Other biomass	4%



## Co-processing waste materials

In 2005, our thermal substitution rate was 12.8%; this is the rate at which we substituted non-traditional fuels for standard fossil fuels, and is equivalent to saving 1.7 million tonnes of coal and using 2.5 million tonnes of waste.

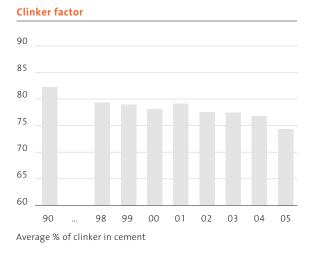
23%

On our website:

<sup>1</sup> Data presented as grams per tonne of clinker, according to our CSI commitment.

## Mineral components and the clinker factor

Group average clinker factor improved from 77% in 2004 to 74.7% in 2005. This is a 2.3% improvement in one year, which is the best year-to-year improvement since 1990.



## Other atmospheric emissions

Review of the data confirms that implementation of our EMR standard enables better tracking of the sources of poor performance and improves data quality and monitoring.

Since 2003, net specific emissions for NOx, SO2, organics and mercury have decreased. The increase in dust is likely to be due to a measurement error and a technical problem that resulted in an underestimate in the previous year. Investigations into likely causes for the increase in dioxins and furans (D/F) are underway.

In line with the Holcim target, data are presented here as grams per tonne of cementitious material.<sup>1</sup>

0.06

0.09

ltem	Number	of kilns reporting	5	Average specific concentration				
		а						
							emissions	
					(g/tonne cementi	tious materials)	(tonnes/a)	
	2003	2004	2005	2003	2004	2005	2005 <sup>B</sup>	
NOx	111	129	120	1,355	1,330	1,315	162,110	
502	119	133	131	545	540	435	53,575	
Dust	124	136	133	105	120	150	18,380	
Organics	104	123	126	80	80	70	8,310	
Mercury	111	120	123	0.03	0.02	0.02	2.6	
		(micrograms TEQ/tonne cementitious materials) <sup>c</sup>						
Dioxins/								

## Other atmospheric emissions<sup>A</sup>

Furans

<sup>A</sup> Data presented in this table are estimates only from cement kiln stacks, and do not include other point sources or fugitive emissions which are difficult to estimate. Some historical data have been adjusted due to corrected measurements and corresponding re-calculations.

0.05

120

114

91

<sup>8</sup> Total annual emissions were extrapolated from available data sets to all 140 consolidated kilns. Emissions based on continuous monitoring data represents 78% of NOx emissions, 96% of SO2 emissions, and 47% of dust emissions. The remaining emissions are based on spot testing or extrapolation.

<sup>c</sup>TEQ: Toxic equivalents – a sum parameter accounting for the relative toxicity of the individual dioxin and furan compounds. In cases where the measurements were below the detection limit, 50% of the detection limit was set as the default value.

	Cement	Aggregates	RMX
Number of sites	127	337	864
Management systems			
Certified EMS (ISO14001)	85% of cement	59%	37%
	plants and grinding		
	stations		
	64% of AFR		
	pre-treatment		
	platforms		
Energy			
Fuel consumption	see p. 25	17 MJ/t – 2.74 M GJ/a	54 MJ/m <sup>3</sup> – 2.0 M GJ/a
Power consumption	see p. 25	2.5 kWh/t–	2.6 kWh/m <sup>3</sup> -
		415 M kWh/a	95 M kWh/a
Water			
Water consumption	430 l/t – 50 M m³/a	450 l/t – 74 M m³/a	250 l/m <sup>3</sup> – 9.3 M m <sup>3</sup> /a
Nater recycling systems	see p. 22	50%	77%
Quarry management and rehabilitat	ion		
% of plants operating			
in sensitive areas*	see p. 22	33%	13%
Approved mining plans by local			
authorities	93%	90%	n/a
Rehabilitation plans in place	71%	86%	n/a
	98% provided		
	financial resources		
	for future		
	rehabilitation		
Fransport			
Transport mode	76% road,	91% road,	100% road
	16% rail, 8% water	9% others	
Waste management and recycling			
General waste			
management system	see p. 22	85%	67%
Returned concrete			
recycling system	n/a	n/a	26%

## Other environmental performance data for cement, aggregates and ready-mix concrete (RMX) 2005

n/a: not applicable

General note: Due to the first time inclusion of aggregates and ready-mix concrete in this report, some data reported are "best estimates" presented in good faith.

\*Sensitive areas are legally protected areas, polluted areas or sensitive ecosystems due to karst, biodiversity or cultural heritage issues.

## "CECAF helps us to improve our quality of life by providing opportunities for extra income generation. It has given me an identity."

Esperanza Cruz, former teacher, Mexico

## **CECAF** evaluation in Orizaba, Mexico

The agricultural and ecological training centers known as Centro de Capacitación Agropecuaria y Forestal (CECAF) near each Holcim Apasco plant go back more than 20 years. They help to strengthen Holcim's reputation in the communities while at the same time contributing to rural development and promoting the preservation of the environment, particularly through reforestation. They establish self-financing training programs that lead to income-generating activities for community members.

In 2005, the work of CECAF in Orizaba, established in 1993, was evaluated. CECAF staff and community representatives checked to see if objectives were being achieved and whether adjustments to the strategy were necessary. They found that knowledge transfer to the community, including training, basic materials and an initial supply of seedlings, ensured that most families could now produce anthuriums (flamingo flowers) for sale. CECAF activities have also significantly changed the community's initial negative attitude toward Holcim.

In 2005, 148 producers were trained in Orizaba, and greenhouses for 43 families were constructed, efforts benefiting a total of 750 community members. New plants such as orchids and ferns are being introduced for sale, and the potential for microfinance is being investigated, to allow producers to improve their businesses.





Following retirement, former teacher **Esperanza Cruz** had a lot of free time but little income. With the support of CECAF, she developed her greenhouse business and today sells more than 300 flowers per month.



Basic infrastructure to generate sales such as fax, phone and computer access was lacking for the start-up businesses. However, knowledge sharing among the producers, facilitated by CECAF, as well as growing incomes, enabled reinvestment in these microenterprises.

## **Group key facts**

93% of Group companies have integrated CSR into business strategy.

Our corporate Passion for Safety initiative assisted the measurable progress in occupational health and safety performance in 2005.

1% of net income before tax was spent on community projects, donations and charity.

Developing and maintaining strong relationships with stakeholders are important parts of doing business. In 2005, nearly all Group companies consulted, involved and partnered with stakeholders.



Over the past 12 years, **Salvador Gallaga** has been Holcim CECAF coordinator in Orizaba. By encouraging the production of the tropical anthurium (flamingo flower), instead of the traditional chayote and coffee, new income opportunities for the community were created.



The project enabled greater participation by women, thereby challenging existing roles and improving gender equality. Increased incomes also led to better integration of families and enabled more educational opportunities for children.

## Partnering with stakeholders: our license to operate

"Social responsibility is about caring for people and the world we live in. It must transcend profit and the bottom line. Both our organizations follow the same principles in daily work, and our common project is mutually beneficial and achieving results."

Deshamanya Lalith Kotelawala, Chairman, Ceyclinco Consolidated, Sri Lanka'

### On our website:

' Information about the "House-for-life" project between Ceylinco Grameen and Holcim.

<sup>2</sup> Our CSR policy.

In our Annual Report 2005:

<sup>3</sup> Our training and learning approach, page 34. Social responsibility has always been a cornerstone of our commitment to SD. With the implementation of the corporate social responsibility (CSR) policy<sup>2</sup> and approach in 2003, CSR is now well-structured in most Group companies. Issues such as employment practices, occupational health and safety, stakeholder engagement and community involvement are integrated into daily business practice.

We are pleased to report that at the end of 2005 93% of Group companies (2004: 81%) had achieved the target of integrating our CSR approach into their business plans.

## **Employment practices**

People are the foundation of all value creation at Holcim. Our goal is to employ the best people in our industry. Excellence in leadership, management and training of our employees is therefore critical. To address these issues we launched a new Group human resources and training policy in 2005.

Employee training is a high priority for a Group committed to ongoing learning. On average, around CHF 650,000 is spent on training by each Group company. Average training hours per employee vary according to need and job scope. In 2005, management level employees recorded more than 65 hours of training each; employees at all other organizational levels recorded around 32 hours. Training needs and skills development objectives are recorded semi-annually in employee performance appraisals, ensuring that employees are involved in the decision on improving their skills and increasing their opportunities.<sup>3</sup>

We promote diversity and continue to be very international; our 1,105 top and senior managers represent 49 nationalities. Holcim is an equal opportunity employer and makes no distinction on the grounds of gender, sexual orientation, race or religion. As in previous years, around 14% of the Group's workforce are women, a statistic which is reflected in middle management positions, but which falls at senior and top levels (see graph in data section).

We work hard to ensure that we are an attractive employer; wages (aggregated across the Group) are around 7% higher than the cement industry average and some 15% higher than general industry. Our labor relations are generally sound, and approximately half of our global workforce is represented by independent trade unions.

We encourage Group companies to conduct employee satisfaction surveys: in 2005, 34% (2004: 26%). In addition, employees discuss issues of job satisfaction with their supervisors, and 55% of Group companies have systems to collect and handle employee grievances and complaints.

## Occupational health and safety

Our occupational health and safety (OH&S) performance improved in 2005, and we are committed to further progress (see data section).

As the health and safety of our employees, subcontractors, third parties and visitors is paramount, we launched a new initiative, Passion for Safety, in 2005 in cooperation with DuPont.

The initiative aims to develop a safe working culture by changing behaviors and attitudes using the Holcim OH&S management system. It is based on strong company commitment, clear organizational accountabilities, and leadership to mobilize the workforce through training and communication. Tight performance management via key performance indicators and strict operational discipline will enable Holcim to move toward its goal of "zero harm".

To that end, and to reinforce the message that company leaders must drive continuous improvement, we have set a new OH&S target.

## New target

Reduce lost time injury frequency rate by at least 30% per year from 2006 to 2009, using 2004 as a reference, until a rate of less than two is achieved.

## Stakeholder engagement

Developing and maintaining strong relationships with stakeholders are important parts of doing business. Various methods and forums are used for stakeholder outreach.

Where it is feasible, we also invest in strategic memberships and cooperations that help achieve a more sustainable future. Our involvement in the WBCSD's Cement Sustainability Initiative, the UN Global Compact and the cooperation with GTZ reflect this trend.<sup>4</sup>

## **Community involvement**

Engaging in our spheres of influence is key to maintaining our license to operate. We encourage Group companies to focus their community projects on three areas: providing education for society's future, building infrastructure for livable communities and supporting sustainable community development. Engagement with stakeholders is key to ensuring the success of such projects (see data section).

To see to it that our local CSR initiatives make a difference and create value for our stakeholders as well as for us, we are developing a tool to measure return on social investment. A first pilot assessment was undertaken in Mexico in 2005 and is described at the beginning of this chapter.

This new target implies that even good performers in the Group must further improve. Holcim makes no compromise regarding safety. Our people are the basis of our success and our most valuable asset; we must protect them.

Holcim is committed to implementing general health management programs for employees. Today all Group companies (2004: 84%) have such a program in place, including, for example, regular medical screening, drug and alcohol awareness, disease and stress management, and procedures for life threatening diseases.





### On our website:

<sup>4</sup> Our approach to stakeholder engagement, numerous case studies and a list of stakeholders, memberships and cooperations.

## Social performance data

## On our website:

## <sup>1</sup> Case study on

## Group employees by region and personnel expenses

**Employment practices** 

our responsible restructuring approach.

Group employees by re	egion			Personnel expension	ses in million CHF
	2003	2004	2005		2005
Europe	15,365	14,980	20,458		1,332
North America	5,236	5,249	10,393		1,098
Latin America	10,278	10,676	10,904		407
Africa Middle East	4,472	4,621	5,318		214
Asia Pacific	12,118	10,644	12,045		289
Corporate	751	739	783		229
Total Group	48,220	46,909	59,901		3,569

With our UK, US and Indian acquisitions in 2005, our global workforce grew to almost 60,000. Apart from these acquisitions, 1,836 jobs were created, while 1,441 were eliminated. Where restructuring of operations is necessary and leads to redundancies, we ensure that it is handled sensitively and via consultations. Each Group company has procedures that go beyond legal requirements to ease former employees' transition to new careers.<sup>1</sup>

## Occupational health and safety

## Fatalities cement, aggregates and ready-mix concrete

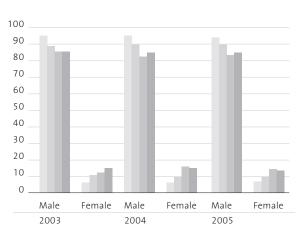
	2004	2005*
Directly employed	21	9
Indirectly employed	17	13
Third parties	8	8
*Including fatalities from Ag	gregate Industries.	

Although 2005 performance improved compared to 2004, we deeply regret that 30 people died in accidents related to our business.

management levels remained at a similar level.

From 2004 to 2005 the percentage of women at all

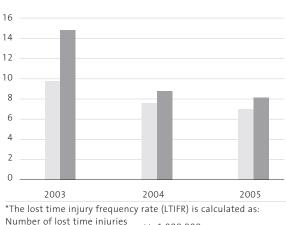




## Top management level

- Senior management level
- Middle management level
- Other employees

## Lost time injury frequency rate\*



Number of lost time injuries × 1,000,000 Total number of hours worked

Data includes all cement, aggregates as well as ready-mix concrete operations (including Aggregate Industries since 2005).

- Employees
- Subcontractors

## Stakeholder engagement

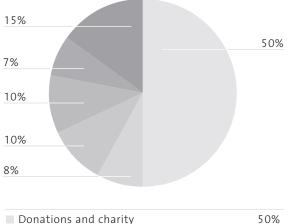
## Stakeholder engagement at local level

Type of engagement		% of G	% of Group companies	
	2003	2004	2005*	
Needs assessment	31%	53%	52%	
Stakeholder involvement in CSR planning and management	61%	74%	77%	
CSR/SD memberships	71%	56%	68%	
Stakeholder dialogues	80%	86%	73%	
Community advisory panels	24%	42%	44%	
Cooperations	61%	65%	81%	

\* 2005 data covered 44 Group companies.

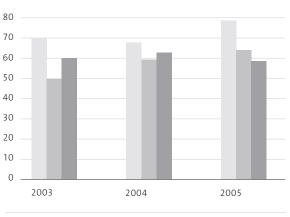
## **Community involvement**

## Total CSR spending 2005: CHF 32.3 million



Donations and charity	50%
Education focus projects	8%
Community development focus projects	10%
Infrastructure focus projects	10%
CSR coordination	7%
Disaster relief	15%

In 2005, Group companies spent CHF 32.3 million on donations and charity, CSR projects in the three focus areas, CSR coordination and disaster relief. Compared to 2004 more was provided in-kind (2005: CHF 16.1 million; 2004: 9) and less for community projects (2005: CHF 11.3 million; 2004: 13.1). Our community initiatives and in-kind support represented 1% of net income before tax. In addition, CHF 4.85 million (CHF 3 million by Holcim Ltd) was donated for disaster relief in 2005 for the Asian tsunami and Hurricane Katrina.<sup>2</sup> CSR focus areas\*



Providing education

- Supporting community development
- Building infrastructure

\* Percentage of Group companies.

## **Government relations**

Political contributions are publicly disclosed at Group company level as appropriate and required by regulation. Available data helps us to estimate such contributions, in total, CHF 308,000 in 2005 (2004: 266,300).<sup>3</sup>

In 2005, 16% of Group companies received subsidies from national governments in the form of grants, tax relief and other types of financial benefits amounting to CHF 3 million. In our Annual Report 2005:

- <sup>2</sup> Rapid assistance after tsunami and Hurricane Katrina disasters, pages 28, 29 and 33.
- On our website:
- <sup>3</sup> Our public policy approach.

## "The Albox CAP is an important tool for 'greening' the town through educational projects. We will also ensure transparency of its operation."

Martín Berbel Granados, member of the NGO Ecologistas en Acción, Spain

Albox community advisory panel, Spain

In 2003, Holcim Spain opened the waste pre-treatment platform of its alternative fuels and raw materials (AFR) subsidiary Energis in Albox, Andalusia. As a new industrial activity to town, local management decided to establish a community advisory panel (CAP) from the beginning.

The CAP includes the mayor of Albox, other local authorities, representatives of environmental and community groups, and Energis management. Its objective is to inform and involve all relevant stakeholders regarding plant operations through active and direct dialogue.

The community was most concerned about plant safety and the AFR process itself. During 2004–2005, three accident simulations were undertaken involving plant employees and local emergency services. These resulted in recommendations to improve the plant's emergency responses, which alleviated community concerns.

Opening the plant's doors to the community also helped. On November 4, 2005, more than 100 guests toured the facilities. They were particularly interested in the areas of the plant where waste is collected and classified as well as the laboratories where waste samples are analyzed before being used.

After the plant had been operating for more than a year, plant employees and panel members assessed progress. They concluded that the CAP's role was well perceived, but the company could improve its community relations by differentiating the plant from its immediate neighbor, a landfill, and by communicating more about CAP activities and the value they have brought to the community. There was also a request to focus CSR activities on educational priorities, including environmental, waste and recycling issues.





As a representative of the center for environmental studies for the Almanzora River and a member of the NGO Ecologistas en Acción, **Martín Berbel Granados** has taken the role of secretary for the community advisory panel in Albox.



The CAP sees its role as being a proactive company-community mediator. This extends to the development of an external coordination plan in the event of an accident, where CAP members have defined roles and follow public alert protocols.

Group key facts

Ethos ranked Holcim among the leaders in Switzerland in environmental and social reporting in its 2006 study.

Independent assurance was provided by KPMG over our CO2 data for 2004 and 2005.

The CSDR 2005 has been prepared in accordance with the 2002 GRI Guidelines.



As director for quality, **Isidora Díaz** is in charge of the quality and environmental performance of Energis, including the waste pre-treatment platform in Albox.



In a spirit of transparency, the CAP has promoted public access to all company documents relevant to safety and environment. These are available from the Town Hall and include impact assessments, emissions data, safety reports and hazardous waste declarations.

## **Transparent reporting**

"Please accept my thanks, on behalf of the global GRI network, for the active role you are playing in creating the third generation of GRI's Sustainability Reporting Guidelines. ... I want to take this opportunity to also thank you for your continuing support for GRI via your participation in the Organizational Stakeholder program."

Letter from Ernst Ligteringen, Chief Executive, Global Reporting Initiative on April 20, 2006, The Netherlands

## On our website:

Notes on exclusions and the restatement of historical CO2 data. To assure accuracy and completeness, we report in accordance with the Global Reporting Initiative. KPMG has provided independent assurance over our CO2 data according to the WBCSD/WRI Cement CO2 Protocol. The awards received by Holcim and our Group companies, and feedback received by our stakeholders, confirm that we have set the right priorities.

## Methods of data collection

We collect information from Group companies using the following tools:

- Plant environmental profile questionnaire
- Equipment data and operating statistics based on annual plant technical reports
- Corporate CO2 inventory according to the WBCSD/WRI Cement CO2 Protocol
- Corporate OH&S questionnaire
- Corporate social responsibility survey

Our data collection systems enable monitoring of performance at three operational levels: individual plant performance, Group company, and corporate consolidation of global performance.

## System boundaries

The scope of our reporting for the different parameters is outlined below. The report includes information from Aggregate Industries in 2005, where relevant, but does not contain data from our new acquisitions in India.

## **Economic performance**

Data included represent consolidated data from Holcim Group plants and companies covering all of the Group's operations, and are consistent with those reported in the Holcim Annual Report 2005.

## **Environmental performance**

CO2: The scope of data collection for CO2 and resources use includes integrated cement plants, grinding stations and terminals. Consolidation of data is consistent with the WBCSD/WRI Cement CO2 Protocol. Where Holcim owns between 20% and 50% of the company and does not have management control, data are proportionally consolidated; below 20%, the data is not reported; all other companies are reported 100%.<sup>1</sup>

The plant environmental profile (PEP) self-assessment questionnaire is the source of performance information and data related to all other environmental impacts of the cement, aggregates and ready-mix concrete business segments; all data from all principal consolidated companies are included in this report. The extension of the PEP from 127 cement plants and grinding stations to include 337 aggregates sites and 864 ready-mix concrete operations in 2005 was a significant challenge. It brought additional complexity to our monitoring efforts, covering a range of different environmental impacts. We know that data accuracy, consistency and quality must be improved.

## Social performance

Personnel data represent consolidated data from Holcim Group plants and companies covering all of the Group's operations.

Occupational health and safety data are collected for all operations via monthly reports and an annual survey, which is then re-validated by our regular business process system. Data are segregated according to onsite and offsite (logistics-related) incidents, and cover directly and indirectly employed, third party service providers, visitors and others. This is consistent with the WBCSD CSI Guidelines for Reporting.

All other social performance data are derived from the CSR questionnaire, which covers all Group companies and are fully consolidated.

## **Reporting cycle**

Holcim follows a two-year SD reporting cycle. The previous full report was published in 2004, covering 2002 and 2003 performance information and data. In 2005, SD information and data for 2004 were updated on our website.

## **Consultation and assurance**

The principles of openness and transparency guide our reporting. The stakeholder engagement activities of our Group companies and the stakeholder dialogues undertaken by the CSI or via the GTZ cooperation have confirmed the priorities outlined in this report. We have also sought stakeholder opinions on various sections of this document. We would like to thank those who helped us for their feedback, which has been integrated.

KPMG provided independent assurance over our CO2 data for the 2004 and 2005 reporting periods.<sup>2</sup>

Holcim has publicly reported SD performance for the last five years. Over this period we have continually reviewed our reporting processes and performance management. We are building on a strong framework for the management and reporting of SD performance. We focus on improving training in the application of tools, guidelines and the resources available for data review and internal verification.

## **Global Reporting Initiative and UN Global Compact**

This report has been prepared in accordance with the 2002 Global Reporting Initiative (GRI) Guidelines, and its guiding principles of accountability, adaptability, balance, inclusiveness, independence, technical excellence, and transparency. Content in the printed report is supplemented by additional performance information and data available on our website.<sup>3</sup>

The UN Global Compact is a network of companies and international labor and civil society organizations that share a set of principles on good corporate citizenship. Holcim signed the Global Compact in 2003 and remains committed to its philosophy, intent and principles. Our assessment of how this report addresses the UN Global Compact principles can be downloaded from our website. <sup>4</sup> On our website:

- <sup>2</sup> The full KPMG assurance reports for each year and the responses of Holcim.
- <sup>3</sup> The GRI content index.
- <sup>4</sup> UN Global Compact Communication on Progress.

## Glossary

## Absolute gross emissions

The total amount of CO<sub>2</sub> emitted from cement production activities.

## Absolute net emissions

Gross emissions minus credits for indirect savings, such as use of waste as fuel.

## Aggregates

Quarried materials (crushed stone, gravel and sand) are the main component by volume of concrete. Aggregates are mainly used in the following construction sectors: manufacture of ready-mix concrete, concrete goods and asphalt as well as for roadbeds and railway fundaments.

## Alternative fuels and raw materials (AFR)

Inputs to clinker production derived from waste streams contributing energy and/or raw material.

## Cement

Cement is a building material made by grinding calcined limestone and clay to a fine powder. It acts as the binding agent when mixed with sand, gravel or crushed stone and water to make concrete.

## Cementitious material or product

A substance which when mixed with water forms a paste that subsequently sets and hardens at room temperature.

## Clinker

An intermediate product in cement manufacturing produced by decarbonizing, sintering, and fast-cooling ground limestone.

## **Clinker factor**

The percentage of clinker in cement (according to the WBCSD Carbon Dioxide Protocol).

## **Composite cement**

Cement with a fixed percentage of secondary cementitious materials, such as slag and fly ash, replacing the clinker portion of the cement.

## Concrete

A material produced by mixing cement, water and aggregates. The cement acts as a binder, and the average cement content in concrete is about 15 %.

## Co-processing

Using the cement manufacturing process to recycle, re-use or treat waste while simultaneously manufacturing cement in a single combined operation.

## Corporate social responsibility (CSR)

The commitment of business to contribute to sustainable development, working with employees, their families, the local community, and society at large to improve their quality of life.

## **Eco-efficiency**

Reduction in the resource intensity of production, i.e. the input of materials, natural resources and energy compared with the output: essentially, doing more with less.

## Fossil fuels

Non-renewable carbon-based fuels traditionally used by the cement industry, including coal and oil.

## Industrial ecology

Framework for improvement in the efficiency of industrial systems by imitating aspects of natural ecosystems, including the transformation of wastes to input materials.

## Kiln

Large industrial oven for producing clinker used in the manufacture of cement. In this report, "kiln" always refers to a rotary kiln.

## Lost time injury

A work-related injury after which the injured person cannot work for at least one full shift/full working day.

## **Mineral components**

Cement constituents which are not derived from clinker production. They include blast furnace slag, fly ash, natural pozzolan and limestone.

## Occupational health and safety (OH&S)

Policies and activities to promote and secure the health and safety of all employees, subcontractors, third parties and visitors.

## **Ordinary Portland cement**

Cement that consists of approximately 95% ground clinker and 5% gypsum.

## Ready-mix concrete

Concrete is a well-dosed mix of cement, aggregates, water and admixtures. It is one of the most widely-used building materials in the world.

## Secondary cementitious materials

Industrial by-products, such as blast furnace slag and fly ash, that have cementitious properties and are used to substitute clinker in cement.

## Specific gross emissions

The gross amount of CO<sub>2</sub> emitted per tonne of cement.

## Specific net emissions

The net CO<sub>2</sub> emissions per tonne of cement.

## Stakeholder

A group or an individual who can affect or is affected by an organization or its activities.

## Stakeholder dialogue

The engagement of stakeholders in a formal and/or informal process of consultation to explore specific stakeholder needs and perceptions.

## Subcontractors

Full-time equivalent personnel working for the company but not on its payroll.

## Waste

A substance or object whose owner discards it, wants to discard it, or has an obligation to discard it.

## WBCSD Carbon Dioxide Protocol

Internationally accepted standard methodology for monitoring and reporting CO<sub>2</sub> emissions from cement production.

## Acronyms and formulae:

/teronymis and	Tormanae.
AFR	Alternative fuels and raw materials
ArCli	Architectural Clinic
САР	Community advisory panel
CECAF	Centro de Capacitación Agropecuaria
	y Forestal
CEO	Chief Executive Officer
СКД	Cement kiln dust
CO2	Carbon dioxide
CSDR	Corporate Sustainable Development Report
CSI	Cement Sustainability Initiative
CSR	Corporate social responsibility
EMR	Emissions monitoring and reporting
EMS	Environmental management system
EUETS	European Union's Emissions Trading System
GJ	Gigajoule
GRI	Global Reporting Initiative
GTZ	Gesellschaft für Technische Zusammenarbeit
	(German Technical Cooperation)
GWh	Gigawatt hour
ISO	International Organization for
	Standardization
ISO9001	Quality standard
ISO14001	Environmental standard
kWh	Kilowatt hour
LTIFR	Lost time injury frequency rate
M	Million
WI	Megajoule
NGO	Non-governmental organization
NOx	Nitrogen oxides
OH&S	Occupational health and safety
OHSAS18000	Occupational health and safety
	management standard
PEP	Plant environmental profile
SD	Sustainable Development
SO2	Sulfur dioxide
LΊ	Terajoule
UN	United Nations
UNEP	United Nations Environment Programme
WBCSD	World Business Council for Sustainable
	Development
WRI	World Resource Institute

## Awards received in 2005

The best evidence of the actions behind our commitment are the awards received from across the Group. For a comprehensive list of all the awards received in 2004 and 2005 see: www.holcim.com/sustainable

## General awards

- Holcim Bangladesh:
- Artha Kantha Award for contribution to the economy
- Financial Mirror Award for best cement company
- Cemento de El Salvador, El Salvador:
- Recognition as the 5th most admired company in the country

Société des Ciments et Matériaux, Ivory Coast:

Honor Diploma from the Ivorian Treasury and Finance Ministry

## Holcim Apasco, Mexico:

Industrial Ethics and Values Award from the Mexican Chamber of Industry

## Holcim Philippines:

Titanium Achievement Award for environment, OH&S, and community development from the Presidential Mineral Industry Environmental Award (PMIEA)

### Siam City Cement, Thailand:

Good Mining Practice by the Ministry of Industry and Mines

### Holcim Vietnam:

Outstanding Taxpayer Award from the Kien Giang Province

## Product and quality awards

- Garadagh Cement, Azerbaijan:
- UGUR National Award for product development

## Holcim Brazil:

Premio Pini Award for ready-mix concrete from the Association of Construction Materials

### St. Lawrence Cement. Canada:

"Hot mix paving contractors of the year" from Ontario Road Builders Association

## Société des Ciments et Matériaux, Ivory Coast:

National Quality Award

## Aggregate Industries, UK:

Showcase Quality Award by the Quarry Products Association

## Holcim Vietnam:

Best Consumer Product from the People's Committee, Ho Chi Minh City

### **Environmental awards**

### St. Lawrence Cement, Canada:

- Phoenix for the Environment from the government of Quebec and an independent environmental foundation
- Environmental Award of Excellence from the Mississauga Board of Trade and from the Aggregate Producers Association of Ontario

## Holcim Costa Rica:

Acknowledgement for technical support in non-cement specific issues by a university in Spain and El Salvador

### Holcim Ecuador

Premier Eco-Efficiency Award (2nd prize) from the Guayaquil municipality

## Holcim Germany:

Regional Business Award for environmental performance (Lägerdorf plant)

## Holcim Indonesia:

Proper Green Belt Trophy for environmental performance

## Holcim Apasco, Mexico:

Environmental Protection Award from the Mexican Ministry of Environment

### Holcim Romania:

Golden Award for Excellence – Environment from the Romanian PR Agency

## Holcim Spain:

- Environmental Excellence Site Restoration Awards from the European Aggregates Association
- Leadership Award for environmental excellence from the business magazine "Dirigentes"

### Aggregate Industries, UK:

Vibes Award from the Scottish Environmental Protection Agency

## Holcim Vietnam:

Green Environment Award from the People's Committee, Ho Chi Minh City

## OH&S awards

- St. Lawrence Cement, Canada:
- Safety Awards for improvement and innovation from the Portland Cement Association and the Ontario Road Builders Association

## Holcim Croatia:

OH&S Recognition Award by the Croatian Association for OH&S Improvement

## Holcim Indonesia:

Golden Flag and SMK3 Accreditation for health and safety management

## Holcim South Africa:

Showplace Awards for the health and safety programs of eight quarries from the Aggregate and Sand Producers Association of Southern Africa

## Social awards

- Holcim Bulgaria:
- Honorary Award from the Bulgarian Municipality Day Committee

## St. Lawrence Cement, Canada:

- Excellence Award for community relations from the Aggregate Producers Association of Ontario
- Members' Choice Award from the Mississauga Heritage Foundation

## Cemento Polpaico, Chile:

- Social Performance Award from the city of Viña del Mar
- Labor Care Award from the National Institute of Training

## Holcim Hungary:

- Eszak-Magyarorszag Award

## Holcim Apasco, Mexico:

- Better Practice Award from the Mexican Center of Philanthropy
- Innovation in CSR Award from the Mundo Ejecutivo Media Group

## Holcim Morocco:

Socially Responsible Investment Award by the Moroccan Investment Association and Vigeo, France

## Holcim Romania:

Best Community Program by the "People for People" Association

### **Holcim Spain:**

Social Award for community relations from the Aggregates Association

## Siam City Cement, Thailand:

Virtue Practice and Youth Development Award from the Ministry of Social Development

## Holcim Vietnam:

Certificate of Recognition for community development from the People's Committee, Ho Chi Minh City

## Design

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Holcim is a worldwide leading supplier of cement and aggregates as well as downstream activities such as ready-mix concrete and asphalt, including services. The Group is present in more than 70 countries on all continents.



